令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	国語表現IA	1	620100	前学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	黒田　譜美	白山麓C： 101.201		水曜　15:00-16:00

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	表記	「書く」活動の準備として、表記、係り受け、接続表現など言葉に関する基本的な知識を習得する。話し言葉と書き言葉、和語・漢語・外来語などのニュアンスの違いを意識し、相手や場面に応じて適切に使い分けられるようにする。また、5W1Hを意識して事実を明確に伝え、事実と意見を区別することで、読み手にとって分かりやすい文章を構成する力を養う。さらに、小論文の学習では段落の役割を考えながら文章を構成し、予想される反論を踏まえながら自分の意見を論理的に述べる力を身につける。
2	語彙選択	
3	事実と意見	
4	段落構成	
5	小論文	

授業の概要および学習上の助言

■授業概要

国語表現は、実社会で必要な国語の知識や技能を身につけることを目標とした科目である。
国語表現IAでは、教科書『国語表現』（大修館書店）の下記範囲を学習する。

言葉と出会う
伝える、伝え合う
小論文・レポート入門

なお、この授業ではアクティブラーニングの一環として、グループワークを行う。

■学習上の助言

・課題は必ず提出すること。
・毎時の小テストは地道に取り組むこと。
・辞書は必ず用意すること。また、辞書を常に引くように心がけ、知らない言葉を確認し、着実に身につけること。
・さまざまなジャンルの本を読むよう心がけること。

【教科書および参考書・リザーブドブック】

教科書：『国語表現』大修館書店 ISBN:978-4-469-62396-3 『国語の常識 plus』明治書院 ISBN:978-4-469-625-23405-7
参考書：
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

日本語検定4級（中学校卒業）程度の国語能力を身につけている。

No.	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	e, f, i	常用漢字の読み書きの習得に積極的に努める。
②	e, f	仮名遣いや送り仮名など表記の決まりを意識し、正しく書くことができる。
③	e, f	接続表現の種類と働きを理解し、適切に使うことができる。
④	e, f	5W1Hを明確にし、事実と意見を区別して書くことができる。
⑤	e, f	小論文の基本的な書き方を理解し、段落の役割を理解して文章を構成することができる。
⑥	e, f	反論を想定して自分の意見を論理的に述べることができる。

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	50	20	0	0	30	0	100
総合力指標	知識を取り込む力	0	30	0	0	0	0	0	30
	思考・推論・創造する力	0	5	15	0	0	10	0	30
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	5	5	0	0	10	0	20
	学習に取組む姿勢・意欲	0	10	0	0	0	10	0	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	小テストは9回実施し、計50点とする。 漢字 8回：20点 表記、文法のまとめ 1回：30点
	②	レ	
	③	レ	
	④		
	⑤		
	⑥		
レポート	①	レ	小論文：20点
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①	レ	自己紹介文：10点 絵や写真を見て書く：10点 マイニュース記事：10点
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
常用漢字の読み書きの習得に積極的に努め、常に正しく読み書きできる。 仮名遣いや送り仮名の決まりなど表記の決まりを理解し、常に正しく書くことができる。 接続表現の種類と働きを理解し、常に適切に使うことができる。 5W1Hを明確にし、事実と意見を区別して書くことができる。 小論文の基本的な書き方を理解し、序論・本論・結論の構造が明確である。 予想される反論を適切に取り上げ、説得力のある反駁により主張の強化ができる。	常用漢字の読み書きの習得に努めることができる。 仮名遣いや送り仮名の決まりなど表記の決まりを意識し、書くことができる。 接続表現の種類と働きを意識し、使うことができる。 5W1Hを意識し、事実と意見を区別して書くことができる。 小論文の基本的な書き方を理解し、序論・本論・結論の構成が概ねできている。 反論となりうる別の考えを挙げ、それに対する意見を述べることができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	■科目ガイダンス ・科目の目的、内容、評価方法について理解する。 自己紹介 ・構成ノートに下書きをしてから文章を書く。	科目ガイダンス 講義と質疑 プリント配布 グループワーク ポートフォリオ①	復習：配布プリントを再読し、学習教育目標や行動目標を確認する。	30
2 ／	言葉と表記 ・表記の決まりを意識し、正しく書く。 ・漢字や慣用表現を正しく使う。	漢字小テスト① 口頭実技① 講義と質疑 プリント配布	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
3 ／	整った文を書く ・係り受けについて理解する。 ・文末表現の統一について理解する。	漢字小テスト② 講義と質疑 プリント配布 小テスト①返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
4 ／	相手に応じた言葉遣い ・話し言葉と書き言葉の違いや、その使い分けについて理解する。 ・和語・漢語・外来語のニュアンスの違いと、その使い分けについて理解する。	漢字小テスト③ 講義と質疑 プリント配布 小テスト②返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
5 ／	わかりやすい文を書く ・長すぎる文を避け、わかりやすい文にする方法を理解する。 ・読点を適切に打ち、あいまいな文を避けることの大切さを理解する。	漢字小テスト④ 講義と質疑 プリント配布 小テスト③返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
6 ／	文のつなぎ方 ・接続表現の種類と働きを理解する。 ・文脈による文のつながりを理解する。	漢字小テスト⑤ 講義と質疑 プリント配布 小テスト④返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
7 ／	まとめとふりかえり	まとめの小テスト 講義と質疑 プリント配布 小テスト⑤返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
8 ／	言葉のストレッチ体操 ・要点を落とさないよう集中して聞く。 ・傾聴について理解する。	漢字小テスト⑥ グループワーク まとめの小テスト返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
9 ／	絵や写真を見て書く ・説明の順序を考える。 ・相手に伝えることを意識してわかりやすい文章を書く。	漢字小テスト⑦ 講義と質疑 プリント配布 小テスト⑥返却 ポートフォリオ②	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
10 ／	マイニュース記事を書こう ・事実を客観的に伝えるために、5W1Hを意識して情報をメモする。 ・事実と意見を区別して書く。	漢字小テスト⑧ 講義と質疑 プリント配布 小テスト⑦返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30

授業明細表

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※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	マイニュース記事を書こう ・発表する。 ・相互評価する。	講義と質疑 プリント配布 小テスト⑧返却 ポートフォリオ③	予習：発表の準備を行う。 復習：教科書・ノートを見直す。	30
12 ／	小論文 ・小論文の基本的な構成を理解する。 ・与えられた問いについて400字程度の小論文を書く。	レポート（小論文１）提出 講義と質疑 プリント配布	予習：小論文について調べる。 復習：教科書・ノートを見直す。	30
13 ／	小論文 ・発想を広げるための方法を理解する。 ・賛成・反対など両面から論じることができる問いを作る。 ・反論を想定し、それに対する反論を考える。	講義と質疑 プリント配布 グループワーク	予習：発想法について調べる。 復習：教科書・ノートを見直す。	30
14 ／	小論文 ・自分たちが考えた問いについて600字程度の小論文を書く。	レポート（小論文２）提出 講義と質疑 プリント配布	予習：構成メモを仕上げる。 復習：教科書・ノートを見直す。	30
15 ／	小論文 ・他の学生の書いた小論文を読む。 ・相互評価する。	グループワーク プリント配布 相互評価 ふりかえり	予習：小論文を仕上げる。 復習：相互評価を見直す。	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Expression I A	1	620200	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	TAYLOR, James	Hakusanroku C: 101.201		Monday 16:30-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Writing	Students will come prepared to speak and write in English. To progress in the class, students will complete and submit tasks on time. Peer review and feedback are important parts of the writing process, so students will use every opportunity to communicate with classmates and respect others' ideas and opinions. It is crucial to ask classmates or the teacher for help when necessary.
2	Paragraphs	
3	Genres	
4	Journal	
5	Peer review	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. Students will consider the features and structures of different genres of paragraphs and will write their own paragraphs of different genres. Students will learn about and practice the writing process, including planning and peer review, to improve the drafts of their work. Students will also learn the conventions for citing the work of others. The work on paragraphs in this course will benefit students as they work on other courses. Through the writing process and targeted language activities, students will gain the skills to describe their ideas logically in written English. Short writing tasks will be completed weekly for homework to give students further opportunities to practice expressing themselves. Students will learn and practice the skills and language to achieve high scores on academic writing tasks.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate in written English.
Desire to improve writing skills through responding appropriately to receiving feedback and constructive criticism.
Work ethic to revise, edit, and rewrite drafts of a paragraph.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b, f	Students will be able to develop sentences and paragraphs in response to issues and themes raised in class.
②	e	Students will be able to draw on cultural knowledge and personal experience to express themselves.
③	d, f, g	Students will be able to use planning techniques and peer review to develop their and others' work.
④	e, f	Students will be able to achieve clarity of thought by identifying the features of various genres of writing.
⑤	f, g	Students will be able to use different writing techniques to express thoughts and opinions and to persuade others.
⑥	e, f, i	Students will be able to investigate and discuss authors' intentions and meanings in various examples.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	80	0	20	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	5	0	0	25
	Ability to think, reason and create	0	0	20	0	5	0	0	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	20	0	5	0	0	25
	Attitude and motivation for learning	0	0	20	0	5	0	0	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Students will write 6 different genres of paragraph, which will be graded according to the following criteria: Process, Task Achievement, Cohesion, Coherence. The total for each criterion is 10, making the total for each paragraph 40 points. Paragraphs will be submitted online. Feedback will be given online before the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students will write a journal of at least 200 words on an assigned topic for homework after each of the first 14 lessons. The journals will be submitted online. Students will receive credit for journals of sufficient length submitted on time. Each journal is worth 10 points. Feedback will be given online before the following lesson.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students improve their writing drastically, go through the writing process, respond appropriately to feedback, and produce paragraphs of various genres that are logically structured, well argued, and supported by evidence from reliable sources. Students complete and submit all work on time.	Students improve their writing to some extent, go through the writing process, respond to some feedback, and produce paragraphs of various genres that are for the most part logically structured, well argued, and supported by evidence from reliable sources.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: students will read the syllabus. Elements of a paragraph: Students will consider the structure of a paragraph.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
2 /	Opinion Paragraph: Students will consider the features and structures of opinion paragraphs, then plan and write their own.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
3 /	Cause & Effect Paragraph: Students will consider the features and structures of cause and effect paragraphs, then plan and write their own.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
4 /	Process Paragraph: Students will consider the features and structures of process paragraphs, then plan and write their own.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
5 /	Comparison Paragraph: Students will consider the features and structures of process paragraphs, then plan and write their own.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
6 /	Problem-Solution Paragraph: Students will consider the features and structures of problem-solution paragraphs, then plan and write their own.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
7 /	Persuasive Paragraph: Students will consider the features and structures of persuasive paragraphs, then write their own.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
8 /	Review: Students will review what has been covered so far in the course.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
9 /	Introductory Paragraph: Students will consider the features and structures of introductory paragraphs and thesis statements.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
10 /	Introductory Paragraph: Students will plan and write their own introductory paragraph.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Main Body Paragraphs: Students will consider the features and structures of effective main body paragraphs, then plan their own.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
12 /	Main Body Paragraphs: Students will write their own main body paragraphs.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
13 /	Concluding Paragraph: Students will consider the features and structures of concluding paragraphs, then plan and write their own. Title: Students will consider the features of effective titles.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
14 /	Citations and References: Students will consider the conventions for citing and referencing others' work.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
15 /	Review: Students will review what was learnt in this course, reflect on their performance, and consider the next semester.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work		

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	国語表現IB	1	620300	後学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	黒田　譜美	白山麓C： 101.201		水曜　15:00-16:00

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	挨拶	人間関係を維持、構築する上で重要な挨拶、敬語についての知識を習得し、実生活でも実践する態度を養う。履歴書、自己推薦書、学修計画書など自分をアピールする書類の特徴を理解し、具体的で説得力のある文章を書けるようにする。社会生活で必要なコミュニケーション能力を高めるために、電子メールのマナーや電話応対、手紙の形式の基礎を学び、相手や目的に応じて、適切なメディアや形式を選び、使い分けられるようにする。さらに、新聞やインターネットの特徴や注意点を理解し、情報を吟味しながら活用する力を身につける。
2	敬語	
3	面接	
4	電子メール	
5	レポート	

授業の概要および学習上の助言

■授業概要

国語表現IAの続きとして、国語表現IBでは教科書『国語表現』（大修館書店）の下記範囲を学習する。

小論文・レポート入門（レッスン６・７）

自己PRと面接

メディアを駆使する

付録 敬語のまとめ

なお、この授業ではアクティブラーニングの一環として、グループワークや発見学習を行う。

■学習上の助言

・課題は必ず提出すること。

・毎時の小テストは地道に取り組むこと。

・辞書は必ず用意すること。また、辞書を常に引くように心がけ、知らない言葉を確認し、着実に身につけること。

・さまざまなジャンルの本を読むよう心がけること。

【教科書および参考書・リザーブドブック】

教科書：『国語表現』大修館書店 ISBN:978-4-469-62396-3 『国語の常識 plus』明治書院 ISBN:978-4-469-625-23405-7

参考書：

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

国語表現IAを履修し、日本語の読解力や文章表現力を身につけている。

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	e, f, i	常用漢字の読み書きの習得に積極的に努める。
②	e, f	人間関係を構築する上での敬語の重要性を理解し、場面や相手に応じて適切に敬語を使うことができる。
③	e, f	電子メール、手紙の基本作法を理解し、適切に使用できる。
④	e, f	具体的なエピソードを入れて、効果的な自己PRをすることができる。
⑤	e, f	インターネットでの情報の検索の仕方と、その注意点について理解することができる。
⑥	e, f	参考文献表の作成方法や引用方法を理解し、自分の意見と他者の意見を区別して書くことができる。

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	40	30	30	0	0	0	100
総合力指標	知識を取り込む力	0	30	0	0	0	0	0	30
	思考・推論・創造する力	0	0	20	0	0	0	0	20
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	10	20	0	0	0	30
	学習に取組む姿勢・意欲	0	10	0	10	0	0	0	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	小テストは計40点とする。 敬語：10点 漢字：30点
	②	レ	
	③		
	④		
	⑤		
	⑥		
レポート	①		レポートは2種類課し、計30点とする。 ①面接準備シート：10点 ②レポート（問いの作り方、参考文献表、構成ノート含む）：20点
	②		
	③		
	④	レ	
	⑤	レ	
	⑥	レ	
成果発表 （口頭・実技）	①		成果発表は3種類課し、各10点計30点とする。 ①挨拶 ②模擬面接 ③電子メール
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
目的や場に応じて常に適切な挨拶ができる。 場や相手に応じて常に適切に敬語を使うことができる。 電子メールや手紙の基本作法ーを理解し、常に適切に書くことができる。 具体的なエピソードに基づいて、効果的な自己PRをすることができる。 インターネットでの情報の検索方法とその注意点について理解し、信頼できる情報を集めることができる。 参考文献表の作成方法や引用方法を正しく理解し、他者の意見を有効に引用しながら文章を論理的に展開することができる。	目的や場に応じて適切な挨拶を心がけている。 場や相手に応じて適切に敬語を使うことを心がけている。 電子メールや手紙の基本作法ーを理解し、適切に書くことができる。 エピソードを入れて、自己PRをすることができる。 インターネットでの情報の検索方法とその注意点について理解することができる。 参考文献表の作成方法や引用方法を理解し、自分の意見と他者の意見を区別して書くことができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	■科目ガイダンス ・科目の目的、内容、評価方法について理解する。 挨拶と人間関係 ・挨拶が人間関係や社会生活にどのような影響を及ぼしているかを理解し、自らの言語生活を検証する。	科目ガイダンス 講義と質疑 プリント配布	復習：配布プリントを再読し、学習教育目標や行動目標を確認する。	30
2 ／	待遇表現―敬語によるコミュニケーション ・尊敬語を理解し、適切に使えるようにする。	漢字小テスト① 実技①（挨拶） 講義と質疑 プリント配布 グループワーク	予習：尊敬語について調べる。 復習：教科書・ノートを見直す。	30
3 ／	待遇表現―敬語によるコミュニケーション ・謙譲語を理解し、適切に使えるようにする。	漢字小テスト② 講義と質疑 プリント配布 グループワーク 小テスト①返却	予習：謙譲語について調べる。 復習：教科書・ノートを見直す。	30
4 ／	待遇表現―敬語によるコミュニケーション ・誤った敬語表現を正しい敬語表現に改める。	敬語小テスト 講義と質疑 プリント配布 グループワーク 小テスト②返却	予習：誤りやすい敬語表現について調べる。 復習：教科書・ノートを見直す。	30
5 ／	面接―自分を知る ・自己分析やグループワークを通して、自分の長所や短所を理解し、言語化できるようにする。	漢字小テスト③ 講義と質疑 プリント配布 グループワーク 敬語小テスト返却	予習：自己分析について調べる。 復習：教科書・ノートを見直す。	30
6 ／	面接―相手を知る ・志望先の情報を集め、面接準備シートを作成する。	レポート①提出（面接準備シート） 講義と質疑 プリント配布 グループワーク 小テスト④返却	予習：志望先の情報を調べる。 復習：面接準備シートを見直す。	30
7 ／	面接―模擬面接をする ・伝わる話し方について理解し、面接における心構えと技術を習得する。 ・模擬面接を通して、面接の基本事項を学ぶ。	実技②（模擬面接） プリント配布 グループワーク レポート②返却	予習：模擬面接の練習をする。 復習：教科書・ノートを見直す。	30
8 ／	通信文を書き分ける ・さまざまな通信文の形式を理解する。 ・相手や目的に応じて適切な形式を選び、通信文を書く。	漢字小テスト④ 講義と質疑 プリント配布 グループワーク	予習：通信文の目的や形式について調べる。 復習：通信文を仕上げる。	30
9 ／	電子メール ・電子メールの特徴やマナーを理解し、適切な形式と内容で電子メール文書を作成する。	実技③（電子メール） 講義と質疑 プリント配布 グループワーク 漢字小テスト返却	予習：電子メールの書式について調べる。 復習：実技③（電子メール）を仕上げる。	30
10 ／	メディアと情報 ・情報が編集されていることを理解する。 ・メディアごとに立場や条件が異なり、情報の伝え方が異なることを理解する。	漢字小テスト⑤ 講義と質疑 プリント配布 グループワーク	予習：情報の編集目的や方法について調べる。 復習：教科書・ノートを見直す。	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	ネットを活用した情報収集 ・インターネットでの情報検索の仕方と、その注意点について理解する。 ・引用の方法、参考文献や注の示し方を理解する。	漢字小テスト⑥ 講義と質疑 プリント配布 グループワーク 漢字小テスト⑤返却	予習：著作権について調べる。 復習：教科書・ノートを見直す。	30
12 ／	レポートを書く ・レポートのテーマから多様な問いを作成する。 ・問いを絞る。	「問いの作り方」提出 講義と質疑 プリント配布 グループワーク 漢字小テスト⑥返却	予習：取り組むテーマを考える。 復習：問いに対する意見を考える。	30
13 ／	レポートを書く ・意見を支える理由を挙げ、客観的な根拠を集める。 ・文章構成・展開を考え、構成ノートを作成する。	「参考文献表」提出 講義と質疑 プリント配布 グループワーク	予習：参考文献を探しておく。 復習：構成ノートを書き進める。	30
14 ／	レポートを書く ・レポートを執筆する。	「構成ノート」提出 講義と質疑 プリント配布	予習：構成ノートを完成させる。 復習：本文執筆をすすめる。	30
15 ／	レポートを書く ・レポートを相互評価する。	レポート②提出 講義と質疑 プリント配布 グループワーク ふりかえり	予習：レポートを見直す。 復習：相互評価を見直す。	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Expression I B	1	620400	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	TAYLOR, James	Hakusanroku C: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Writing	Students will come prepared to speak and write in English. To progress in the class, students will complete and submit tasks on time. Peer review and feedback are important parts of the writing process, so students will use every opportunity to communicate with classmates, and respect others' ideas and opinions. It is crucial to ask classmates or the teacher for help when necessary.
2	Essays	
3	Genre	
4	Journal	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. Students will consider what they learnt in English Expression I A and expand on their knowledge by continuing to learn about and practice the writing process, including planning and peer review, to write essays. Through the writing process and targeted language activities, students will gain the skills to describe their ideas logically in written English. Short writing tasks will be completed weekly for homework to give students further opportunities to practice expressing themselves. Students will learn and practice the skills and language to achieve high scores on academic writing tasks.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books:

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate in written English.
Desire to improve writing skills through responding appropriately to receiving feedback and constructive criticism.
Work ethic to revise, edit, and rewrite drafts of an essay.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b, f	Students will be able to develop sentences, paragraphs, and essays in response to issues and themes raised in class.
②	e	Students will be able to draw on cultural knowledge and personal experience to express themselves.
③	d, f, g	Students will be able to use planning techniques and peer review to develop their and others' work.
④	e, f	Students will be able to achieve clarity of thought by identifying the features of various genres of writing.
⑤	f, g	Students will be able to use rhetorical appeals to express thoughts and opinions and to persuade others.
⑥	e, f, i	Students will be able to investigate and discuss authors' intentions and meanings in various examples.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	80	0	20	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	5	0	0	25
	Ability to think, reason and create	0	0	20	0	5	0	0	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	20	0	5	0	0	25
	Attitude and motivation for learning	0	0	20	0	5	0	0	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Students will write 2 different genres of essay, which will be graded according on Process (25), Task Achievement (25), Cohesion (25), Coherence (25). Essays will be submitted online. Feedback will be given online before the following lesson. Students will complete Academic Writing Task 1 and Task 2 at least twice each. These will be graded on Task Achievement (9), Coherence & Cohesion (9), Lexical Resource (9), Grammar (9). Feedback will be given in writing and electronically at the start of the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students will write a journal of at least 200 words on an assigned topic for homework after each of the first 14 lessons. The journals will be submitted online. Students will receive credit for journals of sufficient length submitted on time. Each journal is worth 10 points. Feedback will be given online before the following lesson.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students improve their writing drastically, go through the writing process, respond appropriately to feedback, and produce essays of various genres that are logically structured, well argued, and supported by evidence from reliable sources. Students complete and submit all work on time. Students achieve high scores on academic writing tasks.	Students improve their writing to some extent, go through the writing process, respond to some feedback, and produce essays of various genres that are for the most part logically structured, well argued, and supported by evidence from reliable sources. Students achieve reasonable scores on academic writing tasks.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: Students will read the syllabus. Academic Writing Task 1 Introduction & Main Body: Students will consider how to write the introduction and main body of an academic writing task answer (graphs and charts).	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
2 /	Academic Writing Task 1 Main Body & Conclusion: Students will consider how to write the main body and conclusion of an academic writing task answer.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
3 /	Academic Writing Task 1 Practice: Students will attempt an academic writing task under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
4 /	Academic Writing Task 2 Introduction & Main Body: Students will consider how to write the introduction and main body of an academic writing task 2 answer (opinion).	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
5 /	Academic Writing Task 2 Main Body & Conclusion: Students will consider how to write the main body and conclusion of an academic writing task 2 answer.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
6 /	Academic Writing Task 2 Practice: Students will attempt an academic writing task under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
7 /	Opinion Essay 1: Students will review the features and structures of an opinion paragraph, review their own paragraph, then plan and write an opinion essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
8 /	Opinion Essay 2: Students will continue writing their opinion essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
9 /	Opinion Essay 3: Students will continue writing their opinion essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
10 /	Opinion Essay 4: Students will complete and submit their opinion essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Academic Writing: Students will review academic writing tasks 1 and 2, then attempt the tasks under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
12 /	Cause & Effect Essay 1: Students will review the features and structures of a cause and effect paragraph, review their own paragraph, then plan and write a cause and effect essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
13 /	Cause & Effect Essay 2: Students will continue writing their cause and effect essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
14 /	Cause & Effect Essay 3: Students will continue writing their cause and effect essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
15 /	Cause & Effect Essay 4: Students will complete and submit their cause and effect essay. Review: Students will review what was learnt in this course, reflect on their performance, and consider the next semester.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work		

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	日本語基礎A Fundamental Japanese A	2	620900	前学期 1st semester	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	筒井　昌子 TSUTSUI, Masako	白山麓C 101,201		

授 業 科 目 の 学 習 教 育 目 標

	キーワード	学習教育目標
1	日本語	この科目では、キャンパスでの一般的な日常会話の習得を目指し、日本語の入門レベルの文型や文法の学習を踏まえた、話す・聞く能力を高める学習を行う。 In this course, students will learn to improve their speaking and listening skills based on the study of introductory-level sentence patterns and grammar in Japanese, with the aim of mastering general daily conversation on campus.
2	コミュニケーションスキル	
3	日本文化・社会	
4		
5		

授業の概要および学習上の助言

【授業の概要】

本科目は「日本語ＩA」と連動しており教材も共通のものを利用する。

キャンパスでの生活における日常会話の習得を目指す。

「日本語基礎A」では「日本語ＩA」で学習した文字・語彙・文法・文型を用いて、キャンパスでの生活における日常会話の習得と・聴解技能の向上を目指す。

This course is linked to “Japanese Language I A” and uses the same teaching materials.

The aim of this course is to master daily conversation in campus life.

In “Fundamental Japanese A,” students will use the letters, vocabulary, grammar, and sentence patterns learned in “Japanese I A” to learn daily conversation and improve listening comprehension skills for daily life on campus.

【学習上の助言】

・学習目標を常に意識すること。

・わからない言葉は辞書で調べること。

- Always be aware of your learning goals.
- Look up unfamiliar words in a dictionary.

※この授業ではアクティブラーニングの一環として、調査学習、体験学習、グループワークなどを行う。

* This class will include research, experiential learning, and group work as part of active learning.

【【教科書および参考書・リザーブドブック】

教科書：「いろどり －生活の日本語」　オンラインブック　国際交流基金

　　「まるごと －日本のことばと文化 入門Ａ１ りかい」　三修社

参考書：

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

特になし

No.	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	e,i	ひらがな、カタカナが正しく読める。 Student will be able to read hiragana and katakana correctly.
②	e,i	テキストで学んだ文型や語彙が用いられた日本語表現を聞いて、意味を理解できる。 Can listen to and understand the meaning of Japanese expressions in which sentence patterns and vocabulary learned in the text are used.
③	a,e,i	テキストで学んだ文型や語彙を用いて話して、大まかに自分の意志を伝えることができる。 Can speak using sentence patterns and vocabulary learned in the text and communicate his/her intentions in broad strokes.
④	e,i	挨拶表現など、日本での習慣的な基本ルールを理解し行動で表現できる。 Understand the basic rules of Japanese customs, such as greetings and expressions, and express them through actions.
⑤	e,f,g	学習した場面と類似の状況下で、学習した言葉や文型を応用して談話展開が想像できる。 Student will be able to create discourse in a situation similar to the one studied.
⑥	e.f.g	突然の談話展開に臆せず、学習した状況に近いタスクをこなすことができる。 Student will be able to perform tasks in situations similar to those studied without being intimidated by sudden discourse developments.

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	40	0	60	0	0	0	100
総合力指標	知識を取り込む力	0	10	0	10	0	0	0	20
	思考・推論・創造する力	0	10	0	10	0	0	0	20
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	20	0	40	0	0	0	60
	学習に取組む姿勢・意欲	0	0	0	0	0	0	0	0

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	✓	<u>クイズ・テスト　Quizzes/Test</u> ・談話作成テスト　評価割合　40% - Letters (include Kanji), vocabulary　(40/100) ※1課または数課ごとにクイズを行う。回数や実施日は学習進度によって変わるため学生と相談の上決定する。 * Quizzes will be given every 1chapter or few chapters. The number of quizzes and dates will depend on the progress of the students and will be decided in consultation with the students.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		<u>口頭会話チェック Oral conversation</u> ・ロールプレイ　評価割合　60% - oral conversation test　(60/100) ※評価内容は事前にルーブリックを提示する。 *A rubric will be presented in advance of the evaluation content.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・助詞や文型、時制を正しく使って、文を産出できる。 ・自分が言いたいことを、学習した文型や語彙を用いて、いくつかの単文で表現できる。 -Can produce sentences using particles, sentence structure and tenses correctly. -Can express what you wants to say in several single sentences using the learned sentence patterns and vocabulary.	・時折、助詞や文型、時制の間違いなどはあるが、意味が通じる程度の正確さで文を産出できる。 ・文型や語彙を助けてもらいながら、自分が言いたいことを、いくつかの単文で表現できる。 -Can produce sentences that make sense despite occasional errors in particles, sentence structure, and tense. -Can express what he/she wants to say in a few single sentences with the help of others.

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1	Class Orientation Introduction of Japanese letter	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
2	Numbers Classroom Expressions Greetings Pronunciation	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
3	More Numbers Introducing yourself Pronunciation of Special Sound.	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
4 ／	Lesson 1 Grammar Can-do 1 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
5 ／	Lesson 1 Grammar Can-do 2 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
6 ／	Lesson 2 Grammar Can-do 3 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
7 ／	Lesson 2 Grammar Can-do 1 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
8 ／	Lesson 3 Grammar Can-do 2 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
9 ／	Lesson 3 Grammar Can-do 3 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
10 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
11 ／	Lesson 4 Grammar Can-do 1 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
12 ／	Lesson 5 Grammar Can-do 2 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
13 ／	Lesson 6 Grammar Can-do 3 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
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回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
14 ／	Lesson 7 Grammar Can-do 1 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
15 ／	Lesson 8 Grammar Can-do 2,3 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
16 ／	Lesson 9 Grammar Can-do 4 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents テストの準備　Prepare for Test	30
17 ／	**会話テスト #1 Conversation Test** Review	講義・演習 Lecture・Practice テスト実施・採点・返却 Test, Grading & Return	授業内容の復習 Review the course contents	30
18 ／	Lesson 10 Grammar Can-do 1 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
19 ／	Lesson 11 Grammar Can-do 2 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
20 ／	Lesson 12 Grammar Can-do 3,4 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
21 ／	Lesson 13 Grammar Can-do 1 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
22 ／	Lesson 14 Grammar Can-do 1,2 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
23 ／	Lesson 15 Grammar Can-do 2,3 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
24 ／	Lesson 16 Grammar Can-do 4,5 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents テストの準備　Prepare for Test	30
25 ／	**会話テスト #2 Conversation Test** Review	講義・演習 Lecture・Practice テスト実施・採点・返却 Test, Grading & Return	授業内容の復習 Review the course contents	30
26 ／	Lesson17 Grammar Can-do 1 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
27 ／	Lesson 18 Grammar Can-do 2 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
28 ／	Lesson 7 Grammar Can-do 3 Sp./L Practice	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents テストの準備 Prepare for Test	30
29 ／	**会話テスト #3 Conversation Test**	講義・演習 Lecture・Practice テスト実施・採点・返却 Test, Grading & Return	授業内容の復習 Review the course contents	30
30 ／	Review & Self Evaluation	講義・演習 Lecture・Practice		なし

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Bridge English A (Physics)	2	621000	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	TSUDA, Akihiro	Hakusanroku C: 101. 201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	STEM	This course emphasizes the fundamental English language to support all the STEM courses conducted in English in the 1st and 2nd year. The main purpose of it is for students to be able to succeed in the content courses as they learn how to address and approach the challenges such as scientific terminology, expressions, or concepts in English.
2	Engineering	
3	Study Skills	
4		
5		

Course Description and Expectations for Students (10.5pt)

This course will offer group work in class as a type of active learning."

The main purpose is to provide the academic support in STEM classes. As all the STEM courses are taught in English, which may cause you to face many challenges and even decrease motivation, the fundamentals gained in this course allow you to build up confidence and academic skills. Additionally, we advise you to use these skills outside of the classroom.
This course is divided into 4 sections; Chemistry, Physics, Math, and Engineering and Science.

(Physics)
Lecture, exercise, pair-work, presentation,
You need to submit all the handouts after a quiz.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Students will be able to improve their vocabulary in order to succeed in their STEM classes.
②	h	Students will be able to use scientific language and expressions needed in their STEM classes.
③	h, d	Students will be able to develop problem solving skills in order to take responsibility for their own learning.
④	i	Students will be able to develop a broader mindset from the content they study in their classes.
⑤	i	Students will be able to increase their knowledge about the content they study.
⑥	i	Students will be able to understand each grammatical point.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	40	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	40	20	0	0	0	0	60
	Ability to think, reason and create	0	20	10	0	0	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	0	0	0	10
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Each quiz will be given after a block of 3 classes. There are 4 quizzes throughout a semester. Total (100pts) = Physics (25pts) + Chemistry (25pts) + Engineering (25pts) + Math (25pts) The results will be returned in class in the following week.
	②	✓	
	③	✓	
	④		
	⑤		
	⑥	✓	
Reports	①		In order to review and evaluate your understanding and progress, you need to submit handouts. Submission rules depend on each teacher. The handouts will be returned in class after a quiz.
	②		
	③		
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Engineering Airplane	Lecture Interactive activity Project based	Read the syllabus Study vocabulary	20
2 /	Engineering Airplane ①	Lecture Interactive activity Project based	Finish the review sheet	30
3 /	Shape ①	Lecture Interactive activity	Review the content Complete the assignment	30
4 /	Shape ①	Lecture Interactive activity	Review the content Complete the assignment	30
5 /	Shape ②	Lecture Interactive activity	Review the content Complete the assignment	30
6 /	Shape ②	Lecture Interactive activity	Review the content Complete the assignment	30
7 /	Force ①	Lecture Interactive activity	Review the content Complete the assignment	30
8 /	Force ①	Lecture Interactive activity	Review the content Complete the assignment	30
9 /	**Catch-up / Quiz** 1	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
10 /	Force ②	Lecture Interactive activity	Review the content Complete the assignment	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Force ②	Lecture Interactive activity	Review the content Complete the assignment	30
12 /	Inertia ①	Lecture Interactive activity	Review the content Complete the assignment	30
13 /	Inertia ①	Lecture Interactive activity	Review the content Complete the assignment	30
14 /	Inertia ②	Lecture Interactive activity	Review the content Complete the assignment	30
15 /	Inertia ②	Lecture Interactive activity	Review the content Complete the assignment	30
16 /	**Catch-up / Quiz 2**	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
17 /	Movement/Actions ①	Lecture Interactive activity	Review the content Complete the assignment	30
18 /	Movement/Actions ①	Lecture Interactive activity	Review the content Complete the assignment	30
19 /	Movement/Actions ②	Lecture Interactive activity	Review the content Complete the assignment	30
20 /	Movement/Actions ②	Lecture Interactive activity	Review the content Complete the assignment	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Heat ①	Lecture Interactive activity	Review the content Complete the assignment	30
22 /	Heat ①	Lecture Interactive activity	Review the content Complete the assignment	30
23 /	**Catch-up / Quiz 3**	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
24 /	Heat ②	Lecture Interactive activity	Review the content Complete the assignment	30
25 /	Heat ②	Lecture Interactive activity	Review the content Complete the assignment	30
26 /	Describing an experiment ①	Lecture Interactive activity	Review the content Complete the assignment	30
27 /	Describing an experiment ①	Lecture Interactive activity	Review the content Complete the assignment	30
28 /	Describing an experiment ②	Lecture Interactive activity	Review the content Complete the assignment	30
29 /	Describing an experiment ②	Lecture Interactive activity	Review the content Complete the assignment	30
30 /	Catch-up / Quiz 4	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Bridge English A (Engineering and Science)	2	621000	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	STEVENSON, Ian	Hakusanroku C.: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	STEM	This course emphasizes the fundamental English language to support all the STEM courses conducted in English in the 1st and 2nd year. The main purpose of it is for students to be able to succeed in the content courses as they learn how to address and approach the challenges such as scientific terminology, expressions, or concepts in English.
2	Engineering	
3	Study Skills	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group work, problem solving, discovery and experiential learning as types of active learning. The main purpose is to provide academic support in STEM classes. As all the STEM courses are taught in English, which may cause you to face many challenges and even decrease motivation, the fundamentals gained in this course allow you to build confidence and academic skills. Additionally, we advise you to use these skills outside of the classroom.
This course is divided into 4 sections; Chemistry, Physics, Math, and Engineering and Science.

(Engineering and Science)
Lecture, exercises, pair-work, presentation

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinions, and plans. Can also ask questions, read simple instructions, and take directions.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Students will be able to improve their vocabulary in order to succeed in their STEM classes.
②	h	Students will be able to use scientific language and expressions needed in their STEM classes.
③	h, d	Students will be able to develop problem-solving skills in order to take responsibility for their own learning.
④	i	Students will be able to develop a broader mindset from the content they study in their classes.
⑤	i	Students will be able to increase their knowledge about the content they study.
⑥	i	Students will be able to understand each grammatical point.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	40	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	40	20	0	0	0	0	60
	Ability to think, reason and create	0	20	10	0	0	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	0	0	0	10
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	Each quiz will be given after a block of 3 classes. There are 4 quizzes throughout a semester. Total (100pts) = Physics (25pts) + Chemistry (25pts) + Engineering and Science (25pts) + Math (25pts) The results will be returned in class in the following week.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	In order to review and evaluate your understanding and progress, you need to submit handouts. Submission rules depend on each teacher. The handouts will be returned in class after a quiz.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Engineering Airplane	Lecture Interactive activity Project based	Read the syllabus Study vocabulary	30
2 /	Engineering Airplane ①	Lecture Interactive activity Project based	Finish the review sheet	30
3 /	Design ①	Lecture Interactive activity	Review the content Complete the assignment	30
4 /	Design ①	Lecture Interactive activity	Review the content Complete the assignment	30
5 /	Design ②	Lecture Interactive activity	Review the content Complete the assignment	30
6 /	Design ②	Lecture Interactive activity	Review the content Complete the assignment	30
7 /	Prototyping ①	Lecture Interactive activity	Review the content Complete the assignment	30
8 /	Prototyping ①	Lecture Interactive activity	Review the content Complete the assignment	30
9 /	**Catch-up / Quiz** 1	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
10 /	Prototyping ②	Lecture Interactive activity	Review the content Complete the assignment	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Prototyping ②	Lecture Interactive activity	Review the content Complete the assignment	30
12 /	Presenting ① Explaining your prototype to another engineer	Lecture Interactive activity	Review the content Complete the assignment	30
13 /	Presenting ①	Lecture Interactive activity	Review the content Complete the assignment	30
14 /	Presenting ②	Lecture Interactive activity	Review the content Complete the assignment	30
15 /	Presenting ②	Lecture Interactive activity	Review the content Complete the assignment	30
16 /	**Catch-up / Quiz 2**	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
17 /	Computer Skills ①	Lecture Interactive activity	Review the content Complete the assignment	30
18 /	Computer Skills ①	Lecture Interactive activity	Review the content Complete the assignment	30
19 /	Computer Skills ②	Lecture Interactive activity	Review the content Complete the assignment	30
20 /	Computer Skills ②	Lecture Interactive activity	Review the content Complete the assignment	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Computer Issues ①	Lecture Interactive activity	Review the content Complete the assignment	30
22 /	Computer Issues ①	Lecture Interactive activity	Review the content Complete the assignment	30
23 /	**Catch-up / Quiz 3**	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
24 /	Computer Issues ②	Lecture Interactive activity	Review the content Complete the assignment	30
25 /	Computer Issues ②	Lecture Interactive activity	Review the content Complete the assignment	30
26 /	Poster Presentation ① Developing the necessary computer skills to make a good poster	Lecture Interactive activity	Review the content Complete the assignment	30
27 /	Poster Presentation ①	Lecture Interactive activity	Review the content Complete the assignment	30
28 /	Poster Presentation ②	Lecture Interactive activity	Review the content Complete the assignment	30
29 /	Poster Presentation ②	Lecture Interactive activity	Review the content Complete the assignment	30
30 /	**Catch-up / Quiz 4**	Review and evaluate your progress and understanding	Study for a quiz / review the contents	

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Bridge English A (Chemistry)	2	621000	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	BAIRD, Pauline	Hakusanroku C: 101. 201		M-W 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	STEM	This course emphasizes the fundamental English language to support all the STEM courses conducted in English in the 1st and 2nd year. The main purpose of it is for students to be able to succeed in the content courses as they learn how to address and approach the challenges such as scientific terminology, expressions, or concepts in English.
2	Engineering	
3	Study Skills	
4		
5		

Course Description and Expectations for Students (10.5pt)

This course will offer discovery and experiential learning as types of active learning. The main purpose is to provide academic support in STEM classes. As all the STEM courses are taught in English, which may cause you to face many challenges and even decrease motivation, the fundamentals gained in this course allow you to build up confidence and academic skills. Additionally, we advise you to use these skills outside of the classroom. This course is divided into 4 sections: Chemistry, Physics, Math, Engineering and Science.

(Chemistry)
Lecture, exercise, pair-work, presentation,
You need to submit all the handouts on the day of the quiz.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinions, and plans. Can also ask questions, read simple instructions, and take directions.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Students will be able to improve their vocabulary in order to succeed in their STEM classes.
②	h	Students will be able to use scientific language and expressions needed in their STEM classes.
③	h, d	Students will be able to develop problem-solving skills in order to take responsibility for their own learning.
④	i	Students will be able to develop a broader mindset from the content they study in their classes.
⑤	i	Students will be able to increase their knowledge about the content they study.
⑥	i	Students will be able to understand each grammatical point.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	40	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	40	20	0	0	0	0	60
	Ability to think, reason and create	0	20	10	0	0	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	0	0	0	10
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	60% Each quiz will be given after a block of classes. There are 4 quizzes throughout a semester (60%) Total (100pts) = Physics (25pts) + Chemistry (25pts) + Engineering (25pts) + Math (25pts) The results will be returned in class in the following week.
	②	✓	
	③	✓	
	④		
	⑤		
	⑥	✓	
Reports	①		40% You must submit handouts to review and evaluate your understanding and progress. Please submit your reports (handouts, homework, and class assignments) in class right before the quiz. (The graded handouts will be returned in class after a quiz.
	②		
	③		
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Engineering Airplane	Lecture Interactive activity Project based	Read the syllabus Study vocabulary	20
2 /	Engineering Airplane ①	Lecture Interactive activity Project based	Finish the review sheet	30
3 /	Module 1: Thinking Like a Scientist Skimming, scanning, and annotating ①	Lecture Interactive activity	Review the content Complete the assignment	30
4 /	Thinking Like a Scientist Skimming, scanning, and annotating ②	Lecture Interactive activity	Review the content Complete the assignment	30
5 /	Skimming, scanning, and annotating ③	Lecture Interactive activity	Review the content Complete the assignment	30
6 /	Skimming, scanning, and annotating ④	Lecture Interactive activity	Review the content Complete the assignment	30
7 /	Module 2: Exploring Chemistry Common Instructions Identify: Describe, define, list, label. Match, write short notes, discuss, complete, submit, email, upload.	Lecture Interactive activity	Review the content Complete the assignment	30
8 /	Common Instructions in STEM ①	Lecture Interactive activity	Review the content Complete the assignment	30
9 /	**Catch-up / Quiz** 1	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
10 /	Common Instructions in STEM ②	Lecture Interactive activity	Review the content Complete the assignment	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Common Instructions in STEM ③	Lecture Interactive activity	Review the content Complete the assignment	30
12 /	Module 3: Properties of Matter Defining, classifying, describing pp. 34-35 ①	Lecture Interactive activity	Review the content Complete the assignment	30
13 /	Defining, classifying, describing pp. 34-35 ①	Lecture Interactive activity	Review the content Complete the assignment	30
14 /	Vocabulary building, summarizing pp. 34-35 ②	Lecture Interactive activity	Review the content Complete the assignment	30
15 /	Vocabulary building, summarizing pp. 34-35 ②	Lecture Interactive activity	Review the content Complete the assignment	30
16 /	**Catch-up / Quiz 2**	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
17 /	Module 4: Matter and Change: Reading and Comprehension pp. 38-39 ①	Lecture Interactive activity	Review the content Complete the assignment	30
18 /	Reading and Comprehension pp. 38-39 ①	Lecture Interactive activity	Review the content Complete the assignment	30
19 /	Defining and Making Comparison pp: 39-40 ②	Lecture Interactive activity	Review the content Complete the assignment	30
20 /	Defining and Making Comparison pp: 39-40 ②	Lecture Interactive activity	Review the content Complete the assignment	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Matter and Change ③ Reading Comprehension pp. 41-42 Annotating & summarizing	Lecture Interactive activity	Review the content Complete the assignment	30
22 /	Matter and Change ③ Reading pp. 41-42 Annotating & summarizing Using adjectives (comparison)	Lecture Interactive activity	Review the content Complete the assignment	30
23 /	**Catch-up / Quiz 3** ③	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30
24 /	Module 5: Describing Process and Results ① Reading pp. 40 Short report, steps in a process	Lecture Interactive activity	Review the content Complete the assignment	30
25 /	Reading pp. 40 ① Short report, steps in a process	Lecture Interactive activity	Review the content Complete the assignment	30
26 /	Reading pp. 52 ② Summarizing a process	Lecture Interactive activity	Review the content Complete the assignment	30
27 /	Reading pp. 52 ② Summarizing a process	Lecture Interactive activity	Review the content Complete the assignment	30
28 /	Reading pp. 52 ③ Summarizing a process & Documenting APA	Lecture Interactive activity	Review the content Complete the assignment	30
29 /	Reading pp. 52 ③ Summarizing a process & Documenting APA	Lecture Interactive activity	Review the content Complete the assignment	30
30 /	**Catch-up / Quiz 4**	Review and evaluate your progress and understanding	Study for a quiz / review the contents	30

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Bridge English A (Math)	2	621000	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	BARNETSON, Hamish	Hakusanroku C.: 101.201		Tuesday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	STEM	This course emphasizes the fundamental English language to support all the STEM courses conducted in English in the 1st and 2nd year. The main purpose of it is for students to be able to succeed in the content courses as they learn how to address and approach the challenges such as scientific terminology, expressions, or concepts in English.
2	Engineering	
3	Study Skills	
4		
5		

Course Description and Expectations for Students (10.5pt)

This course will offer group work, problem solving, discovery and experiential learning as types of active learning. The main purpose is to provide academic support in STEM classes. As all the STEM courses are taught in English, which may cause you to face many challenges and even decrease motivation, the fundamentals gained in this course allow you to build up confidence and academic skills. Additionally, we advise you to use these skills outside of the classroom.
This course is divided into 4 sections: Chemistry, Physics, Math, and Engineering and Science.

(Math)
Lecture, exercise, pair-work, presentation.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinions, and plans. Can also ask questions, read simple instructions, and take directions.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Students will be able to improve their vocabulary in order to succeed in their STEM classes.
②	h	Students will be able to use scientific language and expressions needed in their STEM classes.
③	h, d	Students will be able to develop problem-solving in order to take responsibility for their own learning.
④	i	Students will be able to develop a broader mindset from the content they study in their classes.
⑤	i	Students will be able to increase their knowledge about the content they study.
⑥	i	Students will be able to understand each grammatical point.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	40	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	40	20	0	0	0	0	60
	Ability to think, reason and create	0	20	10	0	0	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	0	0	0	10
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Each quiz will be given after a block of 3 classes. There are 4 quizzes throughout a semester. Total (100pts) = Physics (25pts) + Chemistry (25pts) + Engineering (25pts) + Math (25pts) The results will be returned in class in the following week.
	②	✓	
	③	✓	
	④		
	⑤		
	⑥	✓	
Reports	①		In order to review and evaluate your understanding and progress, you need to submit handouts. Submission rules depend on each teacher. The handouts will be returned in class after a quiz.
	②		
	③		
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Engineering Airplane	Lecture Interactive activity Project-based	Read the syllabus Study vocabulary	30
2 /	Engineering Airplane ①	Project-based	Finish the review sheet	30
3 /	Numbers 1 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary they learn; complete assignments	30
4 /	Numbers 1 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary they learn; complete assignments	30
5 /	Vocabulary 1 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary they learn; complete assignments	30
6 /	Vocabulary 1 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary they learn; complete assignments	30
7 /	Formula 1 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary they learn; complete assignments	30
8 /	Formula 1 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary they learn; complete assignments	30
9 /	**Catch-up / Quiz 1**	Lecture, pair-work, and practice	Review for Quiz 1	30
10 /	Vocabulary 2 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Review and reflect	Review the vocabulary they learn; complete assignments	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Vocabulary 2 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
12 /	Formula 2 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
13 /	Formula 2 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
14 /	Graph 1 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
15 /	Graph 1 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Quiz 2 review	30
16 /	**Catch-up / Quiz 2**	Review and evaluate. your progress and understanding	Review the vocabulary; complete assignments	30
17 /	Numbers 2 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
18 /	Numbers 2 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
19 /	Graph 2 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
20 /	Graph 2 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Formula 3 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
22 /	Formula 3 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Quiz 3 review module	30
23 /	**Catch-up / Quiz 3**	Review and evaluate. your progress and understanding	Study for a quiz / review the contents	30
24 /	Numbers 3 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
25 /	Numbers 3 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
26 /	Vocabulary 3 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
27 /	Vocabulary 3 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
28 /	Graphs 3 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Review the vocabulary; complete assignments	30
29 /	Graphs 3 Exploring the origin/history of math vocabulary/language and the links between this class and other ICT classes.	Lecture, pair-work, and practice	Quiz 4 review	30
30 /	**Catch-up / Quiz 4**	Review and evaluate your progress and understanding	Study for a quiz/review the contents	30

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	日本文学	1	621101	前学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	黒田　譜美	白山麓C： 101.201		水曜　15:00-16:00

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	日本文学	小説、随筆、評論、詩、俳句、和歌、漢詩など多種多様な文学作品を読むことを通して、日本の言語文化の特質や外国の文化との関係について理解を深める。作品が成立した歴史的・文化的背景を調べたり、作中の抽象表現や描写に留意したりしながら、作者の考えや登場人物の心情を丁寧に読み進め、作品の語りかけるものを的確に把握する読解力・鑑賞力を鍛える。また、情景の豊かさや心情の機微を表す語句の量を増し、文章の中で使うことを通して、語感を磨き語彙を豊かにする。
2	読解力	
3	思考力	
4	表現力	
5		

授業の概要および学習上の助言

授業の概要

本授業では主に下記作品を扱う。

『古事記』、『源氏物語』、『論語』、『荘子』、山崎正和『水の東西』、谷崎潤一郎『陰翳礼讃』、夏目漱石『夢十夜』、フランツ・カフカ『掟の門』、筒井康隆『駝鳥』

学習上の助言：

・ノートは板書したものだけではなく、口頭での説明も書くようにすること。
・課題は必ず実行すること。
・辞書は必ず用意すること。また、辞書を常に引くように心がけ、知らない言葉を確認し、着実に身につけること。
・対象作品は徹底的に読み込むこと。
・さまざまなジャンルの書物を読むよう心がけること。

【教科書および参考書・リザーブドブック】

教科書：中島国彦監修『文学のとびらを開く　近現代文学名作選』明治書院(ISBN：978-4-625-28350-5)

参考書：指定なし

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：指定なし

履修に必要な予備知識や技能

日本語検定4級（中学校卒業）程度の日本語能力を身につけている。

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	f	語句の意味を正しく理解し、正確に読むことができる。
②	f	作品の構成や展開の仕方を的確に捉え、説明することができる。
③	f	人物の心理の推移について、作品の展開に即して読み取ることができる。
④	e,f	作品が成立した背景や他の作品との関係を踏まえ、作品の解釈を深めることができる。
⑤	e,f	主張や感動などが効果的に伝わるように、構成や表現を工夫して書くことができる。
⑥	f,i	読書の意義と効用について理解を深め、読書経験を重ねることができる。

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	20	40	20	0	20	0	100
総合力指標	知識を取り込む力	0	20	0	0	0	10	0	30
	思考・推論・創造する力	0	0	20	0	0	0	0	20
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	20	10	0	0	0	30
	学習に取組む姿勢・意欲	0	0	0	10	0	10	0	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	小テスト：20点
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
レポート	①		レポート：40点 ①私がすきなことば ②日本文化論 ③創作
	②		
	③		
	④	レ	
	⑤	レ	
	⑥	レ	
成果発表 （口頭・実技）	①	レ	成果発表：20点
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①	レ	授業記録：20点 ①『源氏物語』 ②『論語』
	②	レ	
	③	レ	
	④		
	⑤		
	⑥	レ	
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
■小テスト 読解に必要な漢字・語句の知識がある。 自ら文献を調べ、作品に関する知識を得ることができる。 正確に読解し、問いに対して的確に解答できる。 論拠を示して、独自の解釈を述べることができる。 ■レポート・成果発表 自分にひきつけて考え、独自の視点が入っている。 明快な文章構成、効果的な文章表現ができる。 多様な作品を読み、ものの見方や考え方を豊かにすることができる。	■小テスト 読解に必要な漢字・語句の知識がある。 教材を読み、作品に関する知識がある。 正確に読解し、問いに対して解答できる。 講義をふまえ、自分の解釈を述べることができる。 ■レポート・成果発表 講義や意見交換をもとに、自分の考えをまとめることができる。 文章構成や文章表現を工夫できる。 作品を読み、ものの見方や考え方を広げることができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	■科目ガイダンス ・科目の目的、内容、評価方法について理解する。 ・過去に鑑賞した作品について話し合う。	講義と質疑 プリント配布	配布プリントやノートを再読し、理解を深める。（復習）	30
2 ／	古典：『古事記』/『源氏物語』 ・作品概要を把握する。 ・古典と創作の関係を考え、話し合う。	授業記録①提出 講義と質疑 プリント配布	授業で指定された部分を読解し、語句を整理する。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30
3 ／	古典：『論語』/『荘子』 ・書き下し文を読み、口語訳する。 ・思想の違いを理解する。	授業記録②提出 講義と質疑 プリント配布	授業で指定された部分を読解し、語句を整理する。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30
4 ／	紹介文（私のすきなことば） ・文章の基本構成、文体を理解する。 ・構成ノートを作成し、文章を書く。	レポート①提出 講義と質疑 プリント配布 グループワーク	授業で指定された部分を読解し、語句を整理する。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30
5 ／	随筆：山崎正和「水の東西」 ・対比的な構成をとりながら論をすすめる展開の仕方を理解する。 ・筆者の日本的感性を理解し、自分の日本的なものの見方とどう違っていたかを話し合う。	講義と質疑 プリント配布 グループワーク	授業で指定された部分を読解し、語句を整理する。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30
6 ／	随筆：谷崎潤一郎「陰翳礼讃」 ・表現技法の特徴を把握する。 ・現代社会において「闇」を活用している例を挙げ、どのような効果があるか考え、話し合う。	小テスト 講義と質疑 プリント配布 グループワーク	小テストの学習をする。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30
7 ／	【演習】 ・レポートに取り組む。	プリント配布 グループワーク	テーマを考える。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30
8 ／	【発表】 ・作品を発表し、相互評価する。	レポート②提出 講義と質疑 プリント配布 小テスト返却	発表の準備をする。（予習） 相互評価を見直し、自己点検を行う（復習）	30
9 ／	小説：夏目漱石「夢十夜」 ・作者について経歴や作風について理解する。 ・作品を読んだ感想を話し合う。	講義と質疑 プリント配布 グループワーク	授業で指定された部分を読解し、語句を整理する。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30
10 ／	小説：カフカ「掟の門」 / 筒井康隆「駝鳥」 ・作品の寓意について話し合う。	講義と質疑 プリント配布 グループワーク	授業で指定された部分を読解し、語句を整理する。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	絵から物語を作る ・発端、展開、クライマックス、結末の展開を意識して、4枚の絵から短い物語を作る。	レポート③提出 講義と質疑 プリント配布 グループワーク	授業で指定された部分を読解し、語句を整理する。（予習） 配布プリントやノートを再読し、理解を深める。（復習）	30
12 ／	物語のテーマと設計図 ・物語のテーマを決める。 ・ストーリーマップとキャラクターマップを利用して物語の設計図を作る。	講義と質疑 プリント配布 グループワーク	物語のテーマを決める。（予習） ノート・教科書を見直す。（復習）	30
13 ／	物語の創作 ・設計図に沿って物語を書く。	レポート③提出 講義と質疑 プリント配布 グループワーク	マップを読み直す。（予習） 作品を仕上げる。（復習）	30
14 ／	プレゼンテーション ・発表資料の作成に取り組む。	プリント配布 グループワーク	発表資料の準備をする（予習） プレゼンテーション資料を仕上げる。（復習）	30
15 ／	プレゼンテーション ・発表を行い、相互評価する。	成果発表 プリント配布 アンケート実施	発表の準備をする。（予習） 相互評価を見直し、自己点検を行う。（復習）	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Literature	1	621200	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	TAYLOR, James	Hakusanroku C: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Literature	Students will be able to familiarise themselves with English literature of various genres. Students will engage critically with the literature by reading, listening, watching, and discussing. Students will discuss and analyse the literature orally and in writing and consider its place in contemporary and modern society.
2	Discussion	
3	Analysis	
4	Writing	
5		

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. Students will consider the features of 4 genres of literature in English: wordless picturebooks; short fiction; poetry; and protest songs. Through a mixture of teacher-led and self-directed activities involving reading, listening, discussing, drawing, and watching, students will gain the skills necessary to engage critically with each piece of literature. Students will prepare for and participate in class discussions and will produce written work in response to the literature. Students will be able to analyse the technical aspects of the literature in addition to placing it in its contemporary context and connecting it to modern society.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate in written and spoken English.
Ability to read and understand an English text.
Ability to listen to and understand spoken English.
Work ethic to complete and submit tasks on time.
Initiative to ask for help when necessary.

No.	Program Objectives	Target Abilities for Students (9pt)
①	e, f, g, i	Students will be able to identify and explain the features and technical aspects of various genres of literature.
②	e, f, g, i	Students will be able to analyse, discuss, and respond to literature of various genres orally.
③	e, f, g, i	Students will be able to analyse, discuss, and respond to literature of various genres in writing.
④	e, f, g, i	Students will be able to consider the contemporary society of the literature they study.
⑤	e, f, g, i	Students will be able to connect the literature they study to modern society.
⑥	e, f, g, i	Students will be able to introduce and discuss literature of their own choosing.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	50	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	13	13	0	0	0	26
	Ability to think, reason and create	0	0	12	12	0	0	0	24
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	13	13	0	0	0	26
	Attitude and motivation for learning	0	0	12	12	0	0	0	24

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Students will produce at least 4 pieces of written work (at least 1 per unit) in response to the literature studied. The tasks will be graded according to the following criteria: Task Achievement, Lexical Resource (Vocabulary), Grammatical Range and Accuracy, Coherence and Cohesion. Tasks will be submitted online. Feedback will be given in person and/or online before the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	Students will produce at least 4 pieces of oral work (at least 1 per unit) in response to the literature studied. The tasks will be graded according to the following criteria: Task Achievement, Lexical Resource (Vocabulary), Grammatical Range and Accuracy, Coherence and Cohesion, Pronunciation. Tasks will be done in class and/or submitted online. Feedback will be given in person and/or online before the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will engage critically with the literature on a deep level to analyse the literature and its connections to contemporary and modern society in detail. Students will participate actively in class discussions by asking and answering questions. Students will submit detailed written tasks on time.	Students will engage with the literature on a superficial level to analyse the literature and its connections to contemporary and modern society in some detail. Students will participate in class discussions to some extent. Students will submit written tasks on time.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: students will read the syllabus. Students will discuss literature in general terms. Unit 1: Wordless Picturebooks (1) Students will be introduced to wordless picturebooks as a genre.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations)	30
2 /	Unit 1: Wordless Picturebooks (2) Students will read, analyse, and discuss wordless picturebooks.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations) and written task (Reports)	30
3 /	Unit 1: Wordless Picturebooks (3) Students will consider the contemporary society of the wordless picturebooks and their implications for modern society.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations) and written task (Reports)	30
4 /	Unit 1: Wordless Picturebooks (4) Students will express their reactions to the wordless picturebooks orally and in writing.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Complete and submit oral task (Presentations) and written task (Reports)	30
5 /	Unit 2: Short Fiction (1) Students will be introduced to short fiction as a genre.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations)	30
6 /	Unit 2: Short Fiction (2) Students will read, analyse, and discuss a piece of short fiction.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations) and written task (Reports)	30
7 /	Unit 2: Short Fiction (3) Students will consider the contemporary society of the short fiction and its implications for modern society.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations) and written task (Reports)	30
8 /	Unit 2: Short Fiction (4) Students will express their reactions to the short fiction orally and in writing.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Complete and submit oral task (Presentations) and written task (Reports)	30
9 /	Unit 3: Poetry (1) Students will be introduced to poetry as a genre and technical terms for analysing poems.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations)	30
10 /	Unit 3: Poetry (2) Students will read, analyse, and discuss poetry.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations) and written task (Reports)	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 3: Poetry (3) Students will consider the contemporary society of the poetry and its implications for modern society.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Prepare for oral task (Presentations) and written task (Reports)	30
12 /	Unit 3: Poetry (4) Students will express their reactions to poetry orally and in writing.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing	Complete and submit oral task (Presentations) and written task (Reports)	30
13 /	Unit 4: Protest Songs (1) Students will be introduced to protest songs as a genre.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing, research	Prepare for oral task (Presentations) and written task (Reports)	30
14 /	Unit 4: Protest Songs (2) Students will read, listen to, analyse, and discuss protest songs. Students will consider the contemporary society of selected protest songs and their implications for modern society.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing, research	Prepare for oral task (Presentations) and written task (Reports)	30
15 /	Unit 4: Protest Songs (3) Students will express their reactions to poetry orally and in writing. Review: students will reflect on the course.	Worksheets, videos, discussion, writing, individual work, pair work, group work, peer review, reading, drawing, research	Complete and submit oral task (Presentations) and written task (Reports)	30

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	日本語基礎B Fundamental Japanese B	1	621300	後学期 2st semester	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	筒井　昌子 TSUTSUI, Masako	白山麓C 101,201		

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	日本語	この科目では、先学期開講した「日本語基礎A」「日本語ＩA」から継続して、日常の日本語でのコミュニケーション能力に関して、四技能を総合的に向上させることをめざす。 In this course, continuing from "Fundamental Japanese A" and "Japanese I A" offered in the previous semester, we aim to comprehensively improve the four skills of daily communication in Japanese.
2	コミュニケーションスキル	
3	日本文化・社会	
4		
5		

授業の概要および学習上の助言

【授業の概要】

先学期に引き続き「日本語基礎B」で会話能力を「日本語ＩB」で読み書きの能力の向上を目指す。
語彙クイズや漢字クイズについては「日本語ＩB」の学習活動として実施し、評価もそちらで行う。
Continuing from last semester, students mastered conversational skills in "Basic Japanese B" and reading and writing skills in "Japanese IB".
Vocabulary quizzes and Kanji quizzes will be conducted as a learning activity in "Japanese IB" and will be evaluated there as well.

【学習上の助言】

・学習目標を常に意識すること。
・わからない言葉は辞書で調べること。
- Always be aware of your learning goals.
- Look up unfamiliar words in a dictionary.

※この授業ではアクティブラーニングの一環として、調査学習、体験学習、グループワークなどを行う。
* This class will include research, experiential learning, and group work as part of active learning.

【【教科書および参考書・リザーブドブック】

教科書：授業開始後に学習者のレベルと習得目標に合わせて決定する。
参考書：
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

特になし

No.	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	e,i	実践を通して、日本語の話す技能が高められる。 Student will be able to improve him/her speaking skills through outside of the class room.
②	e,i	テキストで学んだ文型や語彙が用いられた日本語表現を聞いて、意味を理解できる。 Can listen to and understand the meaning of Japanese expressions in which sentence patterns and vocabulary learned in the text are used.
③	a,e,i	テキストで学んだ文型や語彙を用いて話して、大まかに自分の意志を伝えることができる。 Can speak using sentence patterns and vocabulary learned in the text and communicate his/her intentions in broad strokes.
④	e,i	挨拶表現など、日本での習慣的な基本ルールを理解し行動で表現できる。 Understand the basic rules of Japanese customs, such as greetings and expressions, and express them through actions.
⑤	e,f,g	学習した場面と類似の状況下で、学習した言葉や文型を応用して談話展開が想像できる。 Student will be able to create discourse in a situation similar to the one studied.
⑥	e.f.g	突然の談話展開に臆せず、学習した状況に近いタスクをこなすことができる。 Student will be able to perform tasks in situations similar to those studied without being intimidated by sudden discourse developments.

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	40	0	60	0	0	0	100
総合力指標	知識を取り込む力	0	10	0	10	0	0	0	20
	思考・推論・創造する力	0	10	0	10	0	0	0	20
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	20	0	40	0	0	0	60
	学習に取組む姿勢・意欲	0	0	0	0	0	0	0	0

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	✓	<u>クイズ・テスト　Quizzes/Test</u> ・ロールプレイ　評価割合　40% - Role play　(40/100) ※1課または数課ごとにクイズを行う。回数や実施日は学習進度によって変わるため学生と相談の上決定する。 * Quizzes will be given every 1chapter or few chapters. The number of quizzes and dates will depend on the progress of the students and will be decided in consultation with the students.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
作 品	①		<u>口頭会話チェック Oral conversation</u> ・ロールプレイ　評価割合　60% - oral conversation test　(60/100) ※評価内容は事前にルーブリックを提示する。 *A rubric will be presented in advance of the evaluation content.
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・助詞を正しく使って、学習した文型で文を産出できる。 ・自分が言いたいことを、学習した文型や語彙を用いていくつかの単文で表現できる。 -Able to use Japanese pronunciation and accent to the extent that native speakers can understand the meaning, although there is some influence from their native language. -Can produce sentences using the learned sentence patterns with correct use of particles. -Can express what he/she wants to say in several single sentences using the learned sentence patterns and vocabulary.	・時折、助詞の間違いなどはあるが、意味が通じる程度の正確さで学習した文型を産出できる。 ・自分が言いたいことを、ネイティブスピーカーに文型や語彙を助けてもらいながらいくつかの単文で表現できる。 -The ability to use Japanese pronunciation and accent to the extent that native speakers can communicate with each other, although they need to guess the meaning to some extent. -Can produce learned sentence patterns with enough accuracy to communicate meaning, although there are occasional errors with particles. -Can express what he/she wants to say in a few single sentences with the help of native speakers in terms of sentence structure and vocabulary.

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 10／8	Class Orientation	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
2 ／15	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
3 ／22	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
4 ／29	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
5 11／12	Lesson 1,2	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for Test	30
6 ／19	Lesson 3 **#1 Conversation Test**	講義・演習 Lecture・Practice 採点・返却 Test, Grading & Return	授業内容の復習 Review the course contents	30
7 ／26	Lesson 4	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
8 12／3	Lesson 5	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
9 ／10	Lesson 6	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
10 ／17	Lesson 7	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
11 ／24	Lesson 8	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
12 1／7	Lesson 9	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
13 ／21	Lesson 10	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
14 ／28	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents テストの準備 Prepare for Test	30
15 2／4	**#2 Conversation Test** Review, Self-reflection	講義・演習 採点・返却 Test, Grading & Return	なし	

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Bridge English B (Learning English through STEM Topics)	1	621400	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	UTSUNOMIYA, Takako	Hakusanroku C: 101. 201		By appointment

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	STEM	This course emphasizes fundamental English language and academic English skill building to support all the STEM courses conducted in English in the 1st and 2nd year. The main purpose of it is for students to be able to succeed in the content courses as they learn how to address and approach the challenges such as scientific terminology, expressions, grammar, and writing & presenting concepts in English.
2	Engineering	
3	Study Skills	
4		
5		

Course Description and Expectations for Students (10.5pt)

This course will offer opportunities to do group work and summarize information through writing and speaking in class as a type of active learning. The main purpose is to provide academic support in STEM classes. As all the STEM courses are taught in English, this course is designed to support your study. The fundamentals gained in this course allow you to build confidence, motivation, and academic skills. Additionally, we advise you to use these skills outside of the classroom. This course is divided into 2 sections: Academic Study Preparation (Critical Thinking & Presenting) and Learning English through STEM Topics.

Lecture, exercise, pair-work, presentation, quizzes.
You must keep and submit all your handouts and assignments in a folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students have completed Bridge English A: have the ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinions, and plans.
Can also ask questions, read simple instructions, and take directions.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Students will be able to improve their vocabulary in order to succeed in their STEM classes.
②	h	Students will be able to use scientific language and expressions needed in their STEM classes.
③	h, d	Students will be able to develop problem-solving skills in order to take responsibility for their own learning.
④	i	Students will be able to develop a broader mindset from the content they study in their classes.
⑤	i	Students will be able to increase their knowledge about the content they study.
⑥	i	Students will be able to understand each grammatical point.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	25	15	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	30	10	5	0	0	0	45
	Ability to think, reason and create	0	30	5	5	0	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	5	0	0	0	15
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Quizzes: 60% Quizzes will be given regularly throughout the semester. You will have a total of 6 quizzes. The results will be returned in class the following week. You must schedule a makeup quiz with the teacher if your quiz score is below 60% or if you miss a quiz because of your absence.
	②	✓	
	③	✓	
	④		
	⑤		
	⑥	✓	
Reports	①		Reports (Worksheets): 25% Please submit worksheets, completed homework, class assignments, and other materials that you used to show your understanding and progress. The graded reports will be returned in the next class session.
	②		
	③		
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		Presentations (Speaking activities): 15% You will have a few opportunities to convey your thoughts to others orally in English. It will be a reflective conversation with a teacher or a classmate. You can see the notes while speaking, when necessary. Feedback will be given in the next class session.
	②	✓	
	③	✓	
	④		
	⑤	✓	
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply any and all literacy skills to understand academic and non-academic texts in and out of class. Students can compose and organize ideas logically.	Students can use experience, examples, and reading and critical thinking skills to understand materials and encounters in and out of class.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction & Orientation Order of Events	Lecture Individual & group activity	Review: - Read the syllabus - Complete the assignment	20
2 /	Sequences and Cycles I Reflective conversation/writing	Lecture Individual & group activity	Preview: - Study vocabulary Review: - Complete the assignment - Study for a quiz	30
3 /	Sequences and Cycles II Quiz 1	Quiz Lecture Individual & group activity	Preview: - Study vocabulary Review: - Complete the assignment	30
4 /	Ability and Capacity I Reflective conversation/writing	Lecture Individual & group activity	Preview: - Study vocabulary Review: - Complete the assignment - Study for a quiz	30
5 /	Ability and Capacity II Quiz 2	Quiz Lecture Individual & group activity	Preview: - Study vocabulary Review: - Complete the assignment	30
6 /	Visualizing and Explaining Data 1 Reflective conversation/writing	Lecture Individual & group activity IELTS writing	Preview: - Study vocabulary Review: - Complete the assignment - Study for a quiz	30
7 /	Visualizing and Explaining Data 2 Quiz 3	Quiz Lecture Individual & group activity IELTS writing	Preview: - Study vocabulary Review: - Complete the assignment	30
8 /	Visualizing and Explaining Data 3 Reflective conversation/writing	Lecture Individual & group activity IELTS writing	Preview: - Study vocabulary Review: - Complete the assignment - Study for a quiz	30
9 /	Visualizing and Explaining Data 4 Quiz 4	Quiz Lecture Individual & group activity IELTS writing	Preview: - Study vocabulary Review: - Complete the assignment	30
10 /	Visualizing and Explaining Data 5 Reflective conversation/writing	Lecture Individual & group activity IELTS writing	Preview: - Study vocabulary Review: - Complete the assignment - Study for a quiz	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Visualizing and Explaining Data 6 Quiz 5	Quiz Lecture Individual & group activity	Preview: - Study vocabulary Review: - Complete the assignment	30
12 /	Describing Situations and Objects I Reflective conversation/writing	Lecture Individual & group activity	Preview: - Study vocabulary Review: - Complete the assignment - Study for a quiz	30
13 /	Describing Situations and Objects II Quiz 6	Quiz Lecture Individual & group activity	Preview: - Study vocabulary Review: - Complete the assignment	30
14 /	Describing Situations and Objects III Reflective conversation/writing	Lecture Individual & group activity	Preview: - Study vocabulary Review: - Complete the assignment	30
15 /	Wrap-up and Self-Peer Evaluation	Lecture Individual & group activity	Preview: - Reflect on your learning	20

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Bridge English B (Academic Study Preparation)	1	621400	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	BARNETSON, Hamish	Hakusanroku C: 101. 201		M-W 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Notetaking and Study skills	This course emphasizes fundamental English language and academic English skill building to support all the STEM courses conducted in English in the 1st and 2nd year. The main purpose of it is for students to be able to succeed in the content courses as they learn how to address and approach the challenges such as scientific terminology, expressions, grammar, and writing & presenting concepts in English.
2	Process	
3	Environment	
4	Economic Development	
5	STEM	

Course Description and Expectations for Students (10.5pt)

The course offers discovery, investigation, and experiential learning as types of active learning. The main purpose is to provide academic support in STEM classes. As all the STEM courses are taught in English, this course is designed to support your study. The fundamentals gained in this course allow you to build confidence, motivation, and academic skills. Additionally, we advise you to use these skills outside of the classroom. This course is divided into 2 sections: Academic Study Preparation (Critical Thinking & Presenting) and Learning English through STEM Topics.

Lecture, exercise, pair-work, presentation, quizzes.
You must keep and submit all your handouts and assignments in a folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students have completed Bridge English 1: have the ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinions, and plans. Can also ask questions, read simple instructions, and take directions.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Students will be able to improve their vocabulary in order to succeed in their STEM classes.
②	h	Students will be able to use scientific language and expressions needed in their STEM classes.
③	h, d	Students will be able to develop problem-solving skills in order to take responsibility for their own learning.
④	i	Students will be able to develop a broader mindset from the content they study in their classes.
⑤	i	Students will be able to increase their knowledge about the content they study.
⑥	i	Students will be able to understand each grammatical point.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	25	15	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	30	10	5	0	0	0	45
	Ability to think, reason and create	0	30	5	5	0	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	5	0	0	0	15
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Quizzes (60%) will be given regularly throughout the semester. You will have a total of 4 quizzes. The results will be returned in class the following week. You must schedule a makeup quiz with the teacher if your quiz score is below 60%. Your makeup score may enable you to reach the required passing score of up to 60%.
	②	✓	
	③	✓	
	④		
	⑤		
	⑥	✓	
Reports	①		Reports are (25%). Please submit handouts, completed homework, class assignments, and other materials that you used to review and evaluate your understanding and progress. The graded reports will be returned at the next class meeting day.
	②		
	③		
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		Presentation (15%). With the teacher's help, you will prepare and use language for presentations.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply any and all literacy skills to understand academic and non-academic texts in and out of class. Students can compose and organize ideas logically.	Students can use experience, examples, and reading and critical thinking skills to understand materials and encounters in and out of class.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction / Syllabus **Introduction to Academic Writing** Focus: Academic vs. personal writing Skills: Sentence clarity, formality, paragraph awareness Activity: Diagnostic writing (short paragraph) ungraded	Lecture Interactive activity	Read the syllabus Study vocabulary	20
2 /	**Listening for Main Ideas** Focus: Listening for gist and key points Input: Short lecture (3–5 minutes) Activity: Guided note-taking Writing: Sentence-level summary	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Preview Video for Note Taking	30
3 /	**Quiz 1** **Note-Taking Strategies** Focus: Cornell notes, keywords, symbols Input: Academic video	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Preview a Mind-Map / Outline and a graphic organizer models	30
4 /	**Graphic Organizers** Focus: Planning before writing Tools: Mind maps, outlines Writing: Planned academic paragraph Assessment: Writing an Academic Paragraph 1	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Review the content Complete the assignment	30
5 /	**Academic Paragraph Structure** Focus: Topic sentences, support, explanation Skills: Basic cohesion and linking words Writing: Revised paragraph	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Review the content Complete the assignment	30
6 /	**Quiz 2** **Summarizing Academic Texts** Focus: Identifying key ideas Input: Short academic reading (150–200 words) Writing: One-paragraph summary	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Review the content Complete the assignment	30
7 /	**Paraphrasing Basics** Focus: Avoiding copying and patchwriting Skills: Lexical and structural change Writing: Guided paraphrase task	Workshop	Review the content Complete the assignment	30
8 /	Continued Skills Review & Feedback Session	Workshop	Review the content Complete the assignment	30
9 /	**Quiz 3** **Introduction to Research** Focus: Academic research at a basic level Skills: Topic, Narrowing, topic, and research questions Activity: Research question workshop Finding Sources	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Review the content Complete the assignment	30
10 /	**Finding and Using Sources** Focus: Educational websites and textbooks Skills: Selecting relevant information Writing: Notes from one source	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Review the content Complete the assignment	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	**Quiz 4** **Basic Citation Skills** Focus: Why citation matters Skills: Simple in-text citation (APA or MLA, simplified) Writing: Cited sentences	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Review the content Complete the assignment	30
12 /	Continued ~ Identifying strong summaries Acceptable paraphrasing Recognizing correct vs. incorrect citation Writing: Research paragraph draft	Lecture, pair and group work, individual activities, worksheets, online tasks, discussion, presentations, written reports	Review the content Complete the assignment	30
13 /	**Focus: Explaining graphs, charts, or diagrams** Skills: Simple comparison language Practice: Mini-presentations with visuals		Review the content Complete the assignment	30
14 /	Presentation of research Focus: Speaking from notes and outline Skills: Organization, signposting language, using visuals, using research language.			30
15 /	Review what they learned and complete course evaluation.			30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Advanced English	1	621500	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	STEVENSON, Ian	Hakusanroku C.: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Discussion	Students will be able to improve their English oral and written communication skills through discussion and written responses on various topics. They will be able to enhance their critical thinking skills and practice putting their ideas into logical order in discussions, writing, and presentations.
2	Presentation	
3	Communication	
4	Writing	
5	Critical Thinking	

Course Description and Expectations for Students (10.5pt)

This course will offer discussion and experiential learning, group work, discussion and debate as types of active learning.
Students will actively participate in topic-based discussions in English based on information presented in class. Then, written reflections will be expected in response to the topics and discussions.
Students will learn specific ways to improve their critical thinking and communication skills.
Presentations will also be a key part of the course, so students will be required to do research and use presentation software to complete the assignment.

Students should be prepared with the necessary materials for the class, including computers, handouts, and writing tools.
Students should also be prepared to take an active role in class.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to discuss topics in English fluently
Basic computer skills, especially a basic understanding of presentation software
Willingness to express opinions through discussion and writing

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, g	Students will be able to make a presentation on a topic of their choice.
②	b	Students will be able to discuss and write responses to various social issues.
③	c, d	Students will be able to learn how to communicate their ideas clearly.
④	e, h	Students will be able to gain knowledge on a wide variety of subjects.
⑤	f	Students will be able to express opinions in English.
⑥	i	Students will be able to practice critical thinking skills.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	20	20	30	0	30	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	5	5	0	10	0	25
	Ability to think, reason and create	0	5	5	10	0	5	0	25
	Collaboration and leadership	0	0	5	5	0	5	0	15
	Announcement / Expression / Communication	0	5	5	5	0	5	0	20
	Attitude and motivation for learning	0	5	0	5	0	5	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∨	Two in-class quizzes (20%): Week 8, speaking test (10%) Week 14, written quiz (10%)
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Reports	①	∨	In-class handouts based on the topics (20%)
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Presentations	①	∨	Topic-based presentation (30%) Includes outline, presentation slides, script, in-class presentation, and self-evaluation
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	∨	10 short written responses or reflection paragraphs based on the in-class topics (30%)
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Discuss 100% in English using critical thinking. Professional-level presentation.	Discuss mostly in English. Clear and logical presentation.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Students are introduced to the syllabus and the general contents of the course. Students will participate in communication activities and write a short reflection paper.	lecture discussion cooperative learning writing	Review: review course information and plan for the year ahead.	30
2 /	Topic 1 A Students are introduced to the topic, prepare their ideas, engage in a discussion, and write a response.	lecture discussion cooperative learning writing	Review: complete the classwork, including written responses.	30
3 /	Topic 1 B Students will revisit, review and explore the topic in depth and then prepare their ideas, engage in a discussion, and write a response.	lecture discussion cooperative learning writing	Review: complete the classwork, including written responses.	30
4 /	Topic 2 A Students are introduced to the topic, prepare their ideas, engage in a discussion, and write a response.	lecture discussion cooperative learning writing	Review: complete the classwork, including written responses.	30
5 /	Topic 2 B Students will revisit, review and explore the topic in depth and then prepare their ideas, engage in a discussion, and write a response.	lecture discussion cooperative learning writing	Review: complete the classwork, including written responses.	30
6 /	Topic 3 A Students are introduced to the topic, prepare their ideas, engage in a discussion, and write a response.	lecture discussion cooperative learning writing	Review: complete the classwork, including written responses.	30
7 /	Topic 3 B Students will revisit, review and explore the topic in depth and then prepare their ideas, engage in a discussion, and write a response.	lecture discussion cooperative learning writing	Review: complete the classwork, including written responses.	30
8 /	Speaking Test Students are evaluated through a speaking test. Preparing a Presentation: Topic and Research Students learn about presentations, and then choose a topic and begin doing research.	quiz lecture project	Preview: study for quiz Review: work on research	30
9 /	Preparing a Presentation: Research and Outline Students will complete their research and then write a presentation outline. *Speaking Test results are returned.*	project	Review: complete research and outline	30
10 /	Preparing a Presentation: Presentation Software Students use their research and outline to prepare a slideshow presentation which includes a script in the notes.	project	Review: complete presentation	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Student Presentations Students watch, participate in, and evaluate their peers' presentations. Remaining time is used for open discussion and written responses.	presentations discussion cooperative learning writing	Preview: practice presentation Review: complete written and oral responses.	30
12 /	Student Presentations Students watch, participate in, and evaluate their peers' presentations. Remaining time is used for open discussion and written responses.	presentations discussion cooperative learning writing	Preview: practice presentation Review: complete written and oral responses.	30
13 /	Quiz Students will write a quiz to demonstrate an understanding of their peers' presentations. Communication Activities Students participate in communication activities	presentations discussion cooperative learning writing	Preview: practice presentation Review: complete written and oral responses.	30
14 /	Student Presentations Students reflect on their own presentation, identifying strong and weak points, what they would keep, change and/or cut. Remaining time is used for open discussion and written responses.	quiz lecture cooperative learning	Preview: study for quiz Review: complete written responses.	30
15 /	Evaluation Feedback Students are given oral and written feedback both overall and individually on their work. After the feedback, students participate in communication activities.	feedback communication activities	Preview: complete any remaining classwork.	30

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	日本語ＩＡ Japanese IA	3	621600	前学期 1st semester	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	筒井　昌子 TSUTSUI, Masako	白山麓C 101,201		

授業科目の学習教育目標

	キーワード	学習教育目標
1	日本語	この科目では、主に日本語の読み書きができるようになるために、文字を習得し、語彙と文法の知識をつけて「読む」「書く」技能を向上させる。 In this course, students will mainly learn characters and improve their “reading” and “writing” skills by acquiring vocabulary and grammar knowledge in order to be able to read and write Japanese.
2	コミュニケーションスキル	
3	日本文化・社会	
4		
5		

授業の概要および学習上の助言

【授業概要】

本科目は「日本語基礎A」と連動しており教材も共通のものを利用する。

「日本語ＩA」では文字・語彙・文法・文型の学習と読解・作文技能など主に読み書きを軸に、「日本語基礎A」では会話・聴解技能の向上に主眼を置き、成績についてはそれぞれの科目の重点技能の観点で評価を行う。

なお、話す／聞く技能については本科目では評価項目に含めないが、日々の学習活動の中で、学んだ語彙や文型を授業活動で使うことで会話技能を向上させることも目指している。

This course is linked to “Fundamental Japanese A” and uses the same teaching materials.

Japanese I A” focuses on reading and writing, including reading and writing skills, as well as learning letters, vocabulary, grammar, and sentence patterns, while ‘Fundamental Japanese A’ focuses on improving conversation and listening skills.

Grades will be evaluated from the perspective of the key skills in each subject area.

Although speaking/listening skills are not included in the evaluation items of this course, students are encouraged to use the vocabulary and sentence patterns they have learned in their daily learning activities to improve their conversation skills in class.

【学習上の助言】

・学習目標を常に意識すること。

・わからない言葉は辞書で調べること。

- Always be aware of your learning goals.

- Look up unfamiliar words in a dictionary.

※この授業ではアクティブラーニングの一環として、調査学習、体験学習、グループワークなどを行う。

* This class will include research, experiential learning, and group work as part of active learning.

【教科書および参考書・リザーブドブック】

教科書：「いろどり −生活の日本語」　オンラインブック　国際交流基金

「まるごと −日本のことばと文化 入門Ａ１ りかい」　三修社

参考書：ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

特になし

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	e,i	拗音、長音を含めたひらがな・カタカナが正しく読める。 Student will be able to read hiragana and katakana correctly, including the special sounds.
②	e,i	ひらがな、カタカナの文字を正しく書くことができる。 Student will be able to write hiragana and katakana characters correctly.
③	e,i	聞いたことばをひらがな、カタカナで正しく書くことができる。 Student will be able to write the words heard correctly in hiragana and katakana.
④	e,g,i	学習した漢字の意味を理解して使える。 Student will Understand and be able to use the meanings of the kanji they have learned.
⑤	e,g,i	学習した漢字や言葉をもとに、必要な情報を収集することができる。 Student will be able to collect necessary information based on learned Kanji characters and words.
⑥	e,f,i	学習した言葉や文型を使い、自分のことや身近なことについて簡単な漢字交じりの文を書くことができる。 Student will be able to write simple sentences about oneself and one's surroundings using learned vocabulary and sentence patterns in mixed kanji/kana.

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	80	0	0	0	20	0	100
総合力指標	知識を取り込む力	0	65	0	0	0	2	0	67
	思考・推論・創造する力	0	10	0	0	0	3	0	13
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	5	0	0	0	5	0	10
	学習に取組む姿勢・意欲	0	0	0	0	0	10	0	10

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	✓	**クイズ・テスト** Quizzes/Test ・文字（漢字を含む）・語彙　評価割合　30% - Letters (include Kanji), vocabulary　(30/100) ・学習した語彙、文型、会話文・読解等を含む筆記テスト　評価割合　50% - A written test will be given, including new vocabulary, sentence patterns, and conversational sentences learned.　(50/100) ※1課または数課ごとにクイズを行う。回数や実施日は学習進度によって変わるため学生と相談の上決定する。 * Quizzes will be given every 1chapter or few chapters. The number of quizzes and dates will depend on the progress of the students and will be decided in consultation with the students.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		**プロジェクト** Project ・日本語能力の向上を目的とした活動を企画・実施する。　評価割合　20% - Plan and implement activities aimed at improving Japanese language skills.　(20/100) ※実際の日本語の上達度合いや成果物だけではなく、活動のプロセスを評価する。 * The process of the activity will be evaluated, not only the actual level of progress in Japanese or the deliverables. ※評価内容は事前にルーブリックを提示する。 * A rubric will be presented in advance of the evaluation content.
	②		
	③	✓	
	④	✓	
	⑤		
	⑥	✓	
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・ひらがな、カタカナが正しく読み書きできる。 ・学習した文型や時制を正しく使って文を書くことができる。 ・自分が言いたいことを、学習した文型や語彙を用いていくつかの単文で表現できる。 ・学習したレベルの文型や語彙が使われた文章を読んだり聞いたりして、内容が正しく理解できる。 -Can read and write Hiragana and Katakana correctly. -Can write sentences using the learned sentence patterns and tenses correctly. -Can explain what you want to say in a few sentences using the studied sentence patterns and vocabulary. -Can read and listen to sentences that use the learned vocabulary and sentence patterns, and understand the content correctly.	・時折文字の間違いなどはあるが、学習した文型を概ね使用して文を書くことができる。 ・自分が言いたいことを、文型や語彙を助けてもらいながら、いくつかの単文で表現できる。 ・学習したレベルの文型や語彙が使われた文章を読んだり聞いたりして、内容がおおよそ理解できる。 -Can write sentences using most of the sentence patterns they have learned, with occasional errors. -Can express what you want to say in a few single sentences using learned vocabulary and sentence patterns with the help of others and a dictionary. -Can read and listen to sentences that use the learned sentence patterns and vocabulary, and understand approximately what is being said.

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1	Class Orientation. Introduction of Japanese Letter	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
2	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
3	Hiragana w/r Class expressions Number	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
4	Hiragana w/r Daily expressions Katakana w/r	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
5	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
6	**Hiragana Quiz** Katakana w/r	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
7	Katakana w/r Self Introduction	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
8	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
9	Hiragana Katakana w/r Day, Date	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
10	Lesson 1 **Katakana Quiz**	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
11	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
12	**Vocabulary Quiz L1,2** Lesson 3	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
13	**Grammar Quiz L1,2** Lesson 3	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
14	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
15	Lesson 4	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
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回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
16	**Vocabulary Quiz L3,4** Lesson 5	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
17	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
18	**Grammar Quiz L3,4** Lesson 5	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
19	Lesson 6	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
20	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
21	**Grammar Quiz L5,6** Lesson 7	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
22	Lesson 8	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
23	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
24	**Vocabulary Quiz L7,8** Lesson 9	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
25	**Grammar Quiz L7,8** Lesson 9	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
26	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
27	Lesson 10	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
28	**Vocabulary Quiz L9,10** Lesson 11	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30

授業明細表

ＣＬＩＰ学習プロセスについて

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回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
29	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
30	**Grammar Quiz L9,10** Lesson 11	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
31	Lesson 12	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
32	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
33	**Vocabulary Quiz L11,12** Lesson 13	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
34	**Grammar Quiz L11,12** Lesson13	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
35	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
36	Lesson 14	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
37	Lesson 14	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
38	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
39	**Vocabulary Quiz L13,14** Lesson 15	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
40	**Grammar Quiz L13,14** Lesson 15	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
41	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
42	Lesson 16	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30

授業明細表

ＣＬＩＰ学習プロセスについて

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回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
43	Lesson 16	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
44	Project	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
45	**Vocabulary Quiz L15,16** **Grammar Quiz L15,16**	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return		なし

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing IA (Reading Strategy)	1	621700	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	TSUDA, Akihiro	Hakusanroku C: 101. 201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	In the reading class, students will be able to form a basic core of reading skills, learn to apply these skills in an extensive reading environment, and improve vocabulary, comprehension, and speed. In the writing class, students will be able to exercise literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer pair-work in class as a type of active learning.

This course is divided into 2 sections; Reading Strategy and Writing.

(Reading Strategy)
Lecture, exercise
You need to submit all the handouts after a quiz.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: キクタン Basic 4000,（アルク社）9784757433472 「英語 速読×速解テスト ActiveReader Basic」（いいずな書店） 978-4-86460-796-4
Reserved books: *Basic Reading Power 1* ISBN: 9780138143893/ *Reading Power 2* ISBN:9780138143886

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

＊ The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% : Final exam (academic English proficiency test) includes TOEIC, EIKEN, and IELTS style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	40% : (Reading) Each quiz will be given after each reading skill. (Writing) Complete a final draft of a writing assignment at the end of each unit and turn it in at class time or online. 10% : Speed reading homework (online) 15% : Vocabulary quiz (KIKUTAN) Based on the results, the quiz can be taken again. The results will be returned in class in the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: (Reading) Complete the handouts and submit in time. The class handouts will be returned in class after a quiz. (Writing) Submit all journals and assignments. Student's journal feedback will be available the next week in class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Vocabulary Quiz	Lecture Exercise	Read the syllabus Study vocabulary	20
2 /	Scanning	Lecture Exercise	Speed Reading L1-2 Review reading skills	30
3 /	Scanning	Lecture Exercise	Speed Reading L3-4 Review reading skills	30
4 /	Scanning	Lecture Exercise	Speed Reading L5-6 Review reading skills	30
5 /	Preview / Predict	Lecture Exercise	Speed Reading L7-8 Review reading skills	30
6 /	Preview / Predict	Lecture Exercise	Speed Reading L9-10 Review reading skills	30
7 /	Learning about Context	Lecture Exercise	Speed Reading L11-12 Review reading skills	30
8 /	Learning about Context	Lecture Exercise	Speed Reading L13-14 Review reading skills	30
9 /	Focusing on the Topic	Lecture Exercise	Speed Reading L15-16 Review reading skills	30
10 /	Focusing on the Topic	Lecture Exercise	Speed Reading L17-18 Review reading skills	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Understanding Paragraphs	Lecture Exercise	Speed Reading L19-20 Review reading skills	30
12 /	Understanding Paragraphs	Lecture Exercise	Speed Reading L21-22 Review reading skills	30
13 /	Main idea	Lecture Exercise	Speed Reading L23-24 Review reading skills	30
14 /	Main idea	Lecture Exercise	Review reading skills	30
15 /	Main idea	Lecture Exercise	Review reading skills	30
16 /	Final Exam	Review and evaluate your progress and understanding	Review the final exam	30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing IA (Writing Strategies)	1	621700	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	BAIRD, Pauline	Hakusanroku C 101.201		M-W 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	In the reading class, students will be able to form a basic core of reading skills, learn to apply these skills in an extensive reading environment and improve vocabulary, comprehension, and speed. In the writing class, students will exercise literacy skills to organize ideas for academic writing and use written organizational skills to share ideas with others in English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	TOEFL	

Course Description and Expectations for Students (10.5pt)

This course will offer collaboration and experiential learning as types of active learning. This course is divided into two sections: Reading Strategy and Writing.

(Writing Strategies)
Read the assigned prompts and keep a writing journal for 14 weeks.
(Focusing on forming several types of sentences, making summaries, and paragraphs)
You must submit all in-class exercises at the end of each unit at class time.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts & Teacher-made materials)
Reference books: *Skills for Academic Success: Reading Choice.* By Lorrain C. Smith and Nancy Nici Mare. Adapted by Miwako Yamashina, Mitsuru Yokoyama & Yasuko Okino. National Geographic Learning. 2023.
SRA Reading Laboratory 2a and 2b by McGraw-Hill

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinions, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities and communicate with other students and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
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④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
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Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% Final exam (academic English proficiency test) includes TOEIC, EIKEN, and TOEFL style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	40%: Reading (Each quiz will be given after each reading skill) Intensive Writing (Quizzes will be given in each unit). 10%: Speed reading homework (online) 15%: Vocabulary quiz (KIKUTAN) in Learning Session The results will be returned in class the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: Reading: (Complete the assignments and submit on time). The class handouts will be returned in class after a quiz. Writing: (Complete all reading and written assignments for your journals.)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus **Introducing Myself** Language Focus: Simple present; basic sentences Assessment: Journal 1: Who are you? What do you like?	Written Exercise & Test SRA	Read the syllabus Write journal 1	20
2 /	SRA Reading assessment **My Daily Routine** Language Focus: Present simple; time words Assessment: Journal 2: Describe your weekday routine.	Mini - Workshop Exercise	Write journal 2	30
3 /	SRA Reading Charting and Scoring **My Favorite Subject (STEM)** Language Focus: Opinions; because Assessment: Journal 3 + Quiz 1: Opinion sentences	Mini - Workshop Exercise	Write journal 3+ Daily SRA	30
4 /	**My Study Habits** Language Focus: Adverbs of frequency Assessment: Journal 4: How do you study?	Mini - Workshop Exercise	Write journal + Daily SRA	30
5 /	**Technology in My Life** Language Focus: Simple present; nouns	Mini - Workshop Exercise	Journal Catch-up	30
6 /	**My Favorite Place** Language Focus: There is/are Assessment: Journal 5+ Quiz 2: Opinion + reasons	Mini - Workshop Exercise	Write journal 5 + Daily SRA	30
7 /	**Problem and Solution** Language Focus: Cause & solution Assessment: Journal 6: Describe a problem and solution.	Mini - Workshop Exercise	Write journal + Daily SRA	30
8 /	**Review Week** Language Focus: Sentence accuracy	Mini - Workshop Exercise	Write journal + Daily SRA	30
9 /	**Describing a Process** Language Focus: Sequence words Assessment: Journal 7 + Quiz 3: Organized paragraph	Mini-Workshop Exercise	Write journal + Daily SRA	30
10 /	**Comparing Two Things** Language Focus: Comparatives Assessment: Journal 8: Compare two things	Mini - Workshop Exercise	Write journal +Daily SRA	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	**Giving an Opinion** Language Focus: Opinion Phrases Assessment: Journal 9: Opinion paragraph	Mini - Workshop Exercise	Write journal + Daily SRA	30
12 /	**Describing Data / Results** Language Focus: Numbers & trends Assessment: Journal 10+ Quiz 4: Developed ideas	Mini - Workshop Exercise	Write journal + Daily SRA	30
13 /	**Future Plans** Language Focus: Future forms Assessment: Journal 11: Future goals	Mini – Workshop Exercise	Write journal + Daily SRA	30
14 /	**Paragraph Writing** Language Focus: Topic sentence & support Assessment: Final Writing Quiz (Mini Task 2) Collect journals in a portfolio	Mini – Workshop Exercise	Write journal + Daily SRA	30
15 /	**Final Reflection** Language Focus: Self-reflection Assessment: Journal: Course reflection *Return journals to students*	Review and	Write journal + Daily SRA	30
16 /	Final Exam			30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing IA (Advanced)	1	621700	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	REYNOLDS, Stephanie	Hakusanroku C 101.201		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	In the reading class, students will be able to form a basic core of reading skills, learn to apply these skills in an extensive reading environment, and improve vocabulary, comprehension, and speed. In the writing class, students will be able to exercise literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer group work, discussion, and reflection in class as a type of active learning. It will be divided into 5 sections; Reading Strategy, Grammar, Vocabulary, Extensive Reading, and Writing,

(Reading Strategy) In-class activities and exercises to practice academic reading skills.
(Grammar) In-class activities and exercises to practice sentence structure and word forms for academic writing.
(Vocabulary) Study sets, practice, and regular quizzes to measure growth of vocabulary understanding.
(Extensive Reading) Sustained silent-reading of 1 or more self-selected books at an independent reading level recorded in a reading log.
(Writing) In-class activities and exercises to practice grammar and organization of 4 types of paragraphs/essays.

You need to keep all your assignments and handouts in a folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books: Reflect: Reading & Writing 4 9780357448571 or Reflect: Reading & Writing 5 9780357448588
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions. Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f, g, i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f, g, i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description writing styles.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% Final exam (academic English proficiency test) including TOEIC, EIKEN, and IELTS style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	25% : (Reading Strategy) In-class assignments focusing on reading skills and word forms 15% (Grammar) In-class assignments focusing on grammar and sentence structure. 15% : (Vocabulary) 5 quizzes will be given in classes 1, 3,7, 11, 15. 10% : (Extensive Reading Log) Students will read self-selected books/articles for homework 30 minutes each week for a total of 8 hours over 15 weeks. Feedback and graded assignments will be returned in class and/or online in the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: (Writing) Students will write 4 original, distinct writing tasks, which will be graded according to the following criteria: Writing Process, Task Achievement, Cohesion and Coherence, Vocabulary, Grammar, Format. Students will submit drafts in class and typed assignments online, before the next class period. Verbal and written feedback will be given in writing conferences with the teacher during the following class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: Students will read the syllabus. Reading: Unit 1 Reading 1 Writing: Grammar Quiz 1	Individual and group exercises. Discussion	Read the syllabus. Complete unfinished assignments Extensive Reading Log	30
2 /	Reading: Unit 1 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
3 /	Reading: Quiz 2 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
4 /	Reading: Extensive Reading Writing: Feedback and Revision	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
5 /	Reading: Unit 2 Reading 1 Writing: Grammar	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
6 /	Reading: Unit 2 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
7 /	Reading: Quiz 3 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
8 /	Reading: Extensive Reading Writing: Feedback and Revision	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
9 /	Reading: Unit 3 Reading 1 Writing: Grammar	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
10 /	Reading: Unit 3 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Reading: Quiz 4 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
12 /	Reading: Extensive Reading Writing: Feedback and Revision, Grammar	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
13 /	Reading: Unit 4 Reading 1 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
14 /	Reading: Unit 4 Reading 2 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
15 /	Reading: Quiz 5 Writing: Feedback and revision	Discussion and peer conferencing. Review and evaluate your progress and understanding.		30
16 /	Final Exam	Review and evaluate your progress and understanding.	Review the final exam.	
17 /	Final Exam Return			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking I A (Intermediate)	2	621800	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	TAYLOR, James	Hakusanroku C.: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about things they like/dislike and their hobbies; describe people, things, events, and places using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the first 7 units of the textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 2 (Intermediate): National Geographic Learning by (Eds). Lewis Lansford, Daniel Barber, Amanda Jefferies (National Geographic Learning) 2018.* ISBN: 978-1-337-27713-6.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to recognise introductions from new acquaintances and talk about emotions.
⑤	g, f, i	Students will be able to recognise others' opinions about hobbies, sports, and travel.
⑥	d, f	Students will be able to recognise speech about food, photos, work, shopping, and the human body.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Progress Quizzes in lessons 8, 15, 22, and 29. Quizzes will use TOEFL-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	In each unit, students will do grammar/vocabulary activities followed by a quiz to check their understanding, which will be graded and returned with feedback by the following lesson in class. Each unit will contain at least one listening activity. These will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be at least one speaking activity in each unit. Speaking activities will be graded and returned with feedback by the following lesson in class. Students will complete a spoken reflection exercise at the end of each unit. Reflections will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Unit 1: In Touch with Your Feelings Grammar/Vocabulary	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Read the syllabus.	30
2 /	Unit 1: In Touch with Your Feelings Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
3 /	Unit 1: In Touch with Your Feelings Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
4 /	Unit 1: In Touch with Your Feelings Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
5 /	Unit 2: Enjoy the Ride Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
6 /	Unit 2: Enjoy the Ride Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
7 /	Unit 2: Enjoy the Ride Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
8 /	Progress Quiz 1	Test questions.	Review the test questions.	30
9 /	Unit 2: Enjoy the Ride Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
10 /	Unit 3: Active Lives Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 3: Active Lives Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
12 /	Unit 3: Active Lives Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
13 /	Unit 3: Active Lives Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
14 /	Unit 4: Food Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
15 /	Progress Quiz 2	Test questions.	Review the test questions.	30
16 /	Unit 4: Food Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
17 /	Unit 4: Food Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
18 /	Unit 4: Food Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
19 /	Unit 5: Work Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
20 /	Unit 5: Work Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Unit 5: Work Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
22 /	Progress Quiz 3	Test questions.	Review the test questions.	30
23 /	Unit 6: Superhuman Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
24 /	Unit 6: Superhuman Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
25 /	Unit 6: Superhuman Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
26 /	Unit 7: Shopping Around Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
27 /	Unit 7: Shopping Around Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
28 /	Unit 7: Shopping Around Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
29 /	Progress Quiz 4	Test questions.	Review the test questions.	30
30 /	Review	End of course questionnaire; self-assessment activities.		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking I A (Advanced)	2	621800	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	STEVENSON, Ian	Hakusanroku C.: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about things they like/dislike and their hobbies; describe people, things, events, and places using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group work and discussion, problem solving, discovery and experiential learning as types of active learning. This course emphasizes the use of basic English language for oral communication. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the first 7 units of the textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 2 (Intermediate): National Geographic Learning by (Eds). Lewis Lansford, Daniel Barber, Amanda Jefferies (National Geographic Learning) 2018.* ISBN: 978-1-337-27713-6.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Advanced English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to recognise introductions from new acquaintances and talk about emotions.
⑤	g, f, i	Students will be able to recognise others' opinions about hobbies, sports, and travel.
⑥	d, f	Students will be able to recognise speech about food, photos, work, shopping, and the human body.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Progress Quizzes in lessons 8, 15, 22, and 29. Quizzes will use IELTS-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Students will do grammar, listening, speaking and vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be presentation activities in each unit. These activities will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introductions: Teacher, Syllabus, Classroom tools and expectations Unit 1 – Textbook Units 1 and 2	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Read the syllabus.	30
2 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
3 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
4 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
5 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
6 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
7 /	Presentation 1	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
8 /	Progress Quiz 1	Test questions.	Review the test questions.	30
9 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
10 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
12 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
13 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
14 /	Presentation 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
15 /	Progress Quiz 2	Test questions.	Review the test questions.	30
16 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
17 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
18 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
19 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
20 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Presentation 3	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
22 /	Progress Quiz 3	Test questions.	Review the test questions.	30
23 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
24 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
25 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
26 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
27 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit by the announced deadline.	30
28 /	Presentation 4	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
29 /	Progress Quiz 4	Test questions.	Review the test questions.	30
30 /	Wrap Up and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work	

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking IA (Basic)	2	621800	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	BARNETSON, Hamish	Hakusanroku C.: 101.201		Tuesday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about communication, different types of entertainment, and time using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group work and discussion, problem solving, discovery and experiential learning as types of active learning. This course emphasizes the use of basic English language for oral communication. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the first 7 units of the textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 2 (Intermediate): National Geographic Learning by (Eds). Lewis Lansford, Daniel Barber, Amanda Jefferies (National Geographic Learning) 2018.* ISBN: 978-1-337-27713-6.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Low / Lower-intermediate/English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to recognize introductions from new acquaintances and talk about emotions.
⑤	g, f, i	Students will be able to recognize others' opinions about hobbies, sports, and travel.
⑥	d, f	Students will be able to recognize speech about food, photos, work, shopping, and the human body.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There will be Proficiency Quizzes in lessons 7, 14, 21 and 28. Quizzes will use TOEFL-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students will do grammar, listening, speaking and vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	There will be presentation activities in each unit. These activities will be graded and returned with feedback by the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introductions: Teacher, Syllabus, Classroom tools and expectations Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
2 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
3 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
4 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
5 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
6 /	Unit 1 – Textbook Units 1 and 2	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
9 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
10 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
12 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
13 /	Unit 2 – Textbook Units 3 and 4	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
14 /	Progress Quiz 2	Test questions.	Review the test questions.	30
15 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
16 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
17 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
18 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
19 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
20 /	Unit 3 – Textbook Units 5 and 6	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Progress Quiz 3	Test questions.	Review the test questions.	30
22 /	Unit 4 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
23 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
24 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
25 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
26 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
27 /	Unit 3 – Textbook Unit 7 and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
28 /	Progress Quiz 4	Test questions.	Review the test questions.	30
29 /	Wrap Up and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work	30
30 /	Wrap Up and Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work	30

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	日本語ＩB Japanese IB	2	621900	後学期 2nd semester	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	筒井　昌子 TSUTSUI, Masako	白山麓C 101,201		

授 業 科 目 の 学 習 教 育 目 標

	キーワード	学習教育目標
1	日本語	この科目では、先学期開講した「日本語基礎A」「日本語ＩA」から継続して、日常の日本語でのコミュニケーション能力に関して、四技能を総合的に向上させることをめざす。 In this course, continuing from "Fundamental Japanese A" and "Japanese I A" offered in the previous semester, we aim to comprehensively improve the four skills of daily communication in Japanese.
2	コミュニケーションスキル	
3	日本文化・社会	
4		
5		

授業の概要および学習上の助言

【授業概要】

先学期に引き続き「日本語基礎B」で会話能力を「日本語ＩB」で読み書きの能力の向上を目指す。

Continuing from last semester, students mastered conversational skills in "Basic Japanese B" and reading and writing skills in "Japanese IB".

【学習上の助言】

・学習目標を常に意識すること。

・わからない言葉は辞書で調べること。

- Always be aware of your learning goals.

- Look up unfamiliar words in a dictionary.

※この授業ではアクティブラーニングの一環として、調査学習、体験学習、グループワークなどを行う。

* This class will include research, experiential learning, and group work as part of active learning.

【教科書および参考書・リザーブドブック】

教科書：授業開始後に学習者のレベルと習得目標に合わせて決定する。

参考書：

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

日本語初級前半程度以上の語彙・文法・文型知識および実際に使える技能

No.	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	e,i	テキストで学んだ文型や語彙が用いられた日本語表現を聞いたり読んだりして、意味を理解できる。 Student will be able to listen to and read Japanese expressions in which sentence patterns and vocabulary learned are used and understand their meanings.
②	e,f,i	テキストで学んだ文型や語彙を用いながら話したり書いたりして、自分の意志を伝えることができる。 Student will be able to communicate his/her intentions by speaking and writing while using the sentence patterns and vocabulary learned.
③	e,i	スピーチレベル（丁寧体と普通体）の違いを理解し、使い分けができる。 Student will understand the difference between conversational levels (polite and casual) and be able to distinguish between the two and use them.
④	e,g,i	学習した漢字や言葉をもとに、必要な情報を収集することができる。 Student will be able to collect necessary information based on learned Kanji characters and words.
⑤	e,f,i	学習した漢字を使って、自己表現ができる。 Student will be able to express him/her self using the kanji they have learned.
⑥	e,g,i	まとまりのある長さの文章を読んで理解できる。 Student will be able to read and comprehend sentences of coherent length.

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	80	0	0	0	20	0	100
総合力指標	知識を取り込む力	0	65	0	0	0	2	0	67
	思考・推論・創造する力	0	10	0	0	0	3	0	13
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	5	0	0	0	5	0	10
	学習に取組む姿勢・意欲	0	0	0	0	0	10	0	10

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	✓	**クイズ・テスト** Quizzes/Test ・文字（漢字を含む）・語彙　評価割合　40% - Letters (include Kanji), vocabulary　(40/100) ・学習した語彙、文型、作文、会話文等を含む筆記テスト　評価割合　40% - A written test will be given, including new vocabulary, sentence patterns, essay and conversational sentences learned.　(40/100) ※1課または数課ごとにクイズを行う。回数や実施日は学習進度によって変わるため学生と相談の上決定する。 * Quizzes will be given every 1chapter or few chapters. The number of quizzes and dates will depend on the progress of the students and will be decided in consultation with the students.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		**プロジェクト** Project ・日本語能力の向上を目的とした活動を企画・実施する。　評価割合　20% - Plan and implement activities aimed at improving Japanese language skills.　(20/100) ※実際の日本語の上達度合いや成果物だけではなく、活動のプロセスを評価する。 * The process of the activity will be evaluated, not only the actual level of progress in Japanese or the deliverables. ※評価内容は事前にルーブリックを提示する。 * A rubric will be presented in advance of the evaluation content.
	②	✓	
	③	✓	
	④		
	⑤	✓	
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・助詞を正しく使って、学習した文型で文を産出できる。 ・自分が言いたいことを、学習した文型や語彙を用いていくつかの単文で表現できる。 ・まとまった長さの文章をひとりで読んで、大意を正しく理解できる。 -Can produce sentences using the learned sentence patterns with the correct use of particles. -Explain what you want to say in a few sentences using the learned sentence patterns and vocabulary. -Read sentences of a certain length on one's own and understand the main idea correctly.	・時折、助詞の間違いなどはあるが、意味が通じる程度の正確さで学習した文型を産出できる。 ・自分が言いたいことを、文型や語彙を助けてもらいながら、いくつかの単文で表現できる。 ・教師に助言をもらいながらまとまった長さの文章を読んで、大意をおおよそ理解できる。 -Can produce the learned sentence patterns with enough accuracy to make sense, although there are occasional errors with particles. -Can express what you want to say in a few single sentences using learned vocabulary and sentence patterns with the help of others and a dictionary. -Can read sentences of a coherent length and understand the main idea with the help of teacher.

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	Class Orientation Review on the previous studies	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
2 ／	Lesson 1 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
3 ／	Lesson2 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
4 ／	Lesson3 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
5 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
6 ／	**Vocabulary Quiz L1,2,3** Lesson 4 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
7 ／	**Grammar Quiz L1,2,3** Lesson 5 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	15
8 ／	Lesson 6 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
9 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
10 ／	**Vocabulary Quiz L4,5,6** Lesson 7 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
11 ／	**Grammar Quiz L4,5,6** Lesson 8 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
12 ／	Lesson 9 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
13 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
14 ／	Shodo	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
15 ／	**Vocabulary Quiz L7,8,9** Lesson 10 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
16 ／	**Grammar Quiz L7,8,9** Lesson 11 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
17 ／	Lesson 12 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
18 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
19 ／	**Vocabulary Quiz L10,11,12** Lesson 13 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
20 ／	**Grammar Quiz L10,11,12** Lesson 14 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
21 ／	Lesson 15 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
22 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
23 ／	Lesson 16 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
24 ／	Lesson 17 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course content	30
25 ／	Review 18 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course content クイズの準備 Prepare for quiz	30
26 ／	**Vocabulary Quiz L13,14,15** Review Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course content クイズの準備 Prepare for quiz	30
27 ／	**Grammar Quiz L13,14,15** Review Essay	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
28 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course content クイズの準備 Prepare for quiz	30
29 ／	**Vocabulary Quiz L16,17,18** Reflection & Self Evaluation	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
30 ／	**Grammar Quiz L16,17,18** Lesson13 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	*** Deadline for submitting a essay**	なし

2025 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing I B (Reading Strategy)	1	622000	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	TSUDA, Akihiro	Hakusanroku C: 101. 201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	In the reading class, students will be able to form a basic core of reading skills, learn to apply these skills in an extensive reading environment, and improve vocabulary, comprehension, and speed. In the writing class, students will be able to exercise literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer pair-work in class as a type of active learning.

This course is divided into 2 sections; Reading Strategy and Writing.

(Reading Strategy)
Lecture, exercise
You need to submit all the handouts after a quiz.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: キクタン Basic 4000,（アルク社）9784757433472 「英語 速読×速解テスト ActiveReader Intermediate」（いいずな書店） 978-4-86460-797-1
Reserved books: *Basic Reading Power 1* ISBN: 9780138143893/ *Reading Power 2* ISBN:9780138143886

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

＊ The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% : Final exam (academic English proficiency test) includes TOEIC, EIKEN, and IELTS style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	40% : (Reading) Each quiz will be given after each reading skill. (Writing) Complete a final draft of a writing assignment at the end of each unit and turn it in at class time or online. 10% : Speed reading homework (online) 15% : Vocabulary quiz (KIKUTAN) Based on the results, the quiz can be taken again. The results will be returned in class in the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: (Reading) Complete the handouts and submit in time. The class handouts will be returned in class after a quiz. (Writing) Submit all journals and assignments. Students journal feedback will be available the next week in class
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Vocabulary Quiz	Lecture Exercise	Read the syllabus Study vocabulary	20
2 /	Read Fast	Lecture Exercise	Speed Reading L1-2 Review reading skills	30
3 /	Read Fast	Lecture Exercise	Speed Reading L3-4 Review reading skills	30
4 /	Identifying the Pattern	Lecture Exercise	Speed Reading L5-6 Review reading skills	30
5 /	Identifying the Pattern	Lecture Exercise	Speed Reading L7-8 Review reading skills	30
6 /	Identifying the Pattern	Lecture Exercise	Speed Reading L9-10 Review reading skills	30
7 /	Identifying the Pattern	Lecture Exercise	Speed Reading L11-12 Review reading skills	30
8 /	Guessing Meaning from Context	Lecture Exercise	Speed Reading L13-14 Review reading skills	30
9 /	Guessing Meaning from Context	Lecture Exercise	Speed Reading L15-16 Review reading skills	30
10 /	Making Inference	Lecture Exercise	Speed Reading L17-18 Review reading skills	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Making Inference	Lecture Exercise	Speed Reading L19-20 Review reading skills	30
12 /	Making Inference	Lecture Exercise	Speed Reading L21-22 Review reading skills	30
13 /	Summarizing	Lecture Exercise	Speed Reading L23-24 Review reading skills	30
14 /	Summarizing	Lecture Exercise	Review reading skills	30
15 /	Summarizing	Lecture Exercise	Review reading skills	30
16 /	Final Exam	Review and evaluate your progress and understanding	Review the final exam	30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing IB (Writing Strategies)	1	622000	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	BAIRD, Pauline	Hakusanroku C 101.201		M-W 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	In the reading class, students will be able to form a basic core of reading skills, learn to apply these skills in an extensive reading environment and improve vocabulary, comprehension, and speed. In the writing class, students will be able to exercise literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	TOEFL	

Course Description and Expectations for Students (10.5pt)

This course offers investigative learning, problem solving, and experiential learning as types of active learning. It is divided into 2 sections; Reading Strategy and Writing.

(Writing Strategies)
(Focus on describing, interpreting, making claims, explaining, predicting)
You must submit all in-class exercises and final drafts at the end of each unit at class time.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts & Teacher-made materials)
Reference books: *Skills for Academic Success: Reading Choice.* By Lorrain C. Smith and Nancy Nici Mare. Adapted by Miwako Yamashina, Mitsuru Yokoyama & Yasuko Okino. National Geographic Learning. 2023.
SRA Reading Laboratory 2a and 2b by McGraw-Hill

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% Final exam (academic English proficiency test) includes TOEIC, EIKEN, and TOEFL style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	40%: Reading (Each quiz will be given after each reading skill) (Weekly Extensive Writing Journals Homework online); In-class writing (Quizzes will be given in each unit). 10%: Speed reading homework (online) 15%: Vocabulary quiz (KIKUTAN) in Learning Session The results will be returned in class the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: Reading: (Complete the reading material and submit on time). The class handouts will be returned in class after a quiz. Writing: (Submit all journals and reading assignments) *Student Journal Feedback will be available in class the following week.*
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction to syllabus **Review & Reset** Language Focus: Sentence review; paragraph basics Assessment: Diagnostic journal (opinion paragraph)	Mini - Workshop Exercise	Read the syllabus Review classwork	20
2 /	**Agree / Disagree Questions** Language Focus: Opinion statements Assessment: Journal: Agree or disagree + reasons	Mini - Workshop Exercise	Write journal + Daily SRA	30
3 /	**Reasons Paragraph** Language Focus: Supporting ideas Assessment: Journal + Quiz 1: One strong reason	Mini - Workshop Exercise	Write journal + Daily SRA	30
4 /	**Examples in Writing** Language Focus: For example; explanation Assessment: Journal: Add examples	Mini - Workshop Exercise	Write journal +Daily SRA	30
5 /	**Advantages** Language Focus: Positive arguments Assessment: Journal: Advantages of technology	Mini - Workshop Exercise	Write journal + Daily SRA	30
6 /	**Disadvantages** Language Focus: Negative arguments Assessment: Journal + Quiz 2: Advantages vs disadvantages	Mini - Workshop Exercise	Write journal + Daily SRA	30
7 /	**Balanced Opinion** Language Focus: Both sides language Assessment: Journal: Discuss both views	Mini - Workshop Exercise	Write journal + Daily SRA	30
8 /	**Mid-Semester Review** Language Focus: Paragraph improvement Assessment: Rewrite and improve	Mini - Workshop Exercise	Write journal + Daily SRA	30
9 /	**Cause and Effect** Language Focus: Because / result Assessment: Journal + Quiz 3: Cause-and-effect paragraph	Mini - Workshop Exercise	Write journal + Daily SRA	30
10 /	**Problem–Solution Essay Style** Language Focus: Problem & solution structure Assessment: Journal: Problem and solution	Mini - Workshop Exercise	Write journal + Daily SRA	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	**Formal Academic Tone** Language Focus: Avoid spoken English Assessment: Journal: Rewrite formally	Mini - Workshop Exercise	Write journal + Daily SRA	30
12 /	**Planning Before Writing** Language Focus: Brainstorm & outline Assessment: Journal + Quiz 4: Planned paragraph	Mini - Workshop Exercise	Write journal + Daily SRA	30
13 /	**Timed Writing Practice** Language Focus: Time management Assessment: Journal: Timed paragraph	Mini-Workshop Exercise	Write journal + Daily SRA	30
14 /	**Mini Task 2 Essay** Language Focus: 2-paragraph structure Assessment: Final Writing Quiz (Mini Essay)	Mini - Workshop Exercise	Write journal + Daily SRA	30
15 /	**Final Reflection & All Journals Folder** Language Focus: Self-assessment Assessment: Reflection journal	Mini - Workshop Exercise	Write journal + Daily SRA	30
16 /	Final Exam			30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing I B (Advanced)	1	622000	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	REYNOLDS, Stephanie	Hakusanroku C 101.201		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	In the reading class, students will be able to form a basic core of reading skills, learn to apply these skills in an extensive reading environment, and improve vocabulary, comprehension, and speed. In the writing class, students will be able to exercise literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer group work, discussion, and reflection in class as a type of active learning. It will be divided into 5 sections; Reading Strategy, Grammar, Vocabulary, Extensive Reading, and Writing,

(Reading Strategy) In-class activities and exercises to practice academic reading skills.
(Grammar) In-class activities and exercises to practice sentence structure and word forms for academic writing.
(Vocabulary) Study sets, practice, and regular quizzes to measure growth of vocabulary understanding.
(Extensive Reading) Sustained silent-reading of 1 or more self-selected books at an independent reading level recorded in a reading log.
(Writing) In-class activities and exercises to practice grammar and organization of 4 types of paragraphs/essays.

You need to keep all your assignments and handouts in a folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books: Reflect: Reading & Writing 4 9780357448571 or Reflect: Reading & Writing 5 9780357448588
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description writing styles.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% Final exam (academic English proficiency test) including TOEIC, EIKEN, and IELTS style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	25% : (Reading Strategy) In-class assignments focusing on reading skills and word forms 15% (Grammar) In-class assignments focusing on grammar and sentence structure. 15% : (Vocabulary) 5 quizzes will be given in classes 1, 3,7, 11, 15. 10% : (Extensive Reading Log) Students will read self-selected books/articles for homework 30 minutes each week for a total of 8 hours over 15 weeks. Feedback and graded assignments will be returned in class and/or online in the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: Students will write 4 original, distinct writing tasks, which will be graded according to the following criteria: Writing Process, Task Achievement, Cohesion and Coherence, Vocabulary, Grammar, Format. Students will submit drafts in class and typed assignments online, before the next class period. Verbal and written feedback will be given in writing conferences with the teacher during the following class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: Students will read the syllabus. Reading: Unit 5 Reading 1 Writing: Grammar Quiz 1	Individual and group exercises. Discussion	Read the syllabus. Complete unfinished assignments Extensive Reading Log	30
2 /	Reading: Unit 5 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
3 /	Reading: Quiz 2 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
4 /	Reading: Extensive Reading Writing: Feedback and Revision	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
5 /	Reading: Unit 6 Reading 1 Writing: Grammar	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
6 /	Reading: Unit 6 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
7 /	Reading: Quiz 3 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
8 /	Reading: Extensive Reading Writing: Feedback and Revision	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
9 /	Reading: Unit 7 Reading 1 Writing: Grammar	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
10 /	Reading: Unit 7 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Reading: Quiz 4 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
12 /	Reading: Extensive Reading Writing: Feedback and Revision, Grammar	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
13 /	Reading: Unit 8 Reading 1 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
14 /	Reading: Unit 8 Reading 2 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
15 /	Reading: Quiz 5 Writing: Feedback and revision	Discussion and peer conferencing. Review and evaluate your progress and understanding.		30
16 /	Final Exam	Review and evaluate your progress and understanding.	Review the final exam.	30
17 /	Final Exam Return			

2025 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking I B (Intermediate)	1	622100	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	TAYLOR, James	Hakusanroku C. 101-201		Tuesday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about communication, different types of entertainment, and time using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the last 3 units of a textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 2 (Intermediate): National Geographic Learning by (Eds). Lewis Lansford, Daniel Barber, Amanda Jefferies (National Geographic Learning) 2018.* ISBN: 978-1-337-27713-6.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to recognize introductions from new acquaintances and talk about emotions.
⑤	g, f, i	Students will be able to recognize others' opinions about hobbies, sports, and travel.
⑥	d, f	Students will be able to recognize speech about food, photos, work, shopping, and the human body.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Progress Quizzes in lessons 7 and 14. Quizzes will use IELTS-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Students will do grammar/vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson in class. Each unit will contain a listening activity. This will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be at least one speaking activity in each unit. Speaking activities will be graded and returned with feedback by the following lesson in class. Students will complete a spoken reflection exercise at the end of each unit. Reflections will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Unit 8: Effective Communication Grammar/Vocabulary	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Review the syllabus.	30
2 /	Unit 8: Effective Communication Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
3 /	Unit 8: Effective Communication Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
4 /	Unit 8: Effective Communication Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
5 /	Unit 9: Unexpected Entertainment Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
6 /	Unit 9: Unexpected Entertainment Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Unit 9: Unexpected Entertainment Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
9 /	Unit 9: Unexpected Entertainment Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
10 /	Unit 10: Time Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 10: Time Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
12 /	Unit 10: Time Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
13 /	Unit 10: Time Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
14 /	Progress Quiz 2	Test questions.	Review the test questions.	30
15 /	Review & Catch-up	End of course questionnaire; self-assessment activities.		

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking I B (Basic)	1	622100	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	BARNETSON, Hamish	Hakusanroku C.: 101.201		Tuesday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about communication, different types of entertainment, and time using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group work and discussion, problem solving, discovery and experiential learning as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the last 3 units of the textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 2 (Intermediate): National Geographic Learning by (Eds). Lewis Lansford, Daniel Barber, Amanda Jefferies (National Geographic Learning) 2018.* ISBN: 978-1-337-27713-6.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Low / Lower-intermediate English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to recognize introductions from new acquaintances and talk about emotions.
⑤	g, f, i	Students will be able to recognize others' opinions about hobbies, sports, and travel.
⑥	d, f	Students will be able to recognize speech about food, photos, work, shopping, and the human body.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Proficiency Quizzes in lessons 7 and 13. Quizzes will use TOEFL-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Students will do grammar/vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson in class. Each unit will contain a listening activity. This will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be at least one speaking activity in each unit. Speaking activities will be graded and returned with feedback by the following lesson in class. Students will complete a spoken reflection exercise at the end of each unit. Reflections will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introductions: Teacher, Syllabus, Classroom tools and expectations Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
2 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
3 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
4 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
5 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
6 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
9 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
10 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
12 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
13 /	Progress Quiz 2	Test questions.	Review the test questions.	30
14 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair and group activities.	Completion of unfinished work and preparation for quiz	30
15 /	Review & Catch-up	End of course questionnaire; self-assessment activities.	Completion of unfinished work	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking I B (Advanced)	1	622100	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	STEVENSON, Ian	Hakusanroku C. 101-201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about communication, different types of entertainment, and time using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group work and discussion, problem solving, discovery and experiential learning as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the last 3 units of the textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 2 (Intermediate): National Geographic Learning by (Eds). Lewis Lansford, Daniel Barber, Amanda Jefferies (National Geographic Learning) 2018.* ISBN: 978-1-337-27713-6.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Advanced English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to recognize introductions from new acquaintances and talk about emotions.
⑤	g, f, i	Students will be able to recognize others' opinions about hobbies, sports, and travel.
⑥	d, f	Students will be able to recognize speech about food, photos, work, shopping, and the human body.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Progress Quizzes in lessons 7 and 13. Quizzes will use IELTS-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Students will do grammar/vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson in class. Each unit will contain a listening activity. This will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be at least one speaking activity in each unit. Speaking activities will be graded and returned with feedback by the following lesson in class. Students will complete a spoken reflection exercise at the end of each unit. Reflections will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introductions: Teacher, Syllabus, Classroom tools and expectations Unit 1 – Textbook Units 8 and 9	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Review the syllabus.	30
2 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
3 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
4 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
5 /	Unit 1 – Textbook Units 8 and 9	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
6 /	Presentation 1	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
9 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
10 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
12 /	Unit 2 – Textbook Unit 10 and Semester Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
13 /	Progress Quiz 2	Test questions.	Review the test questions.	30
14 /	Presentation 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
15 /	Review & Catch-up	End of course questionnaire; self-assessment activities.		
16 /				
17 /				
18 /				
19 /				
20 /				

令和8年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	歴史文化IA（日本語）	1	623300	前学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	上田　清史	白山麓 101.201		月曜日・木曜日 16：30－17：30

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	近代化	近現代の歴史の変化に関わる諸事象について、世界とその中の日本を広く相互的な視野から捉え、現代的な諸問題の形成にかかわる近現代の歴史を理解するとともに、諸資料から歴史に関する様々な情報を適切かつ効果的に調べまとめる技能を身に付けるようにする。
2	産業革命	
3	国民国家	
4	帝国主義	
5	大衆化	

授業の概要および学習上の助言

歴史を学ぶための「問い」の設定や歴史叙述における資料の大切さを学ぶ。世界史と日本史への理解を同時に深めてゆく。先ず 近代化へのいくつかの「問い」をふまえつつ前近代から近代への移行過程を理解し、産業革命、国民国家の形成、帝国主義などが 世界と日本に与えた影響を考察してゆく。さらに第一次世界大戦前後の大衆社会の形成について理解を深めてゆく。

学生は自主的に五つの課題に取り組み、これら課題や講義で得た基礎知識をもとに中間テストと期末試験に備える。また、クラス内の発表があるので教員の指示に従ってテーマの選定と発表に向けての準備（リサーチを含む）を主体的に行う。

【教科書および参考書・リザーブドブック】
教科書：「私たちの歴史総合」明和社（令和４年）ISBN 9784905410584
参考書：ハンドアウト
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

日本語を読み書きする能力（日本の高校生レベル）

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	c,e	歴史を学ぶための「問い」の設定や、歴史叙述と資料の重要性について説明できる。
②	c,e	前近代からの「流れ」を通して近代化の歴史的意義を説明できる。
③	c,e	産業革命と国民国家の形成が与えた影響を説明できる。
④	c,e	帝国主義と世界の植民地化が与えた影響を説明できる。
⑤	c,e	第一次世界大戦と大衆化について説明できる。

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		20	20	20	20	0	20	0	100
総合力指標	知識を取り込む力	8	8	5	5	0	5	0	31
	思考・推論・創造する力	4	4	8	8	0	5	0	29
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	8	8	7	7	0	5	0	35
	学習に取組む姿勢・意欲	0	0	0	0	0	5	0	5

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①	✔	定期試験。論述式問題の答案を四つの基準から評価する。①「歴史の流れ」に対する理解度。②解 答に内容における史実の正確性。③試験問題に対する解答の関係性と論理性。④簡潔な文と文章構 成。（20%）
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
クイズ 小テスト	①	✔	中間テスト。論述式問題の解答を四つの基準から評価する。①「歴史の流れ」に対する理解度。② 解答の内容における史実の正確性。③試験問題に対する解答の関係性と論理性。④簡潔な文と文章 構成。翌週の授業までに採点され返却される。（20%）
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
レポート	①	✔	５つの課題：効果的な「考え方」や「書き方」などを指導する。 課題は授業で配布され次の授業の 始まりに提出する。翌週の授業までに採点され返却される。（20%）
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		１回の発表：教員と相談した上で前学期に学んでいる歴史の内容からテーマを決定する。 個人発表 の次の点を評価する：内容、スタイル（方法）、パワーポイントなどの補助資料、資料 （史料）の 提示など。翌週の授業までに発表の評価を受ける。（20%）
	②		
	③		
	④	✔	
	⑤	✔	
	⑥	✔	
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①	✔	ポートフォリオにはリフレクションペーパー・配布資料（メモを取ること）・５つの課題・中間テ スト・発表の補助資料（１点）や関係のある場合はその他を添えること。これは学期末（最後の授 業）に提出する。（20%）
	②	✔	
	③	✔	
	④	✔	
	⑤	✔	
	⑥	✔	
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
歴史を学ぶための「問い」の設定や、歴史叙述と資料の重要性について説明できる。 前近代からの「流れ」を通して近代化の歴史的意義を説明できる。 産業革命が社会に与えた影響を説明できる。 国民国家の形成が与えた影響を説明できる。 帝国主義と世界の植民化が与えた影響を説明できる。 第一次世界大戦と大衆化について説明できる。	歴史を学ぶための「問い」の設定や、歴史叙述と資料の重要性について要点は述べる事ができる。 前近代からの「流れ」を通し近代化とその要点を述べる事ができる。 産業革命が社会に与えた影響とその要点を述べる事ができる 国民国家の形成が与えた影響とその要点を述べる事ができる。 帝国主義と世界の植民地化が与えた影響とその要点を述べる事ができる。 第一次世界大戦と大衆化についてその要点を述べる事ができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	歴史と私たち	我々が経験している身近な問題を通して歴史への興味関心を高めるとともに日本史と世界史が深く関係している点などを中心に講義する。	ノート（プリント）を見直し補完する。	20 10
2 ／	歴史の特質と資料	歴史は多様な資料にもとづいて叙述されている点を中心に講義する。 課題①を配布する。	ノート（プリント）を見直し補完する。	20 10
3 ／	近代化への問い	近代化にともなう人々の生活や社会の変容に関するいくつかのテーマを中心に講義する。 課題①を提出する。	ノート（プリント）を見直し補完する。	20 10
4 ／	18世紀の日本とアジアの経済と社会 ①	18世紀の日本と中国における生産と流通について講義する。 課題②を配布する。	ノート（プリント）を見直して補完する。	20 10
5 ／	18世紀の日本とアジアの経済と社会 ②	アジアに広がる交易システムと西洋列強とアジアの貿易を中心に講義する。 課題②を提出する。	ノート（プリント）を見直して補完する。	20 10
6 ／	工業化の進展と世界市場の形成 ① 産業革命	産業革命の影響、交通・通信手段の革新を中心に講義する。	ノート（プリント）を見直して補完する。	20 10
7 ／	工業化の進展と世界市場の形成 ②	中国の開港、日本の開国を中心に講義する。 課題③を配布する。	ノート（プリント）を見直して補完する。	20 10
8 ／	中間テスト 立憲体制と国民国家の形成 ①	中間テスト（50分間） 主権国家の成立、国民国家の成立を中心に講義する。	中間テストの準備をする。	60 10
9 ／	立憲体制と国民国家の形成 ②	幕末から明治維新かけての過程を中心に講義する。 課題③を提出する。	ノート（プリント）を見直して補完する。	20 10
10 ／	立憲体制と国民国家の形成 ③	明治初期の施策、明治憲法の制定を中心に講義する。 課題④を配布する。	ノート（プリント）を見直して補完する。	20 10

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	列強の帝国主義とアジア諸国の変容 ①	列強による世界分割と世界に広がる植民地を中心に講義する。 課題④を提出する。	ノート（プリント）を見直して補完する。	20 10
12 ／	列強の帝国主義とアジア諸国の変容 ②	日清戦争、日露戦争を中心に講義する。	ノート（プリント）を見直して 補完する。	20 10
13 ／	近代化と現代的な諸問題	近代化といくつかの現代的な諸問題を中心に講義する。 課題⑤を配布する。	ノート（プリント）を見直して 補完する。	20 10
14 ／	国際秩序の変化や大衆化への問い 明治から大正へ	国際秩序の変化や大衆化に関するいくつかのテーマを中心に講義する。 課題⑤を提出する。	ノート（プリント）を見直して補完する。	20 10
15 ／	発表	内容・発表の態度・作成資料などを評価する。	発表の準備をする 自分や他の受講者の発表について評価する。	60 10
16 ／	定期試験	定期試験（50分） 学生の歴史に対する知識と理解度を確かめる。	授業内容を学習する 試験内容・結果を確認する。	60 10
17 ／	試験返却（自己点検）			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	History and Culture IA (English)	1	623400	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	UEDA, Kiyoshi	HC 101.201		Monday/Thursday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Modernization	This course aims to guide students to grasp various phenomena with regards to changes that took place in early modern and modern periods of history, to understand how early modern and modern history affected the development of various contemporary issues, and to acquire skills to effectively research information about history from various sources and summarize it.
2	Industrial Revolution	
3	Nation-state	
4	Imperialism	
5	Rise of Popular Culture	

Course Description and Expectations for Students (10.5pt)

Students will learn the formulation of "questions" for the study of history and the significance of sources for the historical narrative. First, students will comprehend the process of transition from the premodern to modern period with some questions about modernization in mind, specifically examining the influence of the Industrial Revolution, the formation of the nation-state, imperialism, etc., on the world and Japan. Second, students will deepen their understanding of the formation of popular society before and after First World War.

Students will independently work on five assignments, preparing themselves for a mid-term test and final exam according to basic knowledge they will acquire from these assignments and lectures. Also, one presentation will take place in class; students are expected to take the initiative in selecting a topic and preparing (including research) for it.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: Handout
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to read and write English language (at the high-school level)

No.	Program Objectives	Target Abilities for Students (9pt)
①	c,e	Students will be able to explain the formulation of questions for the study of history, historical descriptions, and significance of sources.
②	c,e	Students will be able to explain the historical significance of modernization in the "flow" from the premodern period.
③	c,e	Students will be able to explain the impact of the Industrial Revolution and the development of the nation-state.
④	c,e	Students will be able to explain the impacts of imperialism and colonization.
⑤	c,e	Students will be able to explain the First World War and popular culture.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		20	20	20	20	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	8	8	5	5	0	5	0	31
	Ability to think, reason, and create	4	4	8	8	0	5	0	29
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / expression / communication	8	8	7	7	0	5	0	35
	Attitude and motivation for learning	0	0	0	0	0	5	0	5

＊ The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	Final Examination. Answers to essay-type questions will be evaluated on the basis of 4 criteria. First, the level of comprehension of the "course of history" and "geographical condition." Second, the accuracy of historical facts in the contents of an answer. Third, the relevance and logic of answers to the examination question. Fourth, the use of concise sentences and good textual structure. (20%)
	②	✓	
	③	✓	
	④		
	⑤		
	⑥		
Quizzes	①	✓	Mid-Term Test. Answers to essay-type questions will be evaluated on the basis of 4 criteria. First, a level of comprehension of the "course of history." Second, the accuracy of historical facts (*shijitsu*) and facts (*jijitsu*) in the contents of an answer. Third, the relevance and logic of answers to the examination question. Fourth, the use of concise sentences and good textual structure. (20%)
	②	✓	
	③	✓	
	④		
	⑤		
	⑥		
Reports	①	✓	There will be five assignments; the instructor will explain how to think and how to write effectively. Each assignment will be distributed in class and submitted at the beginning of the next class. Assignments will be evaluated and returned the following week. (20%)
	②	✓	
	③	✓	
	④		
	⑤		
	⑥		
Presentations	①		There will be one presentation at the end of the semester. Students will choose topics from what they are learning in the first semester in consultation with the instructor. Individual presentations will be evaluated on the following points: contents, style, method, supporting material such as power-point, the indication of sources, the role of an individual presenter for the group, etc. The presentation will be evaluated and returned the following week. (20%)
	②		
	③		
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	The portfolio must include a reflection paper, all handouts, 5 assignments, supporting material for one presentation, and other work when relevant. Work will be comprehensively evaluated, together with students' volition and attitudes to learning. Students will submit the portfolio by the end of the semester. (20%)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will be able to explain: • formulation of questions for the study of history, historical description, and significance of sources; • historical significance of modernization in the context of "flow" from the premodern period; • the impact of the Industrial Revolution on society; • the impact of the development of the nation-state; • the impact of imperialism and colonization; • First World War and popular culture.	Students can explain the main points of: • formulation of questions for the study of history, historical description, and significance of sources; • historical significance of modernization in the context of "flow" from the premodern period; • the impact of the Industrial Revolution on society; • the impact of the development of the nation-state; • the impact of imperialism and colonization; • First World War and popular culture.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	History and us	Lecture on enhancing our interest in and awareness of history via familiar issues that we are experiencing and the points where Japanese history and world history are closely linked.	Review course contents.	20 10
2 /	Characteristics of history and sources	Lecture on how history is narrated on the basis of various sources. Distribute assignment ①	Review course contents.	20 10
3	Questions on modernization	Lecture on some themes in people's lives and the transformation of society associated with modernization. Submit assignment ①	Review course contents.	20 10
4	Economy and society of Japan and Asia during the 18th century ①	Lecture on production and distribution in Japan and China during the 18th century. Distribute assignment ②	Review course contents.	20 10
5 /	Economy and society of Japan and Asia during the 18th century ②	Lecture on trading system spreading around Asia and Western powers' trade in Asia. Submit assignment ②	Review course contents.	20 10
6 /	Progress in industrialization and development of world market ① Industrial Revolution	Lecture on influence of Industrial Revolution and renovation of transportation and communication.	Review course contents.	20 10
7 /	Progress in industrialization and development of world market ②	Lecture on opening of ports in China and opening of the nation in Japan. Distribute assignment ③	Review course contents.	20 10
8 /	Mid-term test Constitutionalism and development of nation-state ①	Mid-term test (50 minutes) Lecture on establishment of the sovereign state and establishment of the nation-state.	Prepare for mid-term test.	60 10
9 /	Constitutionalism and development of nation-state ②	Lecture on the process from the Bakumatsu period to Meiji Restoration. Submit assignment ③	Review course contents.	20 10
10 /	Constitutionalism and development of nation-state ③	Lecture on policies of early Meiji and establishment of Meiji Constitution. Distribute assignment ④	Review course contents.	20 10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Imperialism of Great Powers and transformation of various Asian nations ①	Lecture on partition of the world by Great Powers and colonies spreading around the world. Submit assignment ④	Review course contents.	20 10
12 /	Imperialism of Great Powers and transformation of various Asian nations ②	Lecture on Sino-Japanese War and Russo-Japanese War.	Review course contents.	20 10
13 /	Modernization and various contemporary issues	Lecture on modernization and various contemporary issues. Distribute assignment ⑤	Review course contents.	20 10
14	Questions about change in the international order and popular culture	Lecture on some themes with regards to change of international order and popular culture. Submit assignment ⑤	Review course contents.	20 10
15 /	Presentation	Evaluate contents, students' manner of presentation, prepared material, etc.	Prepare presentation.	60 10
16 /	Final Exam	Final Exam (50 minutes) Evaluate students' overall understanding of the subject.	Study overall course contents. Review exam contents.	60 10
17 /	Self-check			

令和8年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	歴史文化IB（日本語）	1	623500	後学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	上田　清史	白山麓 101.201		月曜日・木曜日 16：30－17：30

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	総力戦・国際協調	近現代の歴史の変化に関わる諸事象について、世界とその中の日本を広く相互的な 視野から捉え、現代的な諸問題の形成にかかわる近現代の歴史を理解するとともに、 諸資料から歴史に関する様々な情報を適切かつ効果的に調べまとめる技能を身に付けるようにする。
2	大衆化	
3	経済危機	
4	グローバル化	
5	冷戦	

授業の概要および学習上の助言

後学期では第一次世界大戦から冷戦締結とその後までを広くカバーする。先ずは二つの世界大戦の原因や国内・国際社会に与えた影響を考察する。また戦後期のグローバル化に対するいくつか「問い」を軸として冷戦期の分断する世界と日本の復興などを捉えてゆく。また近現代史を振り返りつつ冷戦締結後の新しい国際秩序について考えてゆく。

学生は自主的に五つの課題に取り組み、これら課題や講義で得た基礎知識をもとに中間テストと期末試験に備える。また、クラス内の発表があるので教員の指示に従ってテーマの選定と発表に向けての準備（リサーチを含む）を主体的に行う。

【教科書および参考書・リザーブドブック】
教科書：「私たちの歴史総合」明和社（令和４年）
参考書：　ハンドアウト
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

日本語を読み書きする能力（日本の高校生レベル）
歴史文化IA（日本語）

№	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	c,e	総力戦と第一次世界大戦後の国際協調体制の成立を説明できる。
②	c,e	大衆社会の形成とその影響について説明できる。
③	c,e	経済危機と第二次世界大戦について説明できる。
④	c,e	冷戦期の分断する世界と日本の民主化・経済復興を説明できる。
⑤	c,e	近現代史を振り返りつつ冷戦締結後の新しい世界秩序について考えることが出来る。

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		20	20	20	20	0	20	0	100
総合力指標	知識を取り込む力	8	8	5	5	0	5	0	31
	思考・推論・創造する力	4	4	8	8	0	5	0	29
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	8	8	7	7	0	5	0	35
	学習に取組む姿勢・意欲	0	0	0	0	0	5	0	5

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		定期試験。論述式問題の答案を四つの基準から評価する。①「歴史の流れ」に対する理解度。②解答の内容における史実の正確性。③試験問題に対する解答の関係性と論理性。④簡潔な文と文章構成。（20%）
	②		
	③		
	④	✔	
	⑤	✔	
	⑥	✔	
クイズ 小テスト	①	✔	中間テスト。論述式問題の解答を四つの基準から評価する。①「歴史の流れ」に対する理解度。②解答の内容における史実の正確性。③試験問題に対する解答の関係性と論理性。④簡潔な文と文章構成。（20%）
	②	✔	
	③		
	④		
	⑤		
	⑥		
レポート	①	✔	５つの課題：効果的な「考え方」や「書き方」などを指導する。 課題は授業で配布され次の授業の始まりに提出する。翌週の授業までに採点され返却される。 （20%）
	②	✔	
	③	✔	
	④	✔	
	⑤	✔	
	⑥	✔	
成果発表 （口頭・実技）	①		１回の発表：教員と相談した上で後学期に学んでいる歴史の内容からテーマを決定する。 個人発表の次の点を評価する：内容、スタイル（方法）、パワーポイントなどの補助資料、資料 （史料）の提示など。翌週の授業までに発表の評価を受ける。（20%）
	②		
	③		
	④	✔	
	⑤	✔	
	⑥	✔	
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①	✔	ポートフォリオにはリフレクションペーパー・配布資料（メモを取ること）・５つの課題・中間テスト・発表の補助資料（１点）や関係のある場合はその他を添えること。これは学期末（最後の授業）に提出する。（20%）
	②	✔	
	③	✔	
	④	✔	
	⑤	✔	
	⑥	✔	
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
総力戦と第一次世界大戦後の国際協調体制の成立を説明できる。 大衆社会の形成とその影響について説明できる。 経済危機と第二次世界大戦について説明できる。 グローバル化の長所とその諸問題を説明できる。 冷戦期の分断する世界と日本の民主化・経済復興を説明できる。 近現代史を振り返りつつ、冷戦締結後に新しい世界秩序の構築が模索されていることを説明できる。	総力戦と第一次世界大戦後の国際協調体制の成立の要点について述べる事ができる。 大衆社会の形成とその影響の要点について述べる事ができる。 経済危機と第二次世界大戦の要点について述べる事ができる。 グローバル化の長所とその諸問題の要点について述べる事ができる。 冷戦期の分断する世界と日本の民主化・経済復興の要点について述べる事ができる。 近現代史を振り返りつつ、冷戦締結後に新しい世界秩序の構築が模索さ れていることを知る。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	総力戦と第一次世界大戦後の国際協調体制	第一次世界大戦の展開、日本やアジアの経済成長を中心に講義する。	ノート（プリント）を見直して補完する。	20 10
2 ／	総力戦と第一次世界大戦後の国際協調体制	ソビエト連邦の成立や米国の台頭を中心に講義する。 課題①を配布する。	ノート（プリント）を見直して補完する。	20 10
3 ／	大衆社会の形成と社会運動の広がり	大衆の政治参加と女性の地位向上、大正デモクラシーと政党政治を中心に講義する。 課題①を提出する。	ノート（プリント）を見直して補完する。	20 10
4 ／	大衆社会の形成と社会運動の広がり	大量消費社会と大衆文化、教育の普及、マスメディアの発達を中心に講義する。 課題②を配布する。	ノート（プリント）を見直して補完する。	20 10
5 ／	経済危機と第二次世界大戦 国際協調体制の動揺	世界恐慌、ファシズムの台頭、日本の動揺と対外政策を中心に講義する。 課題②を提出する。	ノート（プリント）を見直して補完する。	20 10
6 ／	経済危機と第二次世界大戦 第二次世界大戦後の国際秩序と日本の国際社会への復帰	第二次世界大戦と日本の参戦、国際連合の成立とブレントン＝ウッズ体制を中心に講義する。	ノート（プリント）を見直して補完する。	20 10
7 ／	経済危機と第二次世界大戦 第二次世界大戦後の国際秩序と日本の国際社会への復 帰	冷戦の始まりと東アジアの動向、連合軍の戦後改革、講和条約の締結、日本の独立回復について講義する。	ノート（プリント）を見直して補完する。	20 10
8 ／	中間テスト グローバル化への問い	中間テスト（50分間） 7つの問いを中心に講義する。 課題③を配布する。	中間テストの準備をする。	60 10
9 ／	冷戦と世界経済 国際政治の変容	脱植民地化と非同盟国、冷戦下の地域紛争と日本の戦後処理を中心に講義する。 ① 課題③を提出する。	ノート（プリント）を見直して補完する。	20 10
10 ／	冷戦と世界経済 国際政治の変容	脱植民地化と非同盟国、冷戦下の地域紛争と日本の戦後処理を中心に講義する。 ②	ノート（プリント）を見直して補完する。	20 10

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	国際経済の拡大と日本の高度成長期	地域連携が進む西ヨーロッパと東南アジア、社会主義経済の広がり、高度成長期下の日本を中心に講義する。	ノート（プリント）を見直して補完する。	20 10
12 ／	世界秩序の変容と日本 市場経済の変容と課題	2度の石油危機、アジア諸地域の経済発展を中心に講義する。	ノート（プリント）を見直して補完する。	20 10
13 ／	市場経済の変容と課題	市場開放と経済の自由化、情報通信技術の発展を中心に講義する	ノート（プリント）を見直して補完する。	20 10
14 ／	冷戦終結後の国際政治の変容と課題	冷戦の終結、民主化の進展、地域統合の拡大、地域紛争への対応を中心に講義する。	ノート（プリント）を見直して補完する	20 10
15 ／	発表	内容・発表の態度・作成資料などを評価する。	発表の準備をする	60 10
16 ／	定期試験	定期試験（50分）	授業内容を学習する 試験内容・結果を確認する。	60 10
17 ／	試験返却（自己点検）			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	History and Culture IB (English)	1	623600	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	UEDA, Kiyoshi	HC 101.201		Monday/Thursday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Total War, International Cooperation	This course aims to guide student to grasp various phenomena with regards to changes that took place in the early modern and modern periods of history, to understand how early modern and modern history affected the development of various contemporary issues, and to acquire skills to effectively research information about history from various sources and summarize it.
2	Popular Culture	
3	Economic Crisis	
4	Globalization	
5	Cold War	

Course Description and Expectations for Students (10.5pt)

In the second semester, this course will broadly cover the period from the First World War to the end of the Cold War and beyond. First, it will examine the origins of two world wars and their effects on domestic societies and international communities. It will go on to study the divided world during the Cold War and the reconstruction of Japan from the perspectives of several questions on globalization in the postwar period. Finally, the course will advance to the new international order after the end of the Cold War by reflecting on early modern and modern history.

Students will independently work on five assignments, preparing themselves for a mid-term test and final exam according to basic knowledge they will acquire from these assignments and lectures. Also, one presentation will take place in class; students are expected to take the initiative in selecting a topic and in preparing (including research) for it.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: Handout
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to read and write English language (at the high-school level)
History and Culture IA (English)

No.	Program Objectives	Target Abilities for Students (9pt)
①	c,e	Students will be able to explain the idea of total war and the establishment of the system of international cooperation after the First World War.
②	c,e	Students will be able to explain the formation of mass society and its effects.
③	c,e	Students will be able to explain economic crisis and the Second World War.
④	c,e	Students will be able to explain the divided world during the Cold War and the democratization and economic reconstruction of Japan.
⑤	c,e	Students will be able to give their thoughts about the new world order after the Cold War by reflecting on early modern/modern history.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	0	20	20	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	0	5	8	0	5	0	28
	Ability to think, reason and create	15	0	8	4	0	5	0	32
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / expression / communication	10	0	7	8	0	5	0	30
	Attitude and motivation for learning	5	0	0	0	0	5	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		Final Examination. Answers to essay-type questions will be evaluated on the basis of 4 criteria. First, a level of comprehension of the "course of history" and "geographical condition." Second, the accuracy of historical facts in the contents of an answer. Third, the relevance and logic of answers to the examination question. Fourth, the use of concise sentences and good textual structure. (20%)
	②		
	③		
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	Mid-Term Test. Answers to essay-type questions will be evaluated on the basis of 4 criteria. First, a level of comprehension of the "course of history" and "geographical condition." Second, the accuracy of historical facts (*shijitsu*) and facts (*jijitsu*) in the contents of an answer. Third, the relevance and logic of answers to the examination question. Fourth, the use of concise sentences and good textual structure. (20%)
	②	✓	
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	There will be five assignments; the instructor will explain how to think and how to write effectively. Each assignment will be distributed in class and submitted at the beginning of the next class. Assignments will be evaluated and returned the following week. (20%)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		There will be one presentation at the end of the semester. Students will choose topics on the "course of history" and "geographical condition" in consultation with the instructor. Individual presentations will be evaluated on the following points: contents, style, method, supporting material such as power-point, the indication of sources, the role of an individual presenter for the group, etc. The presentation will be evaluated and returned the following week. (20%＋20%＝40%)
	②		
	③		
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	The portfolio must include a reflection paper, all handouts, 5 assignments, supporting material for one presentation, and other work when relevant. Work will be comprehensively evaluated, together with students' volition and attitudes to learning. Students will submit the portfolio by the end of the semester. (20%)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will be able to explain: • the idea of total war and the establishment of the system of international cooperation after the First World War; • the formation of mass society and its effects; • economic crisis and the Second World War; • merits and problems of globalization; • the divided world during the Cold War and democratization and economic reconstruction of Japan; • the new world order after the end of the Cold War by reflecting on early modern/modern history.	Students can discuss the main points of: • the idea of total war and the establishment of the system of international cooperation after the First World War; • the formation of mass society and its effects; • economic crisis and the Second World War; • merits and problems of globalization; • the divided world during the Cold War and the democratization and economic reconstruction of Japan; • the new world order after the end of the Cold War by reflecting on early modern/modern history.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Total war and the system of international cooperation after the First World War	Lecture on development of the First World War and the economic growth of Japan and Asia.	Review course contents.	20 10
2 /	Total war and the system of international cooperation after the First World War	Lecture on establishment of the Soviet Union and the rise of the United States. Distribute assignment ①	Review course contents.	20 10
3	Development of mass society and spread of social movements	Lecture on mass participation in politics and the improvement of the status of women, Taisho Democracy, and party politics. Submit assignment ①	Review course contents.	20 10
4 /	Development of mass society and spread of social movements	Lecture on mass consumer society and mass culture, popularization of education, and development of mass media. Distribute assignment ②	Review course contents.	20 10
5 /	Economic crisis and the Second World War Disturbance to the system of international cooperation	Lecture on the World Depression, the rise of Fascism, Japan's disturbance, and its external policies. Submit assignment ②	Review course contents.	20 10
6 /	Economic crisis and the world order after the Second World War Japan's return to the international community	Lecture on the Second World War and Japan's participation, establishment of the League of Nations and Breton-Woods System.	Review course contents.	20 10
7 /	Economic crisis and the world order after the Second World War Japan's return to the international community	Lecture on the onset of the Cold War and the trend in Asia, the Allies' postwar reform, conclusion of peace treaty, and restoration of Japan's independence.	Review course contents.	20 10
8 /	Mid-term test Various questions on globalization	Mid-term test (50 minutes) Lecture on 7 questions. Distribute assignment ③	Prepare for mid-term test.	60 10
9 /	The Cold War and world economy Transformation of international politics	Lecture on the process of decolonization and nonaligned nations, regional conflicts in the Cold War, and postwar processes of Japan. ① Submit assignment ③	Review course contents.	20 10
10 /	The Cold War and world economy Transformation of international politics	Lecture on the process of decolonization and nonaligned nations, regional conflicts in the Cold War, and postwar processes of Japan. ②	Review course contents.	20 10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Expansion of international economy and Japan's period of high economic growth	Lecture on Western Europe and Southeast Asia where regional cooperation was underway, the spread of the socialist economy. Distribute assignment ④	Review course contents.	20 10
12 /	Transformation of world order and Japan's transformation into a market economy and its challenges	Lecture on two oil crises and economic development of various regions of Asia. Submit assignment ④	Review course contents.	20 10
13 /	Transformation of world order and Japan's transformation into a market economy and its challenges	Lecture on open market and economic liberalization and the development of information technology. Distribute assignment ⑤	Review course contents.	20 10
	Transformation of international politics after the end of the Cold War	Lecture on the ending of the Cold War. Submit assignment ⑤	Review course contents.	20 10
15 /	Presentation	Evaluate contents, students' manner of presentation, prepared material, etc.	Prepare presentation.	60 10
16 /	Final Exam	Final Exam (50 minutes) Evaluate students' overall understanding of the subject.	Study overall course contents. Review exam contents.	60 10
17 /	Self-check			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Precalculus A	2	611000	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	KIHARA, Hitoshi	Hakusanroku C :101. 201		(M-F) 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Sets	Students will be able to manipulate algebraic expressions, rational expressions, equations and inequalities using properties of real numbers, define a function and its properties, graph functions via graphing transformation techniques, combine functions through algebraic operations and composition of functions, determine if functions are one to one by the Horizontal line test, and define inverse functions, its properties and graph.
2	Algebraic Expressions	
3	Rational Expressions	
4	Function Transformations	
5	Inverse Functions	

Course Description and Expectations for Students (10.5pt)

In this course, we will study the real numbers thoroughly, starting with the idea of a set. We will pay close attention to the properties of real numbers, exponents and radicals. We will then talk about algebraic and rational expressions, which then lead to the idea of an equation. We will then study complex numbers and inequalities. Finally, we will introduce the idea of a function, the graph of a function, terminology of functions like domain and range, transformation techniques for graphing functions, the algebra of functions, composition of functions, one-to-one functions and inverse functions.
This course will offer peer teaching in class as a type of active learning.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: Pre-Calculus Mathematics for Calculus 7th Edition by James Stewart (Brooks/Cole Pub Co) ISBN-13: 978-1305071759
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have a basic understanding of numbers and operations on numbers.
It is advised that students should feel comfortable asking questions in and outside of the class. Further, students should take the worksheet problems in class serious in order to understand the topics covered in class. Students should eventually understand that making mistakes is crucial for their learning.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, g, i	Students will be able to manipulate algebraic and rational expressions, equations and inequalities.
②	a, d, g, i	Students will be able to define a function, understand its properties and graph.
③	a, d, f, g	Students will be able to graph functions via techniques of graphing transformations.
④	a, d, g, i	Students will be able to composite two functions.
⑤	a, d, g, i	Students will be able to determine if a function is one-to-one by the horizontal line test.
⑥	a, g, i	Students will be able to define an inverse function, understand its properties and graph.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	50	20	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	25	5	0	0	0	0	45
	Ability to think, reason and create	15	25	5	0	0	0	0	45
	Collaboration and leadership	0	0	5	0	0	0	0	5
	Announcement / Expression / Communication	0	0	5	0	0	0	0	5
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	There will be one exam, the final exam which will cover material for latter half of this semester. It is worth 30% of your final grade. It is crucial that you study all your notes, homework and quizzes before a test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be one quiz for each lecture which will cover material from the previous lesson. The average of all your quizzes will be your final score which is worth 20% of your final grade. These quizzes are meant to make sure you are keeping up with the class. And there will be one mid-term test which will cover material for former half of this semester. It is worth 30% of your grade, so 50% of your final grade will be obtained through these quizzes and mid-term test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	At the end of each lecture, you must submit your worksheet. At the end of each month, you must submit your personal notes. The evaluation criteria are as follows: For worksheets, teacher will check whether you have reviewed your own answers and completely corrected any errors. For notes, teacher will check whether you have accurately transcribed the content from the blackboard. These assignments each account for 10% of your final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are curious, ask a lot of questions and show willingness to try new ideas, no matter of failure. Students further understand that making mistakes is crucial to learning and go back and correct any mistakes they encountered in their work/HW/quizzes/exams. In essence, students learn the procedure of learning.	Students address their weaknesses in specific topics and form a plan in order to succeed in Calculus.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus/Class Introduction Introduce the syllabus and the rules for the class.	Lecture	Review: Read the syllabus. Preparation: Read Section 1.1.	30
2 /	Sets Part I Understand the idea of a set and set relations.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.1.	30
3 /	Sets Part II Understand the properties of real numbers and set-builder notation.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.1.	30
4 /	Real Numbers Understand the subsets of real numbers and several ways of expressing them.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.1.	30
5 /	Absolute value and Decimal representation Understand the absolute value and decimal representation of real numbers.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.1.	30
6 /	Exponents Understand exponential notation, laws of exponents and how to write a number in scientific notation.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.2.	30
7 /	Radicals Understand the definition of the nth root and properties of the nth root. Also, understand the definition of rational exponents and how to rationalize the denominator.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.2.	30
8 /	Algebraic Expressions Part I Understand what an algebraic expression is. Understand algebraic terminology for polynomials. Also, understand special product formulas and how to multiply polynomials by the distributive property.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.3.	30
9 /	Algebraic Expressions Part II Understand the following factoring techniques: by common factors, trinomials, special formulas and by grouping.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.3.	30
10 /	Rational Expressions Part I Understand what a rational expression is. Understand the definition of the domain of an algebraic expression. Also, understand how to simplify rational expressions and how to multiply and divide rational expressions.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.4.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Rational Expressions Part II Understand how to add and subtract rational expressions.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.4.	30
12 /	Rational Expressions Part III Understand how to compound fractions and how to rationalize the denominator or numerator.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.4.	30
13 /	Equations Part I Understand the properties of equality, linear equations, quadratic equations and the zero-product property.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.5.	30
14 /	Equations Part II Understand how to complete the square, the quadratic formula and the discriminant.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.5.	30
15 /	Equations Part III Understand how to solve the rational equations.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.5.	30
16 /	Equations Part IV Understand how to solve the radical equations.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.5.	30
17 /	Summary and review of unclear parts in the previous topics.	Quiz Review all worksheets and ask any question for any difficult problem.	Review the topics studied in the previous classes Review all the worksheets problems	30
18 /	Mid-term test	A quick review. Have the mid-term test.	Review all the worksheets problems.	90
19 /	Complex Numbers Part I Understand the definition of a complex number and arithmetic operations on complex numbers.	Mid-term test return Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.6.	30
20 /	Complex Numbers Part II Understand square roots of negative numbers and how we can get complex solutions for quadratic equations.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.6.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Inequalities Understand rules of inequalities, how to solve linear inequalities and non-liner inequalities.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 1.8.	30
22 /	Functions Understand the definition of a function, how to analyze a function, how to evaluate a function.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 2.1.	30
23 /	Graphs of Functions Part I Understand the definition of a graph, how to draw a graph of a function by plotting points for: $x^2, \sqrt{x}, x, x^3, \sqrt[3]{x}$ and for piece-wise functions: $\lvert x\rvert, \lceil x\rceil, \lfloor x\rfloor$.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 2.2.	30
24 /	Graphs of Functions Part II Understand the vertical line test, how to obtain the domain and range from a graph.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 2.2.	30
25 /	Transformations of Functions Part I Understand how to graph a function by vertical and horizontal shifts. Also, understand how to reflect graphs about the x-axis and the y-axis.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 2.6.	30
26 /	Transformations of Functions Part II Understand how to graph functions by vertical stretching and shrinking. Also, by horizontal stretching and shrinking.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 2.6.	30
27 /	Combining Functions Understand the algebra of functions and the composition of functions.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 2.7.	30
28 /	One-to-One Functions and their Inverses Part I Understand the definition of a one-to-one function and how to determine if a function is one-to-one by the horizontal line test. Also, understand what it means to be an inverse function and the inverse function property.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 2.8.	30
29 /	One-to-One Functions and their Inverses Part II Understand how to find the inverse of a function and how to graph the inverse of a function.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 2.8.	30
30 /	Review for Final Exam	Self-Study / Q&A	Review for Final Exam.	30

Course Schedule

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Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
31 /	Final exam		Review all materials	120
32 /	Final exam return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Precalculus B	2	611100	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	KIHARA, Hitoshi	Hakusanroku C :101. 201		(M-F) 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Polynomial Functions	Students will be able to define a quadratic function and its graph, learn about the general polynomial of degree n and its basic graphs, divide polynomials by long division and synthetic division, define a rational function and learn about its properties and graph, define an exponential function and learn about its properties and graph, and define a logarithmic function and learn about its properties and graph.
2	Dividing Polynomials	
3	Rational Functions	
4	Exponential Functions	
5	Logarithmic Functions	

Course Description and Expectations for Students (10.5pt)

This course will continue with the ideas of pre-calculus, starting with quadratic functions. We will have a thorough study of quadratic functions, polynomial functions, their properties and graphs. We will then learn how to divide polynomials by the division algorithm and learn how to completely factor a polynomial by the Fundamental Theorem of Algebra and the Complete Factorization Theorem. We will then talk about Rational Functions and partial fraction decomposition. The other half of the class will focus on exponential functions, their graphs and properties, as well as logarithmic functions, their graphs and properties.
This course will offer peer teaching in class as a type of active learning.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Pre-Calculus Mathematics for Calculus 7th Edition by James Stewart (Brooks/Cole Pub Co) ISBN-13: 978-1305071759
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have a good understanding about the topics covered in the previous class about functions.
It is advised that students should feel comfortable asking questions in and outside of the class. Further,
students should take the worksheet problems in class serious in order to understand the topics covered in class. Students should eventually understand that making mistakes is crucial for their learning.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, g, i	Students will be able to define a quadratic function, its properties and graph.
②	a, d, g, i	Students will be able to define a polynomial function of degree n, its properties and basic graphs.
③	a, d, f, g	Students will be able to divide polynomials by long division and by synthetic division.
④	a, d, g, i	Students will be able to define a rational function, its properties and graph.
⑤	a, d, g, i	Students will be able to define an exponential function, its properties and graph.
⑥	a, g, i	Students will be able to define a logarithmic function, its properties and graph.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	50	20	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	25	5	0	0	0	0	45
	Ability to think, reason and create	15	25	5	0	0	0	0	45
	Collaboration and leadership	0	0	5	0	0	0	0	5
	Announcement / Expression / Communication	0	0	5	0	0	0	0	5
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	There will be one exam, the final exam which will cover material for latter half of this semester. It is worth 30% of your final grade. It is crucial that you study all your notes, homework and quizzes before a test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be one quiz each lecture which will cover material from the previous lesson. The average of all your quizzes will be your final score which is worth 20% of your final grade. These quizzes are meant to make sure you are keeping up with the class. And there will be one mid-term test which will cover material for former half of this semester. It is worth 30% of your grade, so 50% of your final grade will be obtained through these quizzes and mid-term test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	At the end of each lecture, you must submit your worksheet. At the end of each month, you must submit your personal notes. The evaluation criteria are as follows: For worksheets, teacher will check whether you have reviewed your own answers and completely corrected any errors. For notes, teacher will check whether you have accurately transcribed the content from the blackboard. These assignments each account for 10% of your final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are curious, ask a lot of questions and show willingness to try new ideas, no matter of failure. Students further understand that making mistakes is crucial to learning and go back and correct any mistakes they encountered in their work/HW/quizzes/exams. In essence, students learn the procedure of learning.	Students address their weaknesses in specific topics and form a plan in order to succeed in Calculus.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus/Class Introduction Quadratic Functions Part I Understand the general and standard form of a quadratic function.	Lecture Worksheet	Review: Read the syllabus. Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.1.	30
2 /	Quadratic Functions Part II Understand maximum and minimum values of quadratic functions.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.1.	30
3 /	Polynomial Functions and their Basic Graphs I Understand the definition of a polynomial of degree n, how to graph monomials using graphing transformations and the end behavior of polynomials.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.2.	30
4 /	Polynomial Functions and their Basic Graphs II Understand how to use zeros to graph a polynomial function.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.2.	30
5 /	Dividing Polynomials Part I Understand how to do long division of polynomials by the division algorithm.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.3.	30
6 /	Dividing Polynomials Part II Understand how to divide of polynomials by synthetic division and how to transform the answer in the form of $P(x)=Q(x)\times D(x)+R(x)$.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.3.	30
7 /	Dividing Polynomials Part III Understand how to use the Remainder Theorem and the Factor Theorem.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.3.	30
8 /	Rational Zeros of Polynomials Understand how to use the Rational Zeros Theorem to find the rational zeros of a polynomial.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.4.	30
9 /	Complex Zeros and the Fundamental Theorem of Algebra Part I Understand how to use the Fundamental Theorem of Algebra and the Complete Factorization Theorem in order to factor a polynomial completely.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.5.	30
10 /	Complex Zeros and the Fundamental Theorem of Algebra Part II Understand the Conjugate Zeros Theorem and how it helps us to find polynomials with specified zeros.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.5.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Rational Functions Part I Understand the definition of a rational function. Understand how graphing the simple rational function $y = \frac{1}{x}$ helps us define the vertical and horizontal asymptotes.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.6.	30
12 /	Rational Functions Part II Understand how to find vertical asymptotes, horizontal asymptotes, domain and range of a rational function. Also, understand the three cases for horizontal asymptotes.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.6.	30
13 /	Rational Functions Part III Understand how to graph rational functions by using x-int, y-int and asymptotes.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.6.	30
14 /	Rational Functions Part IV Understand the definition of holes and slant asymptotes and how to graph rational functions.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.6.	30
15 /	Polynomial & Rational Inequalities Understand how to solve polynomial and rational inequalities.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 3.7.	30
16 /	Partial Fractions Understand how to perform partial fraction decomposition	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 10.7.	30
17 /	Summary and review of unclear parts in the previous topics.	Quiz Review all worksheets and ask any question for any difficult problem.	Review the topics studied in the previous classes Review all the worksheets problems	30
18 /	Mid-term test	A quick review. Have the mid-term test.	Review all the worksheets problems.	90
19 /	Exponential Functions Part I Understand the definition of an exponential function, its graph and its properties. Also, understand how to graph exponential functions by techniques of graphing transformations.	Mid-term test return Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.1.	30
20 /	Exponential Functions Part II Understand the definitions of the number e, and how to find the values of the natural exponential function. Also, understand how to graph the natural exponential function by techniques of graphing transformations.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.2.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Exponential Functions Part III Understand the compound interest formula and the continuously compound interest formula	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.2.	30
22 /	Logarithmic Functions Part I Understand the definition of the logarithmic function and be able to use the definition to convert from an exponential equation to a logarithmic equation. Understand the notion of a common logarithm and a natural logarithm and properties of logarithms.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.3.	30
23 /	Logarithmic Functions Part II Understand how to graph logarithmic functions by techniques of graphing transformations.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.3.	30
24 /	Laws of Logarithms Part I Understand the laws of logarithms and how to use them to expand and combine logarithms. Also, understand how to evaluate logarithmic expressions using laws of logarithms.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.4.	30
25 /	Laws of Logarithms Part II Understand how to use the change of base formula.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.4.	30
26 /	Exponential Equations Understand how to solve exponential equations.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.5.	30
27 /	Logarithmic Equations Understand how to solve logarithmic equations	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.5.	30
28 /	Exponential and Logarithmic Inequalities Understand how to solve inequalities	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.5.	30
29 /	Modeling with Exponential Functions and Logarithmic Scales Understand how to model with exponential functions and logarithmic functions.	Quiz Lecture Worksheet	Review: Finish worksheet/HW. Prepare the quiz. Preparation: Read Section 4.6.	30
30 /	Review for Final Exam	Self-Study / Q&A	Review for Final Exam.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
31 /	Final exam		Review all materials	120
32 /	Final exam return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Fundamental Mathematics A	2	611400	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	WOHLFARTH, Brandon KIHARA, Hitoshi	Hakusanroku C :101.201		Tues. 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Lines	The goal of this course in to gather an understanding of fundamental techniques and relationships within mathematics. This course specifically deals with mathematical interpretation, both graphically and using calculations, of different functions/shapes like, lines, trigonometric functions, and triangles. Students will learn the relationships and will be able to practice and implement them through problem solving.
2	Triangles	
3	Trigonometric Functions	
4	Unit Circle	
5	Trigonometric Identities	

Course Description and Expectations for Students (10.5pt)

The purpose of this course is to teach the fundamental mathematical skills that will be required in future classes, not only in mathematics but in other courses related to S.T.E.M.

This course offers learning circles as a type of active learning.

In this course:
- Students should submit all exercises and quizzes.
- All late submissions will result in a decrease in the score on that assignment.
- All classes will be conducted in English.

This class builds on important mathematical concepts that will be used throughout your time at ICT. If there is a topic that you do not understand please ask a classmate, a learning mentor, or schedule a meeting with one of the teachers so that we can help.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: "Pre-Calculus: Mathematics for Calculus 7th Edition"(CENGAGE LEARNING) ISBN 978-1-305-07175-9
Reference books: "Higher Level Mathematics 2012 Edition" (PEARSON) ISBN 978-0-435-07496-8
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic mathematical skills from junior high school mathematics courses.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to write the equations and graph lines and trigonometric functions.
②	h,i	Students will be able to use trigonometric functions to solve problems.
③	h,i	Students will be able to use trigonometric identities to simplify and solve equations.
④	h,i	Students will be able to use the unit circle to solve problems using trigonometry.
⑤	h,i	Students will be able to connect the concepts learned with how they can be used in other subjects as well as in mathematics.
⑥	d,h,i	Students will be able to complete assignments and use study skills to review material learned throughout the course.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		20	45	35	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	25	15	0	0	0	0	50
	Ability to think, reason and create	10	20	15	0	0	0	0	45
	Collaboration and leadership	0	0	5	0	0	0	0	5
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	∨	There is an exam at the end of the semester, worth 20% of your overall grade in the course, which contains the content covered in the second half of the course.
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Quizzes	①	∨	At the beginning of a new topic, there will be a quiz about the previous topic as marked in the syllabus. These quizzes are worth a total of 25% of the total score in the course. There is a mid-term test which covers the content in the first half of the course. This test is worth 20% of the overall grade in the course.
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Reports	①	∨	Each class students will receive an exercise containing problems relevant to the topics discussed in the course. These exercises are worth a total of 10% of the total score. Students should complete this exercise in class unless stated by the instructor. In addition, students will need to complete review problems as outlined by the instructor worth a total of 25% of the total score.
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will be able to interpret and utilize trigonometric identities and properties in order to solve problems. Students will interpret and make the graphs of different shapes and understand the connections these methods share. Students will understand the how trigonometric identities are derived and can select which identities can be used in a variety of problem settings.	Students will be able to use trigonometric functions to solve problems. Students will be able to graph different shapes. Students will be able to understand the different between different trigonometric identities.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course Introduction and Syllabus Introduction of Lines ➢ Distance/Midpoint Formula ➢ Finding equation of a line	Lecture and Exercise	Review, complete assignment Read “Pre-Calculus” textbook section 1.10	10 20
2 /	Graphing Lines ➢ Slope Intercept Form ➢ Graphing Lines	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 1.10	10 20
3 /	Equation for Parallel and Perpendicular Lines	Lecture and Exercise Quiz	Review, complete assignment	10
4 /	Introduction to Pythagorean Theorem	Lecture and Exercise Quiz	Review, complete assignment	10
5 /	Introduction to Trigonometry ➢ Angles ➢ Arc Length and Sectors	Lecture and exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 6.1	10 20
6 /	Right Triangles ➢ Trigonometric functions ➢ Special Triangles	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 6.2	10 20
7 /	Right Triangles ➢ Area of a Triangle ➢ Inverse Trig Functions	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 6.4	10 20
8 /	Trigonometric Functions with Coordinates ➢ Reference Angle	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 6.3	10 20
9 /	The Unit Circle	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 5.1	10 20
10 /	Graphing Trigonometric Functions ➢ Sine Function ➢ Cosecant Function	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 5.3 & 5.5	10 20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Graphing Trigonometric Functions ➢ Cosine Function ➢ Secant Function	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 5.3 & 5.5	10 20
12 /	Graphing Trigonometric Functions ➢ Tangent Function ➢ Cotangent Function	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 5.4 & 5.5	10 20
13 /	Review for Midterm Test	Exercise Quiz	Review, complete assignment	10
14 /	Midterm Test	Test	Review, complete assignment	10
15 /	Law of Sine ➢ Definition of Law of Sine	Lecture and Exercise	Review, complete assignment Read “Pre-Calculus” textbook section 6.5	10 20
16 /	Law of Sine	Lecture and Exercise	Review, complete assignment	10
17 /	Law of Cosine	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 6.6	10 20
18 /	Law of Cosine	Lecture and Exercise	Review, complete assignment	10
19 /	Pythagorean Identities	Lecture and Exercise Quiz	Review, complete assignment	10
20 /	Trigonometric Identities	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 7.1	10 20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Trigonometry Operations ➢ Addition Formula ➢ Subtraction Formula	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 7.2	10 20
22 /	Single Function Sine Function Transformation	Lecture and Exercise	Review, complete assignment	10
23 /	Addition and Subtraction Formula Practice	Exercise	Review, complete assignment	10
24 /	Trigonometry Operations ➢ Double-Angle	Lecture and Exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 7.3	10 20
25 /	Trigonometry Operations ➢ Half-Angle	Lecture and Exercise Quiz	Review, complete assignment	10 20
26 /	Trigonometry Operations ➢ Product-Sum	Lecture and Exercise Quiz	Lecture and Exercise	10 20
27 /	Review Trigonometric Identities	Exercise	Lecture and Exercise	10
28 /	Solving Equations using Trig Identities	Lecture and Exercise	Review, complete assignment Read “Pre-Calculus” textbook section 7.4	10 20
29 /	Solving Equations using Trig Identities	Exercise	Review, complete assignment Read “Pre-Calculus” textbook section 7.5	10 20
30 /	Review for Final Exam	Exercise Quiz	Review, complete assignment	30
31 /	Final Exam			

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
32 /	Return Final Exam Score			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Fundamental Mathematics B	2	611500	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	WOHLFARTH, Brandon KIHARA, Hitoshi	Hakusanroku C :101.201		Tues. 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Circles	The goal of this course in to gather an understanding of fundamental techniques and relationships within mathematics. This course specifically deals with inequalities as well as understanding sets of events or numbers through the study of sequences, probability, and statistics. Students will be able to practice and implement them through problem solving.
2	Inequalities	
3	Sequences	
4	Probability	
5	Statistics	

Course Description and Expectations for Students (10.5pt)

The purpose of this course is to teach the fundamental mathematical skills that will be required in future classes, not only in mathematics but in other courses related to S.T.E.M.

This course offers learning circles as a type of active learning.

In this course:
- Students should submit all exercises and quizzes.
- All late submissions will result in a decrease in the score on that assignment.
- All classes will be conducted in English.

This class builds on important mathematical concepts that will be used throughout your time here at ICT. If there is a topic that you do not understand please ask a classmate, a learning mentor, or schedule a meeting with one of the teachers so that we can help.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: "Pre-Calculus: Mathematics for Calculus 7th Edition"(CENGAGE LEARNING) ISBN 978-1-305-07175-9
Reference books: "Higher Level Mathematics 2012 Edition" (PEARSON) ISBN 978-0-435-07496-8
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic mathematical skills from junior high school mathematics courses.
Skills and concepts from Fundamental Mathematics A

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to numerically calculate inequalities.
②	h,i	Students will be able to understand different statistical terms and techniques.
③	h,i	Students will be able to use probability analysis to find different values.
④	h,i	Students will be able to create graphs for trigonometry functions.
⑤	h,i	Students will be able to connect the concepts learned with how they can be used in other subjects as well as in mathematics.
⑥	d,h,i	Students will be able to complete assignments and use study skills to review material learned throughout the course.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		20	45	35	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	25	15	0	0	0	0	50
	Ability to think, reason and create	10	20	15	0	0	0	0	45
	Collaboration and leadership	0	0	5	0	0	0	0	5
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	∨	There is an exam at the end of the semester, worth 20% of your overall grade in the course, which contains the content covered in the second half of the course.
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Quizzes	①	∨	At the beginning of a new topic, there will be a quiz about the previous topic as marked in the syllabus. These quizzes are worth a total of 25% of the total score in the course. There is a mid-term test which covers the content in the first half of the course. This test is worth 20% of the overall grade in the course.
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Reports	①	∨	Each class students will receive an exercise containing problems relevant to the topics discussed in the course. These exercises are worth a total of 10% of the total score. Students should complete this exercise in class unless stated by the instructor. In addition, students will need to complete review problems as outlined by the instructor worth a total of 25% of the total score. There will be a data analysis mini-project.
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will be able to understand numerically the solutions to inequalities of different types of functions. Students will be able to understand and use statistical properties to evaluate a real data set. Students will be able to use probability terms and methods to analyze different types of situations.	Students will be able to calculate inequalities of standard functions. Students will be able to calculate different statistical values. Students will be able to calculate key values in probability.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Review of Fundamental Mathematics A	Lecture and Exercise	Review, complete assignment	10
2 /	Linear and Quadratic Inequalities	Lecture and Exercise Quiz	Review, complete assignment	10
3 /	Trigonometric Inequalities	Lecture and Exercise Quiz	Review, complete assignment	10
4 /	Linear Programming	Lecture and exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 10	10 20
5 /	Introduction to Circles ➢ Forms of the equation for a circle	Lecture and exercise Quiz	Review, complete assignment	
6 /	Equation of a Circle from 3 Points	Lecture and Exercise	Review, complete assignment	10
7 /	Circles and Tangent Lines	Lecture and Exercise Quiz	Review, complete assignment	10
8 /	Introduction to Sequences	Lecture and exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 12.1	10 20
9 /	Introduction to Summation	Lecture and exercise Quiz	Review, complete assignment	10
10 /	Arithmetic Sequences	Lecture and exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 12.2	10 20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Geometric Sequences 1	Lecture and exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 12.3	10 20
12 /	Geometric Sequences 2	Lecture and exercise	Review, complete assignment Read “Pre-Calculus” textbook section 12.4	10 20
13 /	Mathematical Induction	Lecture and exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 12.5	10 20
14 /	The Binomial Theorem	Lecture and exercise Quiz	Review, complete assignment Read “Pre-Calculus” textbook section 12.6	10 20
15 /	Review for Midterm Test	Exercise Quiz	Review, complete assignment	10 20
16 /	Midterm Test	Test	Review, complete assignment	10
17 /	Randomness	Lecture and Exercise	Review, complete assignment Read “Mathematics” textbook section 12.1	10 20
18 /	Probability Terms ➢ Tree and Grid Diagrams ➢ Venn Diagrams	Lecture and Exercise Quiz	Review, complete assignment Read “Mathematics” textbook section 12.2 & 12.3	10 20
19 /	Counting Principles (Permutations)	Lecture and Exercise Quiz	Review, complete assignment	10 20
20 /	Counting Principles (Combinations)	Lecture and Exercise Quiz	Review, complete assignment	10 20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Outcomes ➢ Probability Rules and Mutually Exclusive Events	Lecture and Exercise Quiz	Review, complete assignment	10 20
22 /	Geometric Probability	Lecture and Exercise Quiz	Review, complete assignment	10 20
23 /	Independent Events and Conditional Probability	Exercise Quiz	Review, complete assignment Read “Mathematics” textbook section 12.4	10 20
24 /	Multiplication Rules of Conditional Probability	Lecture and Exercise Quiz	Review, complete assignment	10 20
25 /	Bayes’ Theorem	Lecture and Exercise Quiz	Review, complete assignment Read “Mathematics” textbook section 12.5	10 20
26 /	Importance of Statistics and Definitions of Statistical Terms ➢ Mean, Median, and Mode of Data	Lecture and Exercise	Review, complete assignment Read “Mathematics” textbook section 11.1 & 11.2	10 20
27 /	Range, Variance, and the Standard Deviation Percentile and Quartiles of data Box Plots	Lecture and Exercise Quiz	Review, complete assignment Read “Mathematics” textbook section 11.3	10 20
28 /	Data and Control Charts Mini-Project	Lecture and Exercise Quiz	Review, work on project	10
29 /	Data and Control Charts Mini-Project	Lecture and Exercise	Review, work on project	10
30 /	Review for Final Exam	Exercise	Review, complete exercise	30
31 /	Final Exam			

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
32 /	Return Final Exam Score			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Fundamental Physics A	1	611800	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	WOHLFARTH, Brandon ITO, Meguru	Hakusanroku C: 101.201		From 16:30 to 17:30 on the class day

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Physics	Physics cultivates the ability to think systematically and logically about phenomena that are important to learning natural science and engineering. In this course, students will expand their knowledge of forces and the basics of understanding motion of objects in a two-dimensional space. Students will also learn the basics of mathematical analysis.
2	One Dimensional Motion	
3	Projectile Motion	
4	Equilibrium	
5	Newton's Laws	

Course Description and Expectations for Students (10.5pt)

In this course,

- Students must should all assignments.
- Late submission may reduce a students' score on that assignment.
- All classes are conducted in English.
- Students are expected to take notes in class

This course offers learning circles as a type of active learning.

Advices for students:

- Fundamental Physics A is a course that forms the base of Fundamental Physics B and future physics course. Be sure to understand the content. If you have any questions, ask during classes, learning sessions, and/or speak with a teacher during posted office hours.
- This course consists of preparations (preview check), classes (exercises/class work/quiz), and reviews. Be sure to work on preparations because understanding during classes will improve greatly.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books: "Physics" (HMH) ISBN 978-0-544-81773-9

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge of science corresponding to junior high school

Fundamental skills of calculation

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to understand significant figures.
②	h,i	Students will be able to understand both one- and two-dimensional motion.
③	h,i	Students will be able to understand Newton's 2nd Law.
④	h,i	Students will be able to understand Newton's 3rd Law.
⑤	d,h,i	Students will be able to understand physical phenomena through demonstrations.
⑥	i	Students will be able to participate classes actively and review what you achieved.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	20	30	0	0	0	10	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	15	0	0	0	0	50
	Ability to think, reason and create	20	10	15	0	0	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	5	5
	Attitude and motivation for learning	0	0	0	0	0	0	5	5

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	This course has one final exam, that covers all course content. The final exam is worth 40% of the total points in the course.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①	✓	After the completion of each content section there will be a short quiz to check understanding of the topic covered.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Each class students will receive an exercise containing problems relevant to the topics discussed in the course. Students should complete this exercise in class unless otherwise stated by the instructor. Most course topics will have a preview check that students will do for preparation. In addition, students will need to complete review problems as outlined by the instructor.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Students will complete in class feedback notes at the end of each class throughout the quarter.
	②		
	③		
	④		
	⑤		
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to correctly understand actual phenomena correctly through physical interpretations of class concepts. Students are able to calculate physical values for natural phenomena using formulae. Students are able to understand units and their dimensions for each physical value.	Students are able to understand phenomena. Students are able to solve questions correctly. Students are able to understand units of physical values.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Significant Figures	Lecture and exercise	Read syllabus and review lecture material Complete preview check if necessary Finishing assignment	10 20
2 /	One-Dimensional Motion-Horizontal ➢ Displacement, velocity, and acceleration ➢ Introduction of kinematic equation	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
3 /	One-Dimensional Motion-Vertical ➢ Introduction to acceleration due to gravity	Lecture and exercise	Finishing assignment/Preview Check if needed	10
4 /	Vectors ➢ Definition of vectors ➢ Graphical and mathematical combination of vectors ➢ Trigonometry	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
5 /	Projectile Motion ➢ Component vectors ➢ Launch angle and trajectory	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
6 /	Projectile Motion ➢ Review and practice projectile motion	Exercise	Finishing assignment/Preview Check if needed	10
7 /	Projectile Motion ➢ Review and practice projectile motion	Exercise	Finishing assignment/Preview Check if needed	10
8 /	Relative Velocity ➢ Defining relative velocity ➢ Motion review	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
9 /	Forces and Newton's 1st Law ➢ Defining forces ➢ Free body diagrams ➢ Defining inertia ➢ Defining Newton's 1st Law	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
10 /	Newton's 1st Law Demonstration	Demonstration	Finishing assignment/Preview Check if needed	10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Action and Reaction Forces with Newton's 3rd Law ➢ Defining friction ➢ Defining weight and normal forces	Lecture and Exercise Quiz	Finishing assignment/Preview Check if needed	10
12 /	Newton's 3rd Law Demonstration	Demonstration	Finishing assignment/Preview Check if needed	10
13 /	Newton's 2nd Law ➢ Defining net force and Newton's 2nd Law ➢ Simple machines ➢ Equilibrium	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
14 /	Newton's 2nd Law ➢ Practice and review	Lecture and exercise	Finishing assignment/Preview Check if needed	10
15 /	Review	Exercise Quiz	Review for final exam	10
16 /	Final Exam			
17 /	Return Final Exam Scores			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Fundamental Physics B	2	611900	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	WOHLFARTH, Brandon ITO, Meguru	Hakusanroku C: 101.201		From 16:30 to 17:30 on the class day

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Work, Power, and Mechanical Energy	Physics cultivates the ability to think systematically and logically about phenomena that are important to learning natural science and engineering. In this course, students will be able to further develop their understanding of forces and motion learned in Fundamental Physics A through learning concepts across different mediums.
2	Momentum and Impulse	
3	Circular Motion	
4	Fluid Mechanics	
5	Conservation Laws	

Course Description and Expectations for Students (10.5pt)

In this course,

- Students should submit all assignments.
- Late submission may reduce a students' score on that assignment.
- All classes are conducted in English.
- Students are expected to take notes in class.

This course offers learning circles as a type of active learning.

Advices for students:

- Fundamental Physics B is a course that forms the base for future physics courses. Be sure to understand the content. If you have any questions, ask during classes, learning sessions, and/or speak with a teacher during posted office hours.
- This course consists of preparations (preview check), classes (exercises/class work/quiz), and reviews. Be sure to work on preparations because understanding during classes will improve greatly.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books:

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge of Fundamental Physics A

Fundamental skills of calculation

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to understand mechanical energy.
②	h,i	Students will be able to understand momentum and impulse.
③	h,i	Students will be able to understand circular and rotational motion.
④	h,i	Students will be able to understand the fundamentals of fluid mechanics
⑤	d,h,i	Students will be able to understand physical phenomena through hands on demonstrations.
⑥	i	Students will be able to participate classes actively and review what you achieved.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	20	30	0	0	0	10	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	20	0	0	0	0	50
	Ability to think, reason and create	20	10	10	0	0	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	5	5
	Attitude and motivation for learning	0	0	0	0	0	0	5	5

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	This course has one final exam, that covers all course content. The final exam is worth 40% of the total points in the course.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①	✓	After the completion of each content section there will be a short quiz to check understanding of the topic covered.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Each class students will receive an exercise containing problems relevant to the topics discussed in the course. Students should complete this exercise in class unless otherwise stated by the instructor. Most course topics will have a preview check that students will do for preparation. In addition, students will need to complete review problems as outlined by the instructor.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Students will complete in class feedback notes at the end of each class throughout the quarter.
	②		
	③		
	④		
	⑤		
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to correctly understand actual phenomena correctly through physical interpretations of class concepts. Students are able to calculate physical values for natural phenomena using formulae. Students are able to understand units and their dimensions for each physical value.	Students are able to understand phenomena. Students are able to solve questions correctly. Students are able to understand units of physical values.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Review of Fundamental Physics A	Lecture and exercise	Finishing assignment/Preview Check if needed	10
2 /	Rotational Kinematics ➢ Defining tangential velocity and acceleration ➢ Defining angular velocity and acceleration ➢ Understanding total acceleration	Lecture and exercise	Finishing assignment/Preview Check if needed	10
3 /	Centripetal Acceleration and Centripetal Force ➢ Defining circular motion ➢ Defining centripetal acceleration ➢ Defining centripetal force	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
4 /	Newton's Law of Gravitation ➢ Defining Newton's Law of Gravitation ➢ Understanding gravitational forces between two objects ➢ Calculating the acceleration due to gravity	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
5 /	Torque ➢ Definition of torque ➢ Understanding sum of torques	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
6 /	Torque ➢ Review and practice sum of torques	Lecture and exercise	Finishing assignment/Preview Check if needed	10
7 /	Torque/Sum of Moments Practice and Demonstration	Demonstration	Finishing assignment/Preview Check if needed	10
8 /	Inertia and Center of Gravity ➢ Defining center of gravity ➢ Defining rotational inertia	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
9 /	Torque ➢ Defining Newton's 2nd Law with torques	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
10 /	Torque ➢ Simple Machines	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Work and Power ➢ Defining work and power ➢ Understand direction of work	Lecture and exercise	Finishing assignment/Preview Check if needed	10
12 /	Work and Power Demonstration	Demonstration	Finishing assignment/Preview Check if needed	10
13 /	Kinetic Energy ➢ Defining kinetic energy ➢ Relationship between work and kinetic energy	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
14 /	Rotational Kinetic Energy ➢ Defining rotational kinetic energy	Lecture and exercise	Finishing assignment/Preview Check if needed	10
15 /	Potential Energy ➢ Defining gravitational potential energy ➢ Defining elastic potential energy	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
16 /	Conservation of Mechanical Energy ➢ Defining conservation of energy with no work	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
17 /	Conservation of Mechanical Energy ➢ Defining conservation of energy with work	Lecture and exercise	Finishing assignment/Preview Check if needed	10
18 /	Conservation of Mechanical Energy ➢ Review and practice conservation of mechanical energy	Exercise	Finishing assignment/Preview Check if needed	10
19 /	Momentum and Impulse ➢ Defining momentum and impulse ➢ Understanding the relationship between momentum and impulse	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
20 /	Conservation of Momentum ➢ Defining conservation of momentum ➢ Understanding different types of collisions	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Conservation of Momentum ➢ Defining coefficient of restitution	Lecture and exercise	Finishing assignment/Preview Check if needed	10
22 /	Conservation of Momentum Experiment	Experiment	Finishing assignment/Preview Check if needed	10
23 /	Conservation of Momentum ➢ Review and practice conservation of momentum	Lecture and Exercise	Finishing assignment/Preview Check if needed	10
24 /	Rotational Dynamics ➢ Defining angular momentum ➢ Understanding conservation of angular momentum	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
25 /	Rotational Dynamics ➢ Review and practice conservation of angular momentum	Lecture and exercise	Finishing assignment/Preview Check if needed	
26 /	Fluid Properties and Buoyant Force ➢ Defining different fluid properties ➢ Defining buoyant force	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
27 /	Fluid Pressure ➢ Definition of pressure ➢ Understand pressure at different depths	Lecture and exercise	Finishing assignment/Preview Check if needed	10
28 /	Fluid Dynamics ➢ Defining conservation of mass in pipes ➢ Defining Bernoulli's Equation	Lecture and exercise Quiz	Finishing assignment/Preview Check if needed	10
29 /	Fluid Dynamics ➢ Review and practice fluid dynamics	Lecture and exercise	Finishing assignment/Preview Check if needed	10
30 /	Review	Exercise Quiz	Review for final exam	
31 /	Final Exam			

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
32 /	Returning Final Exam Scores			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Fundamental Chemistry A	2	612200	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	RASHED, Nagwa Fekri ITO, Meguru	Hakusanroku C 101.201		Wednesday 15:00~

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Matter	Learning Chemistry is essential for students of science and technology. In this course, students will learn about matter and energy from both the macro and micro viewpoints. Students will learn classifications and properties of matter. Then, they will learn about atomic structure and understand the mechanism of chemical bonding and interaction. They will be able to understand the characteristics of substances present in nature or industrially synthesized.
2	Physical vs. chemical change	
3	Atomic structure	
4	Periodic table	
5	Chemical bonding	

Course Description and Expectations for Students (10.5pt)

Fundamental Chemistry A will include interactive lectures, lab demonstrations, problem-solving exercises, group experiments, peer teaching, investigative learning, and reflective learning, which are types of active learning.

For better course achievements, please consider the following:
- Students` safety comes first, so be constantly aware of your safety by following the Safety in the Chemistry Lab Rules.
- Check eSyllabus regularly for updates.
- Preview the specified sections in the textbook and other resources before attending class.
- Keep taking notes during class time.
- Participate actively in the discussions by asking questions and sharing your ideas with teachers and classmates.

To build your portfolio, keep all the materials, such as class notes, experiment reports, and other assignments, in a folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: SAVVAS Chemistry (SAVVAS) ISBN 978-1-323-21353-7
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

- Analysis and problem-solving
- Time management and organization
- Written and oral communication
- Monitoring/maintaining records and data
- Teamwork and research

No.	Program Objectives	Target Abilities for Students (9pt)
①	d, h, i	Students will be able to explore the importance and nature of chemistry as a core science.
②	d, h, i	Students will be able to analyze the nature of matter and its classifications.
③	d, h, i	Students will be able to access and find information displayed in the periodic table of elements.
④	d, h, i	Students will be able to relate the electron configuration and valence electrons to the formation of ions.
⑤	d, h, i	Students will be able to connect ion formation to ionic bonds and ionic compounds.
⑥	d, h, i	Students will be able to explore the nature of covalent bonding and molecular shapes.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	20	15	0	0	20	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	10	4	0	0	5	4	38
	Ability to think, reason and create	15	10	4	0	0	5	4	38
	Collaboration and leadership	0	0	0	0	0	0	3	3
	Announcement / Expression / Communication	0	0	3	0	0	5	0	8
	Attitude and motivation for learning	0	0	4	0	0	5	4	13

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	-The final exam is a cumulative exam for all chapters/topics taught.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	- A test on the lab equipment & safety rules will be held. - Chapter General Tests will be held for each chapter. - A test on the names and symbols of the first 36 elements in the periodic table will be held. - A lab practical on the flame test experiment will be held.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students are expected to do the following: − Include lesson title, student`s full name, and number at the top of each assignment page. − Submit self-checked answers to the assigned textbook and worksheet questions on time. − Turn in any other online assignments on the eSyllabus on time. (A 10 % deduction is applied for each day of delay in submitting an assignment.)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	- The purpose of the portfolio is to provide evidence of students' chemistry knowledge, learning development, process skills, and attitudes. - Portfolio evaluation is based on documentation of learning evidence, themed research, and reflective journal entries, and a letter to reviewers that reflects students' understanding of the learning skills they have gained. (Refer to the Portfolio Grading Criteria on eSyllabus)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①	✓	Grading criteria of this section are as follows (Refer to the Note Taking Rubric on eSyllabus): 1- Clear and organized class notes showing all the covered topics. 2- Clear and organized lab reports of the performed experiments 3- Response in a proper manner to orally asked Qs by teachers or classmates 4- Safety procedures are followed at all times. 5- Cleanliness of the laboratory and hygiene that leads to efficiency in all procedures and class time.
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to: - answer and give explanations of the essential questions by applying the taught chemistry knowledge and concepts. - design and perform experiments safely to find solutions or propose an explanation. - apply their problem-solving skills to solve complex problems whose solutions require multiple steps. - analyze, evaluate, or design a solution to a real-world problem by connecting their gained chemistry knowledge to daily lives and other subjects or fields of study	Students are able to: -answer the essential questions by applying the taught chemistry knowledge. - perform experiments safely, make observations, analyze given data, and use scientific thinking to draw conclusions - apply their problem-solving skills to solve problems whose solutions require multiple steps. - to connect their gained chemistry knowledge to daily lives and other subjects or fields of study.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	The Scope of Chemistry - Explain why the scope of chemistry is so vast. - Identify five traditional areas of study in chemistry.	- Lab Equipment & Safety Rules Test. - Lecture - Class Activity	- Prepare for Lab Equipment & Safety Rules Test - Answer Lesson 1.1 Book Qs.	30
2 /	Chemistry and You - Identify three general reasons to study chemistry. -Identify some outcomes of modern research in chemistry.	- Lecture - Class Activity	- Read and summarize Book p. 9 - Answer Lesson 1.2 Book Qs.	30
3 /	Thinking like a scientist - Identify three steps in the scientific method - Explain the role collaboration and communication play in science.	- Lecture - Quick Lab Bubbles	- Read Quick Lab “Bubbles” p. 17 - Answer Lesson 1.3 Book Qs. - Prepare for Chapter 1 General Test.	30
4 /	Properties of Matter - Explain why all samples of matter have the same intensive properties. - Identify the three states of matter. - Classify physical change.	- Chapter 1 General Test - Lecture - States of Matter Simulation	- Read and annotate Lesson 2.1 - Answer Lesson 2.1 Book Qs.	30
5 /	Mixtures - Explain how mixtures can be classified. - Explain how mixtures can be separated.	- Lecture - Separating mixtures experiments.	- Read and prepare for Quick Lab” Separating mixtures” p.39 - Read “Recycled Mixtures” p.52-53 - Answer Lesson 2.2 Book Qs.	30
6 /	Elements and Compounds - Explain the difference between an element and a compound. -Distinguish between a substance and a mixture.	- Lecture - Teacher Demo - Practice problems - Exercises	- Read and annotate Lesson 2.3 - Start memorizing symbols and names of the first 36 elements in the periodic table	30
7 /	Elements and Compounds - Explain how chemists use chemical symbols and chemical formulas.	- Pretest on Elements - Lecture - Exercises	- Memorize symbols and names of the first 36 elements in the periodic table - Answer lesson 2.3 Book Qs.	30
8 /	Chemical Reactions -Identify the four possible clues that a chemical change has taken place are. -Law of conservation of mass.	- Test on Elements - Lecture - Teacher Demo	- Read Lesson 2.4 - Answer Lesson 2.4 Book Qs.	30
9 /	Chemical Reactions - Observe chemical changes.	- Experiment - Small Scale Lab “1+2+3= Black” p.51.	- Read Small Scale Lab p.51 - Prepare for Chapter 2 General Test.	30
10 /	Defining the Atom - Explain how Democritus and John Dalton described atoms. - Identify instruments used to observe individual atoms.	- Chapter 2 General Test. -Quick Lab to describe what is in a closed box. - Lecture - Exercises	-What devices are used to see individual atoms in Japan? - Answer Lesson 4.1 Book Qs.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Structure of the nuclear atom - Identify three types of subatomic particles. - Describe the structure of atoms according to the Rutherford model.	- "Rutherford`s Gold Foil Experiment" "Cathode Ray Tube" Kinetic Art	- Read Electron Microscopy p.110-111 - The Story of the Atom (Part 1)	30
12 /	Distinguishing Among Atoms - Explain what makes one element different from another. - Explain how isotopes of an element differ.	- Lecture - Practice problems - Exercises	- Review the names, symbols, and atomic numbers of the first 36 elements. - Answer Lesson 4.3 Book Qs.	30
13 /	Distinguishing Among Atoms - Calculate the atomic mass of an element. - Explain the meaning of atomic mass and the atomic mass unit.	- Test on Elements - Lecture - Practice problems - Exercises	- Search for the most abundant isotopes. - Prepare for Chapter 4 General Test	30
14 /	Revising the atomic Models - Describe what Bohr proposed in his model of the atom.	- Chapter 4 General Test - Lecture - Bohr Atomic Model - "Atomic orbitals" Kinetic Art.	- Research about Niels Bohr and Erwin Schrodinger	30
15 /	Revising the atomic Models - Describe what the quantum mechanical model determines about the electron configurations of elements. - Explain how sublevels of principle energy levels differ.	- Lecture - Group Activity	- Read Development of Atomic Models p. 133 - Answer Lesson 5.1 Book Qs	30
16 /	Electron arrangement in Atoms - List and apply three rules for writing the electron configurations of elements.	- Lecture - Exercises Complete the electron configuration of the first 36 elements.	- What is the difference between energy levels, sublevels, and atomic orbitals? - Read and prepare for Flame Test Lab	30
17 /	Atomic Emission Spectra - Explain what causes atomic emission spectra.	- Lecture - Flame test experiment	- Prepare for Flame Test Lab Practical - Prepare for Chapter 5 General Test and Lab Practical	30
18 /	Lab Practical - Demonstrate lab procedure and safety rules awareness.	- Chapter 5 General Test - Lab Practical	- Review flame colors of different metals. - Read "Light Emitting Diodes" p. 146	30
19 /	Organizing Elements - Describe how Mendeleev organized his periodic table. -Describe how the modern periodic table is organized. -Identify three broad classes of elements.	- Lecture - Exercises	- Search about J. W. Dobereiner and Dmitri Mendeleev. - Answer Lesson 6.1 Book Qs.	30
20 /	Classifying the Elements - List the types of information that can be displayed in the periodic table. -Classify elements based on electron configuration.	- Lecture - Practice problems - Exercises	- Review electron configuration in groups. - Answer Lesson 6.2 Book Qs.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Periodic Trends - Describe trends among elements for atomic size. - Explain how ions form. -Describe periodic trends for first ionization energy, ionic size, and electronegativity.	- Lecture - Interpret Graphs - Exercises	- Read Elements of Life p. 183 - Answer Lesson 6.3 Book Qs.	30
22 /	Periodic Trends - Find information on the periodic table. - Use periodic trends to compare between atoms.	- Lecture - Group Game	- Review Chapter 6. - Prepare for Chapter 6 General Test.	30
23 /	Ions - Determine the number of valence electrons in an atom of a representative element. -Describe how cations and anions form. - Write electron configuration for various transition metals and their ion	- Chapter 6 General Test. - Lecture - Small Scale Lab: Electron Configuration of ions	- Read Small-Scale Lab p. 200 - Answer Lesson 7.1 Book Qs.	30
24 /	Ionic bonds and ionic compounds - Explain the electrical charge for an ionic compound. - Describe the properties of ionic compounds.	- Lecture - Practice Problems - Exercises	- Read Ionic Crystals p. 208 and Quick Lab p.207 - Answer Lesson 7.2 Book Qs	30
25 /	Bonding in metals - Model the valence electrons of metal atoms. - Describe the arrangement of atoms of a metal. - Explain the importance of alloys.	- Lecture - “Metals vs Ionic Compounds” Kinetic Art. - Exercises	- Review properties of metals - Answer Lesson 7.3 Book Qs. - Prepare for Chapter 7 General Test	30
26 /	Molecular Compounds - Identify the information a molecular formula provides. -Describe the representative units that define molecular compounds and ionic compounds	- Chapter 7 General Test - Lecture - Activity	- Review electron dot structure. - Answer Lesson 8.1 Book Qs.	30
27 /	The Nature of Covalent Bonding - Explain the result of electron sharing in covalent bonds. -Describe how coordinate covalent bonds are different from other covalent bonds. - Identify some exceptions to the octet rule.	- Lecture - Quick Lab - Exercises	- Read Quick Lab p. 238 - Answer Lesson 8.2 Book Qs.	30
28 /	Bonding Theories - Describe the relationship between atomic and molecular orbitals. - Describe how VSEPR theory helps predict the shape of molecules. - Explain orbital hybridization in molecules	- Lecture - Class activity to make molecular models.	- Review atomic orbitals - Answer Lesson 8.3 Book Qs.	30
29 /	Polar Bonds and Molecules - Describe how the electronegativity values determine the charge distribution in a polar molecule. - Evaluate the strength of intermolecular attractions	- Lecture - Lab Demo	- Review electronegativity - Answer Lesson 8.4 Book Qs. - Prepare for Chapter 8 General Test	30
30 /	General Review - Review Chapters 1,2, 4, 5, 6, 7, and 8	- Chapter 8 General Test - Evaluating and reflecting on the progress of one's own learning. - School Questionnaire	- Prepare for the Final Exam - Finalize the Portfolio	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
31 /	Final Exam	- Evaluating the progress of one's learning. - Submit the finalized portfolios.		
32 /	Returning Final Exam results	- Return graded exams and portfolios - Evaluating and reflecting on the progress of one's own learning.		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Fundamental Chemistry B	2	612300	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	RASHED, Nagwa Fekri ITO, Meguru	Hakusanroku C 101.201		Wednesday 15:00~

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Stoichiometry	In this course, students will learn about moles as a unit of measurement for quantifying substances. They will be able to explain the quantitative relationships in various types of chemical reactions and understand the nature of chemical processes, calculations, and their applications. Students will also be able to relate the state of matter to the kinetic theory. Students will be able to explain how aqueous systems form due to water's unique properties.
2	Types of chemical reaction	
3	States of matter	
4	kinetic theory	
5	Aqueous systems	

Course Description and Expectations for Students (10.5pt)

Fundamental Chemistry B will include interactive lectures, lab demonstrations, problem-solving exercises, group experiments, peer teaching, investigative learning, and reflective learning, which are types of active learning.

For better course achievements, please consider the following:
- Students` safety comes first, so be constantly aware of your safety by following the Safety in the Chemistry Lab Rules.
- Check eSyllabus regularly for updates.
- Preview the specified sections in the textbook and other resources before attending class.
- Keep taking notes during class time.
- Participate actively in the discussions by asking questions and sharing your ideas with teachers and classmates.

To build your portfolio, keep all the materials, such as class notes, experiment reports, and other assignments, in a folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: SAVVAS Chemistry (SAVVAS) ISBN 978-1-323-21353-7
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

- Analysis and problem-solving
- Time management and organization
- Written and oral communication
- Monitoring/maintaining records and data
- Teamwork and research

No.	Program Objectives	Target Abilities for Students (9pt)
①	d, h, i	Students will be able to determine the names and chemical formulas of ions and compounds.
②	d, h, i	Students will be able to use mole to convert among the count, mass, and volume of a specified substance.
③	d, h, i	Students will be able to describe chemical reactions and balance a chemical equation.
④	d, h, i	Students will be able to use mole ratios of balanced chemical equations to define chemical quantities.
⑤	d, h, i	Students will be able to apply kinetic theory to determine the characteristics of the states of a substance.
⑥	d, h, i	Students will be able to identify the unique properties of water and how aqueous systems form.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	20	15	0	0	20	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	10	4	0	0	5	4	38
	Ability to think, reason and create	15	10	4	0	0	5	4	38
	Collaboration and leadership	0	0	0	0	0	0	3	3
	Announcement / Expression / Communication	0	0	3	0	0	5	0	8
	Attitude and motivation for learning	0	0	4	0	0	5	4	13

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	-The final exam is a cumulative exam for all taught chapters/topics.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	- Chapter General Tests will be held for each chapter.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students are expected to do the following: − Include lesson title, student`s full name, and number at the top of each assignment page. − Submit self-checked answers to the assigned textbook and worksheet questions on time. − Turn in any other online assignments on the eSyllabus on time. (A 10 % deduction is applied for each day of delay in submitting an assignment.)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	- The purpose of the portfolio is to provide evidence of students' chemistry knowledge, learning development, process skills, and attitudes. - Portfolio evaluation is based on documentation of learning evidence, themed research, and reflective journal entries, and a letter to reviewers that reflects students' understanding of the learning skills they have gained. (Refer to the Portfolio Grading Criteria on eSyllabus)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①	✓	Grading criteria of this section are as follows (Refer to the Note Taking Rubric on eSyllabus): 1- Clear and organized class notes showing all the covered topics. 2- Clear and organized lab reports of the performed experiments 3- Response in a proper manner to orally asked Qs by teachers or classmates 4- Safety procedures are followed at all times. 5- Cleanliness of the laboratory and hygiene that leads to efficiency in all procedures and class time.
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to: - answer and give explanations of the essential questions by applying the taught chemistry knowledge and concepts. - design and perform experiments safely to find solutions or propose an explanation. - apply their problem-solving skills to solve complex problems whose solutions require multiple steps. - analyze, evaluate, or design a solution to a real-world problem by connecting their gained chemistry knowledge to daily lives and other subjects or fields of study	Students are able to: -answer the essential questions by applying the taught chemistry knowledge. - perform experiments safely, make observations, analyze given data, and use scientific thinking to draw conclusions - apply their problem-solving skills to solve problems whose solutions require multiple steps. - to connect their gained chemistry knowledge to daily lives and other subjects or fields of study.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Naming and Writing Formulas of Ions & Ionic Compounds - Apply the rules for naming and writing formulas of ions and ionic compounds.	- Lecture - Practice problems - Exercises	- Review Ions and ionic compounds. - Answer Lesson 9.1 and 9.2 Book Qs.	30
2 /	Naming and Writing Formulas for Molecular Compounds - Apply the rules for naming and writing formulas for binary molecular compounds.	- Lecture - Practice problems - Exercises	- Review Molecular compounds - Answer Lesson 9.3 Book Qs.	30
3 /	Naming and Writing Formulas for Acids and Bases - Determine the names and formulas of an acid. - Determine the name and formula of a base.	- Lecture - Practice problems - Exercises	- Read Sports Nutrition Advisor p. 284 - Answer Lesson 9.4 Book Qs.	30
4 /	The Laws Governing How Compounds Form - Explain how the law of definite proportions is consistent with Dalton`s atomic theory. - General guidelines for writing the name and formula of a chemical compound.	- Lecture -Practice problems -Exercises - Small-Scale Lab p. 295	- Read and prepare for Small-Scale Lab p. 295 - Answer Lesson 9.5 Book Qs. - Prepare for Chapter 9 General Test.	30
5 /	Using and Expressing Measurements - Write numbers in scientific notations - Evaluate accuracy and precision	- Chapter 9 General Test - Lecture - Practice Problems - Exercises	- Review Names and Chemical Formulas of Compounds. - Read and annotate the book, p. 66 - Answer Book Qs.	30
6 /	Using and Expressing Measurements - Explain why measurements must be reported to the correct number of significant figures.	- Lecture - Measuring Experiment - Practice problems - Exercises	- Read “Carbon Footprints” p. 83 - Answer Lesson 3.1 Book Qs.	30
7 /	Units of Measurement - Explain why metric units are easy to use - Identify the units of temperature scientists usually use. -Calculate the density of a substance.	- Lecture - Density stimulation - Practice problems - Exercises	- Review metric prefixes - Answer Lesson 3.2 Book Qs.	30
8 /	Solving Conversion Problems - Explain what happens when a measurement is multiplied by a conversion factor. - Describe what kinds of problems can easily be solved using dimensional analysis.	- Lecture - Practice problems - Exercises	- What is a conversion factor? - Answer Lesson 3.2 Book and Workbook related Qs.	30
9 /	Solving Conversion Problems - Explain what happens when a measurement is multiplied by a conversion factor. - Describe what kinds of problems can easily be solved using dimensional analysis.	- Lecture - Small-Scale Lab	- Read Small-Scale Lab p. 92 - Prepare for Chapter 3 General Test.	30
10 /	The Mole: A Measurement of Matter - Convert among the count, mass, and volume of matter. - Determine the molar mass of an element and of a compound.	- Chapter 3 General Test - Lecture - Practice problems - Exercises	- Read and Summarize lesson 10.1 - Answer Lesson 10.1 Book Qs.	30

Course Schedule

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Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Mole-Mass and Mole-Volume - Describe how to convert the mass of a substance to the number of moles of a substance and moles to mass. - Convert the volume of a gas at STP to the number of moles of the gas.	- Lecture - Practice problems - Exercises	- Read How Big is A Mole? P.316 - Answer Lesson 10.2 Book Qs.	30
12 /	Mole-Mass and Mole-Volume - Describe how to convert the mass of a substance to the number of moles of a substance and moles to mass. - Convert the volume of a gas at STP to the number of moles of the gas.	- Practice Problems - Exercises	- Review “The Mole”. - Answer Lesson 10.2 Book Qs.	30
13 /	Percent Composition and Chemical Formulas - Calculate the percent by mass of an element in a compound. - Calculate the empirical formula of a compound.	- Lecture - Practice problems - Exercises - Quick Lab	- Read Quick Lab p. 328 - Answer Lesson 10.3 Book Qs. - Prepare for Chapter 10 General Test	30
14 /	Describing Chemical Reactions - Describe how to write a skeleton equation. - Describe the steps for writing and balancing a chemical equation.	- Chapter 10 General Test - Lecture -Group Game to balance equations - Experiment.	- Read Kitchen Chemistry p. 355 - Answer Lesson 11.1 Book Qs.	30
15 /	Types of Chemical Reactions - Identify the five general types of reactions	- Lecture - Teacher Demo - Practice problems - Exercises	- Read “The History of Dynamite” p. 368 - Answer Lesson 11.2 Book Qs.	30
16 /	Reactions in Aqueous Solution - Describe the information found in a net ionic equation. - Predict the formation of a precipitate in a double-replacement reaction.	- Lecture - Practice problems - Exercises - Small- Scale Lab	-Read and prepare for Small-Scale Lab p. 374 -Answer Lesson 11.3 Book Qs. - Prepare for Chapter 11 General Test	30
17 /	The Arithmetic of equations - Describe how chemists use balanced chemical equations. - Describe the quantities you can use to interpret a balanced chemical equation.	- Chapter 11 General Test - Lecture - Practice problems - Exercises	- Prepare for Chapter 11 General Test - See Balancing Chemical Equations online. - Answer Lesson 12.1 Book Qs	30
18 /	Chemical Calculations - Explain how the mole ratios are used in chemical calculations. - Explain the general procedure for solving a stoichiometric problem.	- Lecture - Practice problems - Exercises	- Read Stoichiometric Safety p. 397 - Summarize Lesson 12.2	30
19 /	Limiting reagent and Percent Yield - Explain how the amount of product in a reaction is affected by an insufficient quantity of any of the reactants. - Explain what the percent yield of a reaction measures.	- Lecture - Practice problems - Exercises -Quick Lab	- Read Quick Lab p. 404 - Answer Lesson 12.3 Book Qs - Prepare for Chapter 12 General Test	30
20 /	The Nature of Gases - Describe the three assumptions of kinetic theory as it applies to gases. - Interpret gas pressure in terms of kinetic theory.	- Chapter 12 General Test - Lecture -Virtual Lab - Practice problems -Exercises	- Make a summary about the coldest place in the universe - Answer Lesson 13.1 Book Qs.	30

Course Schedule

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Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	The Nature of Liquids - Identify the factors that determine the physical properties of a liquid. - Define conditions under which a dynamic equilibrium can exist between a liquid and its vapor.	- Lecture - Interpret graphs - Virtual lab	- Read Lesson 13.2 - Answer Lesson 13.2 Book Qs.	30
22 /	The Nature of Solids - Describe how the structure and properties of solids are related. - Identify the factors that determine the shape of a crystal.	- Lecture - Small-Scale Lab	- Read and prepare for Small-Scale Lab p. 435 - Answer Lesson 13.3 Book Qs.	30
23 /	Change of States - Identify the conditions necessary for sublimation. - Determine how the conditions at which phases are in equilibrium are represented on a phase diagram.	- Quick Lab - Lecture - Interpret graphs	- Read “Plasma Waste Converter” - Answer Lesson 13.4 Book Qs. - Prepare for Chapter 13 General Test.	30
24 /	Ideal Gases - Calculate the amount of a contained gas when the pressure, volume, and temperature are specified. - Define the conditions when real gases are most likely to differ from ideal gases.	- Chapter 13 General Test - Lecture - Virtual Lab - Practice problems - Exercises	- Review “Gas Laws” p. 450~463 - Answer Lesson 14.3 Book Qs.	30
25 /	Gases: mixtures and Movements - Relate the total pressure of a mixture of gases to the partial pressures of the component gases. - Explain how the molar mass of a gas affects the rate at which the gas diffuses and effuses.	- Lecture - Virtual Lab - Practice problems - Exercises	- Read Natural Gas Vehicle p. 476-477 - Answer Lesson 14.4 Book Qs.	30
26 /	Gases: mixtures and Movements - Relate the total pressure of a mixture of gases to the partial pressures of the component gases. - Explain how the molar mass of a gas affects the rate at which the gas diffuses and effuses.	- Small- Scale Lab - Exercises	- Read Small-Scale Lab p. 475 - Prepare for Chapter 14 General Test	30
27 /	Water and Its Properties - Identify the factor that causes the high surface tension, low vapor pressure, and high boiling point of water. - Describe the structure of ice.	- Chapter 14 General Test - Lecture - Quick Lab	- Read Quick Lab p. 491 - Answer Lesson 15.1 Book Qs.	30
28 /	Homogeneous Aqueous Systems - Identify the types of substances that dissolve most readily in water. - Why are all ionic compounds electrolytes? - Explain why hydrates easily lose and gain water.	- A Small-Scale Lab - Lecture -Group Activity	- Read Reverse Osmosis Distillation p. 502-503 - Answer Lesson 15.2 Book Qs.	30
29 /	Heterogeneous Aqueous Systems - Distinguish between a suspension and a solution. - identify how to distinguish a colloid from a suspension and a solution.	- Lecture - Teacher Demo “Tyndall Effect”. - Small-Scale Lab	- Read Small-Scale Lab p. 507 - Answer Lesson 15.3 Book Qs. - Prepare for Chapter 15 General Test.	30
30 /	General Review - Review Chapters 9, 10, 11,12, 13, 14, and 15	- Chapter 15 General Test - Evaluating and reflecting on the progress of one's own learning. - School Questionnaire	- Prepare for the Final Exam - Finalize the Portfolio	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
31 /	Final Exam	- Evaluating the progress of one's own learning. - Submit the finalized portfolios.		
32 /	Returning Final Exam results	- Return graded exams and portfolios - Evaluating and reflecting on the progress of one's own learning.		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Health and Physical Education IA	1	612600	First	Exercises / Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	CADZOW, Philip	Hakusanroku C 101 Gym		Friday 16:30-17:30

Course Objectives

	Keywords	Learning Objectives
1	Sportsmanship	Students will learn how to use the school facilities safely for fitness and sports for lifelong health. Students will develop sport skills and knowledge in Badminton and Volleyball. Students will learn and practice the basics of fitness for lifelong health through exercise. Students will demonstrate and understand the importance of sportsmanship and effort.
2	Safety	
3	Sports	
4	Exercise	
5	Health	

Course Description and Expectations for Students

The course will initially instruct students with the safe use and care of the Hakusanroku campus facilities which include the gymnasium, bouldering wall, training machines, and running course. After the introduction, class will focus on developing Volleyballs skills and Badminton skills. Students will be instructed on health for life which may include various types of exercise or health theory but will be focussed on increasing aerobic and cardiac health through running when the weather permits. Small-sided games will be used to increase skill practice time per student and transition skills from closed to open while imparting basic tactics. The expectation is for students to be on time for class in the correct uniform and fully participate in the activities of class to the best of their abilities, while maintaining a respectful attitude and an inclusive atmosphere. This course will offer student led activities and practical learning in class as a type of active learning.
This course is a practical course and so inability to physically partake in activities – specifically learning of sport skills may result in a reduced score unless alternative work is given. Students who have disabilities preventing participation may be given alternate work, and injured students may request makeup classes outside of the class schedule, if they have taken care to manage their injuries throughout the healing process.

Required Materials (textbooks, reference books, reserved books)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

No prior skills or knowledge are required for this course.

No.	Program Objectives	Target Abilities for Students (9pt)
①	d	Students will learn how to train their body correctly for a healthy life.
②	f	Students will be able to learn from failure and develop fortitude.
③	i	Students will develop confidence in their abilities and work with a sincere heart.
④	i	Students will learn the value of enjoying sports and the lifelong benefits of exercise.
⑤	c	Students will be able to support each other in learning new skills.
⑥	b	Students will become accustomed to working for the good of others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	60	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	20	0	0	20
	Ability to think, reason and create	0	0	0	0	10	0	0	10
	Collaboration and leadership	0	0	0	0	10	0	10	20
	Announcement / Expression / Communication	0	0	0	0	10	0	10	20
	Attitude and motivation for learning	0	0	0	0	10	0	20	30

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Volleyball – 20% Badminton – 10% Exercise and Health– 30% Based on skills, knowledge and performance with rubrics provided in class, and may be evaluated through observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc. Standards may be referenced by normative, ipsative, or criterion-based data.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Sportsmanship 40% Based on effort, personal and social behavior which is assessed in reference to the rubric provided in class. Evaluations may take the form of observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Players are able to do the following: Perform and select appropriate techniques for given situations, including very accurately hitting the ball or shuttle. Demonstrate very good understanding of basic rules, and techniques of Badminton and Volleyball. Demonstrate very good sportsmanship and inclusive play, along with very good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps out others.	Players are able to do the following: Perform and select appropriate techniques for given situations, including accurately hitting the ball or shuttle. Demonstrate a basic understanding of rules, techniques, and tactics of Badminton and Volleyball. Demonstrate good sportsmanship and inclusive play, along with good effort in personal exercise. Carries out duties and tasks with a willing attitude.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Introduction to PE facilities and teacher Syllabus explanation	Lecture	Review class material and practice in own time.	100
2 /	Continued introduction to PE facilities	Lecture	Review class material and practice in own time.	100
3 /	Volleyball unit 1.1 Exercise 1.1	Practical	Review class material and practice in own time.	100
4 /	Volleyball unit 1.2 Exercise unit 1.2	Practical	Review class material and practice in own time.	100
5 /	Volleyball unit 1.3 Exercise unit 1.3	Practical	Review class material and practice in own time.	100
6 /	Volleyball unit 1.4 Exercise unit 1.4	Practical	Review class material and practice in own time.	100
7 /	Volleyball unit 1.5 Exercise unit 1.5	Practical	Review class material and practice in own time.	100
8 /	Volleyball unit 1.6 Exercise unit 1.6	Practical	Review class material and practice in own time.	100
9 /	Volleyball unit 1.7 Exercise unit 1.7	Practical	Review class material and practice in own time.	100
10 /	Volleyball unit 1.8 Exercise unit 1.8	Practical	Review class material and practice in own time.	100

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Badminton unit 1.1 Exercise unit 1.9	Practical	Review class material and practice in own time.	100
12 /	Badminton unit 1.2 Exercise unit 1.10	Practical	Review class material and practice in own time.	100
13 /	Badminton unit 1.3 Exercise unit 1.11	Practical	Review class material and practice in own time.	100
14 /	Badminton unit 1.4 Exercise unit 1.12	Practical	Review class material and practice in own time.	100
15 /	Badminton unit 1.5 Exercise unit 1.13	Practical	Review class material and practice in own time.	100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Health and Physical Education IB	1	612700	Second	Exercises/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	CADZOW, Philip	Hakusanroku C 101 Gym		Friday 16:30-17:30

Course Objectives

Keywords		Learning Objectives
1	Sportsmanship	Students will demonstrate an improvement in bouldering ability. Students will develop sport specific skills in Badminton and Basketball. Students will continue to learn and practice the basics of fitness for lifelong health through exercise. Students will continue to demonstrate and understand the importance of sportsmanship and effort.
2	Safety	
3	Sports	
4	Exercise	
5	Health	

Course Description and Expectations for Students

The course will focus on continuing badminton skills from Health and Physical Education IA, and then move onto learning basketball specific sport skills. The course will also have students log their performance of bouldering to clearly see improvement over time. Additionally, on days when there is no bouldering, students will be instructed on health for life which may include various types of exercise or health theory, primarily looking at increasing muscular endurance through body weight training. Small-sided sport games will be used to increase skill practice time per student and transition skills from closed to open while imparting basic. The expectation is for students to be on time for class in the correct uniform and fully participate in the activities of class to the best of their abilities, while maintaining a respectful attitude and an inclusive atmosphere. This course will offer student led activities and practical learning in class as a type of active learning.

This course is a practical course and so inability to physically partake in activities – specifically learning of sport skills may result in a reduced score unless alternative work is given. Students who have disabilities preventing participation may be given alternate work, and injured students may request makeup classes outside of the class schedule, if they have taken care to manage their injuries throughout the healing process.

Required Materials (textbooks, reference books, reserved books)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

Prior required practical skills and knowledge needed are knowing Badminton rules, to be able to serve, and how to use the facilities safely, as learned in Health and Physical Education IA.

No.	Program Objectives	Target Abilities for Students
①	d	Students will learn how to train their body correctly for a healthy life.
②	f	Students will be able to learn from failure and develop fortitude.
③	i	Students will develop confidence in their abilities and work with a sincere heart.
④	i	Students will learn the value of enjoying sports and the lifelong benefits of exercise.
⑤	c	Students will be able to support each other in learning new skills.
⑥	b	Students will become accustomed to working for the good of others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	60	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	20	0	0	20
	Ability to think, reason and create	0	0	0	0	10	0	0	10
	Collaboration and leadership	0	0	0	0	10	0	10	20
	Announcement / Expression / Communication	0	0	0	0	10	0	10	20
	Attitude and motivation for learning	0	0	0	0	10	0	20	30

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Badminton – 10% Basketball – 20% Exercise and Health – 15% Bouldering – 15% Based on skills, knowledge and performance with rubrics provided in class, and may be evaluated through observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc. Standards may be referenced by normative, ipsative, or criterion-based data.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Sportsmanship – 40% Based on effort, personal and social behavior which is assessed in reference to the rubric provided in class. Evaluation may take the form of observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Players do the following: Perform and select appropriate techniques for given situations, including very accurately hitting the shuttle or controlling the ball. Demonstrate a very good understanding of basic rules, techniques, and tactics of Badminton and Basketball. Demonstrate very good sportsmanship and inclusive play, along with very good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps out others.	Players do the following: Perform and select appropriate techniques for given situations, including accurately hitting the shuttle or controlling the ball. Demonstrate a basic understanding of rules, techniques, and tactics of Badminton and Basketball. Demonstrate good sportsmanship and inclusive play, along with good effort in personal exercise. Carries out duties and tasks with a willing attitude.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Badminton unit 1.6 Exercise unit 1.14	Practical	Review class material and practice in own time.	100
2 /	Badminton unit 1.7 Exercise unit 1.15	Practical	Review class material and practice in own time.	100
3 /	Badminton unit 1.8 Exercise unit 1.16	Practical	Review class material and practice in own time.	100
4 /	Bouldering unit 1.1 Exercise unit 1.17	Practical	Review class material and practice in own time.	100
5 /	Badminton unit 1.10 Exercise unit 1.18	Practical	Review class material and practice in own time.	100
6 /	Basketball unit 1.1 Exercise unit 1.19	Practical	Review class material and practice in own time.	100
7 /	Basketball unit 1.2 Exercise unit 1.19	Practical	Review class material and practice in own time.	100
8 /	Basketball unit 1.3 Exercise unit 1.19	Practical	Review class material and practice in own time.	100
9 /	Basketball unit 1.3 Exercise unit 1.19	Practical	Review class material and practice in own time.	100
10 /	Basketball unit 1.4 Exercise unit 1.19	Practical	Review class material and practice in own time.	100

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Basketball unit 1.5 Exercise unit 1.19	Practical	Review class material and practice in own time.	100
12 /	Basketball unit 1.6 Exercise unit 1.19	Practical	Review class material and practice in own time.	100
13 /	Basketball unit 1.7 Exercise unit 1.19	Practical	Review class material and practice in own time.	100
14 /	Basketball unit 1.8 Exercise unit 1.19	Practical	Review class material and practice in own time.	100
15 /	Team and individual sportsmanship demonstration	Practical	Review class material and practice in own time.	100

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 必修	ビジュアルアーツI	1	613200	後学期	実験・実習／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
1年	小髙有普	白山麓C： 101.201		月～金16:30-17:30

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	図形表現の基本的な技法	最善で価値あるモノやコトの提案に導くためには、「感じる力」「見つける力」「伝える力」「深く考える力」などが必要だが、これらの能力を発揮するための一助として、図形表現の基本的技法を習得する。授業では、フリーハンドで自ら発想したアイデアや観察した対象の形、機能、構造などをドローイングし、誰にでも認識できるレベルとする。また、発想などをドローイング表現することや、伝達の道具とすることで、アイデアの検証を容易にし、改善や発展などに必要な思考力や発想力の向上を促すなどのスパイラル型思考過程を体験する。創造的なスキルとして認識し、継続的に使用していくことを目指す。
2	図形表現の多様性	
3	図によるコミュニケーション	
4	思考力や発想力の向上	
5	スパイラル型思考過程の体験	

授業の概要および学習上の助言

授業は以下のプロセスで実施されます。
１）ドローイングの意義と位置付け
２）ドローイングの基本知識と技法の学習
３）ドローイングの実践と図を用いた情報伝達
４）スパイラル型思考の演習

注意
・すべての課題は提出期限に間に合うように必ず提出すること。課題の提出が遅れると減点します。
・この授業を合格するには、学生はすべての課題を提出する必要があります。
・この授業では定期試験を実施しません。
・１０分程度の予習課題を毎週授業前までにしておくこと。
・授業内でできなかった課題は次週の授業前までに完成しておくこと。

この授業ではアクティブラーニングの一環としてグループワークによるアイデア出しを行います。

【教科書および参考書・リザーブドブック】
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：アイデア・ドローイング第２版(共立出版)ISBN978-4-320-07177-3
IDEA DRAWING HOW TO DRAW(TANAKA&SHOBUNDO GRAPHIC ART CO.,LTD)ISBN978-4-924861-35-0

履修に必要な予備知識や技能

本授業はリザーブドブック「アイデア・ドローイング第２版」に沿って実施される。このため、予め熟読しておくことが好ましい。
また、授業の進行は積み上げになっているので、各回ごとに不明点などが残らないように心がける。
理解不足と感じたらリザーブドブックやオフィスアワーを利用し復習を行う。

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	f,g	図形表現の基本的な技法を理解できる。
②	f,g	同じモノをさまざまな距離、方向、思考などの観点から観察し、それらを的確に表すドローイングをすることができる。
③	f,g	誰もが認識できるようなドローイングをすることで、第三者との意見交換や意思疎通ができる。
④	f,g	第三者の多様な意見を取り入れて、自分自身の発想を正確に図形で表現する事ができる。
⑤	f,g	創造活動の中でのドローイングの重要性を認識し、図を用いる情報の伝達が的確にできる。
⑥	f,g,d	自らの作業を客観的に振り返る姿勢を示すことができる。

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	0	30	35	30	5	0	100
総合力指標	知識を取り込む力	0	0	10	10	0	0	0	20
	思考・推論・創造する力	0	0	0	10	5	0	0	15
	コラボレーションとリーダーシップ	0	0	0	5	0	0	0	5
	発表・表現・伝達する力	0	0	20	10	25	0	0	55
	学習に取組む姿勢・意欲	0	0	0	0	0	5	0	5

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①		1週目から7週目までと9,10週目：描画の基本的技法の修得度を評価します。（30%）
	②		
	③	レ	
	④	レ	
	⑤		
	⑥		
成果発表 （口頭・実技）	①		12～15週目の課題(最終日に学生の発表を通じてルーブリック評価を行う) (35%)
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
作品	①	レ	８,11週目：ドローイングによるアイデア表現（30%）
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		
ポートフォリオ	①		創造的活動に対する自己評価の書き込み（5%） 15週の学習レポート
	②		
	③		
	④		
	⑤		
	⑥	レ	
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
①知識と技法：知識を完全に理解し、これに基づいたシンプルな線を用い、フリーハンドで図が描ける。 ②応用力：複雑な形、働きなどを判りやすい視点からドローイング表現ができる ③伝達力：誰にでも同じ内容が伝わるレベルで「モノ」や「コト」をドローイングで表現できる。 ④総合力：自分の発想内容や第三者の発想などもシンプルなドローイングで表現し、これを利用して発展させる事ができる。	①知識と技法：知識を理解し、これに基づいたフリーハンド図が描ける ②応用力：簡単な形、単純な働きなどをドローイング表現ができる。 ③伝達力：知識や興味がある第三者に、同じ内容が伝わるレベルで「モノ」や「コト」をドローイングで表現できる。 ④総合力：自分や第三者の発想、アドバイスをドローイングで表現し、補足的な表現を加えることで描きあらわし、他者との相互理解のためのツールとして利用する事ができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	・フリーハンドドローイングの発想の視覚化と提示での有効性についての理解。 ・コミュニケーションを成立する描画条件について基本的な表現訓練 ・表現法基礎①　透視図法を理解する	・ガイダンス ・講義 ・描画演習	予習：指示に従い準備 復習：課題の完成と振り返り	20
2 ／	・表現法基礎② 観測者との位置関係を考える	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
3 ／	・表現法基礎③ 視点の変化でも変わらない図形の規則性を学ぶ	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
4 ／	・表現法基礎④ 立方体を理解し、形の比を記憶する 立方体を利用して等しい量を持つ他の立体を描く	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
5 ／	・表現法基礎⑤ 立方体を利用して等しい量を持つ他の立体を描く	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
6 ／	・表現法基礎⑥ 立体の配置条件や見えない形を補助する表現としての陰影を学ぶ	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
7 ／	・表現法基礎⑦ 立体の配置条件や見えない形を補助する表現としての陰影を学ぶ２	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
8 ／	・総合力ラーニング（レポート） 一般的製品の形を学ぶ 立体の複合からできる様々な形状を理解し、自分で複合する形を発想し描画する	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
9 ／	・表現法基礎⑧ 人と現象・反応の表現方法について 簡易的人体の描画法を学ぶ	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
10 ／	・表現法基礎⑨ 人とモノ・状態の表現方法について 簡易的人体の描画法を学ぶ２	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	40

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	総合力ラーニング１ ・図を活用したレポートを作る	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	20
12 ／	総合力ラーニング２ ・問題解決策を考える ・アイデアを伝えるための情報図の検討	・グループ活動	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	20
13 ／	総合力ラーニング２ ・アイデアを伝えるための情報図を作成する	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	30
14 ／	総合力ラーニング３ ・アイデアを伝える情報図の作成（改善）	・講義 ・描画演習	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させる	100
15 ／	・最終プレゼンテーション ・振り返り学習	・発表 ・振り返り活動	予習：次の授業用準備課題を仕上げる 復習：当日の授業課題を完成させることと、振り返り	30

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Engineering Design IA	2	710100	First	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	WOHLFARTH Brandon KODAKA Arihiro HAYASHI, Michihiro	Hakusanroku C 101.201		

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Design Process	In this class, the students will work on project-based learning activities for finding problems and creating solutions in their daily life and environment. The student groups will practice the design process and methods in their projects. They will also learn basic knowledge and methods to make quick prototypes of their ideas as well. Through making ideas into shapes and sharing them with others, the students learn value creation.
2	Finding problems	
3	Creating solutions	
4	Quick prototypes	
5	Value Creation	

Course Description and Expectations for Students (10.5pt)

The class consists of the following phases:
Phase 1: Learning basic skills and knowledge about the individual steps in the design process
Phase 2: Implement learned skills in hands on engineering design project

Advice on taking this class
- Students should submit all assignments to pass this course.
- Act with appropriate manners and behaviors as important aspects of conducting research.
- Submit all the assignments on time. There will be penalty points if you are late to submit your assignments.
- Participate in class work autonomously. Don't afraid to challenge yourself and feel free to ask questions.
- There will be no exam in this class.
- The class is conducted 2 sessions in a row.
- Check E-syllabus often and download all files needed for the lessons.

This course will offer project-based learning as a type of active learning.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, g	Students will be able to understand the design process to create products and services.
②	a, g	Students will be able to work based on the design thinking mindsets.
③	a, f	Students will be able to make tangible prototyping forms and convey their main ideas using them.
④	d, e, g	Students will be able to generate and improve ideas through iteratitive processes.
⑤	h	Students will be able to collect and analyze the information, and they can define a problem.
⑥	I	Students will be able to show their attitude to reflect on their own work objectively.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	15	30	50	5	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	5	5	15	1	0	26
	Ability to think, reason and create	0	0	5	5	15	1	0	26
	Collaboration and leadership	0	0	2	10	5	1	0	18
	Announcement / Expression / Communication	0	0	2	10	15	1	0	28
	Attitude and motivation for learning	0	0	1	0	0	1	0	2

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Reports will be submitted in written/digital forms including sketches, spreadsheets, and any other styles of forms about the projects. The format of the report will be announced by the instructors depending on the activities.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥	✓	
Presentations	①		Students will give oral presentations about their projects. The format of the presentations will be announced by instructors, such as slides, posters, videos, and/or any other styles. Teachers will grade the presentations on content and presentation etiquette. Rubric will be provided.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Works	①	✓	The works include your practice use of digital fabrication and tools in the workshop or other facilities. The format of works can be the physical prototypes of solutions, the iteration process, and other styles of visual aids of your project. The format will be announced by the instructors.
	②		
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①	✓	Students will have self-reflection in handout or E-syllabus weekly basis.
	②		
	③		
	④		
	⑤		
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
- Student can define an appropriate problem based on user research - Student can propose creative, feasible, and appropriate solutions. - Students can make meaningful and effective prototypes of their solutions. - Students can effectively communicate their thoughts and design ideas well.	- Student can define a problem with some connection to user research generated data - Student can propose appropriate solutions. - Students can make tangible prototypes of their solutions. - Students can explain their thoughts and design ideas adequately.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Class Guidance - Introduction to CDIO contexts and Design Thinking mindsets and process	Lecture and Practice	Prepare as instructed	15
2 /		Lecture and Practice	Finish class assignments and reflection	20
3 /	Maker Studio Safety Instruction Understanding Function and Scope Introduction of Project 1	Lecture and Practice	Prepare as instructed	15
4 /		Lecture and Practice	Finish class assignments and reflection	20
5 /	Understanding Materials	Lecture and Practice	Prepare as instructed	15
6 /		Lecture and Practice	Finish class assignments and reflection	20
7 /	Communication Drawing Skills - Practice - Sketching for Project 1	Lecture and Practice	Prepare as instructed	15
8 /		Lecture and Practice	Finish class assignments and reflection	20
9 /	Idea Modeling - Introduction to digital modeling - 3D printer safety - Modeling for Project 1	Lecture and Practice	Prepare as instructed	15
10 /		Lecture and Practice	Finish class assignments and reflection	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Introduction to poster creation and presentation skills - Creating poster for Project 1 - Creating presentation for Project 1	Lecture and Practice	Prepare as instructed	15
12 /		Lecture and Practice	Finish class assignments and reflection	20
13 /	In-class Presentation for Project 1	Presentation	Prepare as instructed	15
14 /	Introduction of Project 2	Presentation, Lecture, and Practice	Finish class assignments and reflection	20
15 /	Problem analysis and discovery - Problem statement - User analysis - User Experience - Interactions	Lecture and Practice	Prepare as instructed	15
16 /		Lecture and Practice	Finish class assignments and reflection	20
17 /	Sketching Project 2 - Steps to sketching - Generating iterations of sketching	Lecture and Practice	Prepare as instructed	15
18 /		Lecture and Practice	Finish class assignments and reflection	20
19 /	Rapid Prototyping 1	Practice	Prepare as instructed	15
20 /		Practice	Finish class assignments and reflection	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Rapid Prototype 2 Task List and Project Mapping	Practice	Prepare as instructed	15
22 /		Practice	Finish class assignments and reflection	20
23 /	Design Review for Project 2	Review	Prepare as instructed	15
24 /		Practice	Finish class assignments and reflection	20
25 /	Prototyping and iteration 1 Poster Presentation Preparation	Preparation and Practice	Prepare as instructed	15
26 /		Preparation and Practice	Finish class assignments and reflection	20
27 /	Prototyping and iteration 2 Poster Presentation Preparation	Preparation and Practice	Prepare as instructed	15
28 /		Preparation and Practice	Finish class assignments and reflection	20
29 /	Final Presentation and Reflection: - Present how their refined ideas and prototypes solve a problem - Self-reflection and realizing the outcome of the activity from the portfolio entries	Presentation	Prepare as instructed	15
30 /		Self-Reflection	Finish class assignments and reflection	20

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Engineering Design IB	2	710200	Second	Experiment／Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	WOHLFARTH Brandon / MATSUSHITA, Omihito / HAYASHI, Michihiro	Hakusanroku C 101.201		

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Engineering Design Process	In this class students will experience the engineering design process by understanding users to create solutions to solve various problems: research users, generate ideas, develop specifications, have design reviews, make prototypes, and evaluate them based on requirement. Through this process, students will also learn project management methods; as well as, how to implement the engineering design process.
2	Understanding users	
3	Project management	
4	Problem finding and solving	
5	Basic robot control	

Course Description and Expectations for Students (10.5pt)

Proper production process needs to be practiced to realize ideas. In this class students will go through the design process and learn project management methods while creating prototypes to fit their user's criteria.

This course will offer project-based learning in class as a type of active learning.

Students will:
- Act with appropriate manners and behaviors as important aspects of conducting research.
- All the assignments should be submitted to pass the class. There will be penalty points if you are late to submit your assignments.
-There will be no exam in this class.
- Participate in class work autonomously. Don't afraid to challenge yourself and feel free to ask questions.
- The class is conducted 2 sessions in a row.
- Check e-syllabus often and download all files needed for the lessons.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Courses: Engineering Design I A

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, h, i	The students will be able to understand the importance of user research in the design process.
②	a, h, i	The students will be able to make basic robot-controlled systems.
③	c, g, h	The students will be able to make project plan based on quality and delivery time.
④	b, c. d	The students will be able to implement a project within a team using proper management methods.
⑤	b, g, h	The students will be able to create ideas realizing required spec. and practice design review with team.
⑥	a, h, i	The students will be able to show their attitude to reflect on their own work objectively.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	15	15	65	5	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	3	4	15	1	0	23
	Ability to think, reason and create	0	0	3	4	15	1	0	23
	Collaboration and leadership	0	0	3	3	15	1	0	22
	Announcement / Expression / Communication	0	0	3	4	10	1	0	18
	Attitude and motivation for learning	0	0	3	0	10	1	0	14

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Report will include work reports and personal reflection on own learning experience about project progress, contribution, and outcomes. The format of the report will be announced by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	This grade is for the final presentation from students to teacher. Teacher will grade on presentation content, presentation Etiquette, Rubric will be provided as a group and individually. Also, presentation format, and the presentation deliverables will be included in the calculation of this grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①	✓	The format of works can be physical prototypes of solutions, concept diagrams, sketches, and other styles of visual aids and writing forms. The format will be announced by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①	✓	Portfolios will include final personal reflection on own project management and contribution, and learning experience through the project. The format of the portfolio will be announced by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Finishing work during class time, helping other team members or other teams in progressing work. Sharing new insights and knowledge to class and teachers. Having a good line of communication with facilitators and teachers.	Finishes the tasks assigned to them, contributes ideas and opinions when prompted to. Provides answers to questions from facilitators and teachers when approached.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Class guidance Project Introduction Robot controls 1	Lecture	Prepare as instructed	15
2 /		Lecture and Practice	Finish class assignments and reflection	20
3 /	Understanding Users/Stakeholders 1 • Desktop Research • "Proto-Persona" Generation	Lecture and Practice	Prepare as instructed	15
4 /		Practice	Finish class assignments and reflection	20
5 /	Understanding Users/Stakeholders 2 • Interview • Persona	Lecture and Practice	Prepare as instructed	30
6 /		Practice	Finish class assignments and reflection	20
7 /	User Data Analysis • Problem Statement • Insight • Customer Journey Map	Practice	Prepare as instructed	60
8 /	Idea Sketching 1	Lecture and Practice	Finish class assignments and reflection	30
9 /	Understanding Materials and Assembly - Bill of Materials - Assembly Diagrams	Lecture and Practice	Prepare as instructed	15
10 /	Idea Sketching 2	Practice	Finish class assignments and reflection	15

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Idea sketching & Quick Prototyping User Feedback	Practice	Prepare as instructed	15
12 /		Practice	Finish class assignments and reflection	30
13 /	Project Management/Planning • Techniques • Requirements	Practice	Prepare as instructed	15
14 /		Practice	Finish class assignments and reflection	15
15 /	Design Review and prototype planning Finalizing ideas and Prototype 1	Discussion	Prepare as instructed	15
16 /		Practice	Finish class assignments and reflection	30
17 /	Prototype 2	Practice	Prepare as instructed	15
18 /		Practice	Finish class assignments and reflection	30
19 /	Prototype 3	Practice	Prepare as instructed	15
20 /		Practice	Finish class assignments and reflection	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Prototype 4 and user feedback	Practice	Prepare as instructed	15
22 /		Practice	Finish class assignments and reflection	30
23 /	Prototype 5 and Status Report	Discussion	Prepare as instructed	20
24 /		Practice	Finish class assignments and reflection	30
25 /	Prototype iteration 1 and user feedback Prepare for the final presentation	Practice	Prepare as instructed	20
26 /		Practice	Finish class assignments and reflection	30
27 /	Prototype iteration 2 and user feedback Prepare for the final presentation	Practice	Prepare as instructed	20
28 /		Practice	Finish class assignments and reflection	30
29 /	Project completion and Final presentation Self-Reflection	Presentation	Prepare the final presentation materials	30
30 /		Presentation and self-reflection	Reflecting on self-growth, any different routes or options you would have taken if opportunity is provided.	30

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Computer Skills IA	1	710900	First	Experiment／Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	OGAWA, Hayato KODAKA, Arihiro	Hakusanroku C 101.201		From 16:30 to 17:30 on the class day

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	3D modeling	In today's world, computers are used everywhere, making computational thinking and creativity essential for engineers across all disciplines. This course enables students to learn fundamental computer skills. Specifically, students will enhance their abilities to create documents and engage in creative tasks practically using computers.
2	Office	
3	Statistics	
4	Creative Design	
5		

Course Description and Expectations for Students (10.5pt)

In this course, there is no final examination. All assignments must be submitted, and Late assignments may reduce scores. This course will offer experiential learning in class as a type of active learning.

Advice for students:
- Participate in class activities and do not hesitate to ask questions.
- Come prepared and bring all studied materials.
- Be diligent in adhering to the submission dates for all assignments.

Additionally, be sure to include what you achieved in this class in your portfolio for future reference and review.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books: Excel で易しく学ぶ統計解析（東京図書）ISBN 978-4489023170
完全独習統計学入門（ダイヤモンド社）ISBN 978-4478820094
Fusion 360 for Makers (MAKER COMMUNITY LLC) ISBN 9781680453553
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

The fundamental operation of a computer (left click, right-click, double click, drag and drop shutdown, start-up, etc.)
Fundamental usage of internet browsers (search, URL, etc.)

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	Students will be able to learn how to use computers
②	hi	Students will be able to use Microsoft Office and analyze data statistically.
③	fhi	Students will be able to create 3D models using Autodesk Fusion 360.
④	fghi	Students will be able to create and edit images using Adobe Photoshop
⑤	fghi	Students will be able to draw and create illustrations using Adobe Illustrator.
⑥	i	Students will be able to review what you achieved using the Portfolio system.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	80	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	40	0	0	40
	Ability to think, reason and create	0	0	0	0	40	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	10	0	10
	Attitude and motivation for learning	0	0	0	0	0	10	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	x	Students are required to submit assignments for each topic to demonstrate the skills learned in class. Their evaluations will be based on their ability to execute software operations accurately. The grading will be divided as follows: 40% for the first half of the assignments (Fusion360 and Office) and 40% for the second half (Photoshop and Illustrator). Students must submit all assignments. Failure to submit any one assignment will result in a deduction of points.
	②	x	
	③	x	
	④	x	
	⑤	x	
	⑥		
Portfolios	①	x	Portfolio evaluation is based on documentation of evidence of e-syllabus entry that reflects students' understanding of their gained learning skills.
	②	x	
	③	x	
	④	x	
	⑤	x	
	⑥	x	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to recognize computer capabilities and address related issues. Students are able to utilize Microsoft software products, Adobe, and Autodesk as needed. Students are able to create impressive work in other classes and projects	Students are able to use and manage computers effectively. Students are able to use Microsoft Word, Excel, PowerPoint, Adobe Photoshop, Illustrator, and Autodesk Fusion 360, depending on the situation. Students are able to apply the skills they have learned to other classes and projects.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	・Syllabus explanation and Guidance ・Laptop and software set-up ・Fusion 360 Introduction to Fusion 360	Explanation of this course Lecture and getting started with Fusion 360	Finishing set-up of PC Preparation based on instruction	15
2 /	・Fusion 360 Understanding the basic tools of Fusion 360 and the process of sketching.	Lecture and practice of Fusion 360	Finishing assignments for this class Preparation based on instruction	25
3 /	・Fusion 360 Creating and exporting models for 3D printers and laser cutters	Lecture and practice of Fusion 360	Finishing assignments for this class Preparation based on instruction	25
4 /	・PowerPoint Creating a slide and presentation rule	Lecture and practice of Excel	Finishing assignments for this class	25
5 /	・Excel Reviewing how to use Excel	Lecture and practice of Excel	Finishing assignments for this class	25
6 /	・Excel Understanding basic statistics and normal distribution from data	Lecture and practice of Excel	Finishing assignments for this class Preparation based on instruction	25
7 /	・Word Reviewing how to use Word	Lecture and practice of Word	Finishing assignments for this class Preparation based on instruction	25
8 /	・Photoshop Understanding image repairing and resolution	Lecture and practice of Photoshop	Finishing assignments for this class Preparation based on instruction	25
9 /	・Photoshop Understanding the composition of images	Lecture and practice of Photoshop	Finishing assignments for this class Preparation based on instruction	25
10 /	・Photoshop Understanding the composition of images	Lecture and practice of Photoshop	Finishing assignments for this class Preparation based on instruction	25

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	・Illustrator Understanding Bezier curve	Lecture and practice of Illustrator	Finishing assignments for this class Preparation based on instruction	25
12 /	・Illustrator Understanding basic operations to create figures	Lecture and practice of Illustrator	Finishing assignments for this class Preparation based on instruction	25
13 /	・Illustrator Understanding image trace	Lecture and practice of Illustrator	Finishing assignments for this class Preparation based on instruction	25
14 /	・Illustrator Create printing data	Lecture and practice of Illustrator	Finishing assignments for this class Preparation based on instruction	25
15 /	・Illustrator Creating printing data and reviewing this class	Lecture and practice of Illustrator	Finishing assignments for this class Preparation based on instruction	25

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Computer Skills IB	1	711000	Second	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	MATSUSHITA, Omihito FUJISAWA, Takeshi	Hakusanroku C 101.201		

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Video editing	In modern days, computers are used everywhere and computational thinking is an essential for engineers in all fields. Students must be aware of how to use the Internet to their advantages for communicating their works to the world. In particular, students will learn about how to use software to express themselves and the technology related to the Internet.
2	HTML	
3	CSS	
4	Web Design	
5		

Course Description and Expectations for Students (10.5pt)

This course will offer research and experiential learning in class as a type of active learning.

In this course,
- There is no final examination.
- All assignments must be submitted.
- Late assignments may reduce students' score.

Advice for students:
- Involve in class activity. Do not be shy to ask some questions.
- Take care to stick to the submission date of all assignments.

Write what you achieved in this class in the portfolio for your own record and review.

Required Materials (textbooks, reference books, reserved books)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Fundamental operation of computer (left click, right click, double click, drag and drop, shutdown, start up, etc.)
Fundamental usage of internet browser (search, URL, etc.)
Fundamental usage of basic function of a PC (touch typing, file system, software installation, etc.)

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	Students will be able to learn how to use video editing software.
②	e,f,i	Students will be able to create their own videos.
③	h,i	Students will be able to understand technologies related to the Internet.
④	h,i	Students will be able to understand HTML & CSS.
⑤	f,h,i	Students will be able to edit web pages.
⑥	i	Students will be able to review what you achieved using Portfolio system.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	80	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	40	0	0	40
	Ability to think, reason and create	0	0	0	0	40	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	10	0	10
	Attitude and motivation for learning	0	0	0	0	0	10	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	∠	To check the learned skills in class, students have to submit assignment for each topic. They are evaluated from the viewpoint of being able to execute correctly software operation for the first half (Premiere). 40% each is allocated for the first half of assignments (Premiere) and the second half (HTML). **Students must submit all assignments. If they do not submit even one of them, the grading of works will be 0.**
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥		
Portfolios	①	∠	Portfolio evaluation is based on documentation of evidence of e-syllabus entry that reflects students understanding of their gained learning skills.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to understand of capabilities of the software and learn from somewhere other than the teacher. Students are able to understand about HTML tags and CSS selectors, and customize all elements. Students are able to create an impressive work in other classes and projects.	Students are able to use software appropriately. Students are able to understand about HTML tags and CSS selectors. Students are able to apply the learned skills to other classes and projects.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	・Guidance ・Premiere Pro Basic operation of Premiere Pro	Explanation of this course Lecture and practice of Premiere Pro	Finishing assignments of this class	15
2 /	・Premiere Pro Fundamental method of editing videos	Lecture and practice of Premiere Pro	Finishing assignments of this class	15
3 /	・Premiere Pro Adding text and caption	Lecture and practice of Premiere Pro	Finishing assignments of this class	15
4 /	・Premiere Pro Chroma key composition	Lecture and practice of Premiere Pro	Finishing assignments of this class	15
5 /	・Premiere Pro Camera work and storyboard	Lecture and practice of Premiere Pro	Finishing assignments of this class	15
6 /	・Premiere Pro Creating own video	Project	Continuing the work	15
7 /	・Premiere Pro Creating own video	Project	Finishing assignments of this class	30
8 /	・Orientation + Basic web page structure Component Parts of a Web Page What is HTML?	Lecture and practice	Finishing assignments of this class	25
9 /	・Basic HTML Structure Exercises - Practice the basics of heading structure, paragraphs, lists, links, image tags, etc.	Lecture and practice Evaluated assignment (1)	Finishing assignments of this class	25
10 /	・CSS Basics and Styling Experience - Exercises in Basic CSS - Selector usage, class specification	Lecture and practice	Finishing assignments of this class	25

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	・Creating a simple web page with CSS - Arrange web page using CSS	Lecture and practice Evaluated assignment(2)	Finishing assignments of this class	25
12 /	・Introduction to Copilot and Project Preparation	Lecture and practice	Finishing assignments of this class	25
13 /	・ Project①：Web page design Using AI to design web pages	Self Study Evaluated assignment (3)	Finishing assignments of this class	25
14 /	・Project ②：Web page creation Using AI to create HTML & CSS	Self Study Evaluated assignment (3)	Continuing the work	25
15 /	・Project③：Submission and review Review and check the understanding of what is learned so far	Self Study Evaluated assignment (3)	Submit your evaluated assignment	25

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept.S Specialized Required	Academic Foundation	1	710301	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	MATSUSHITA, Omihito MEBUSAYA, Rattiya	HC 101-201		

Course Objectives

	Keywords	Learning Objectives of the Course
1	Leadership competency	Students will learn the basics of attitudes, mindsets, and thinking skills necessary for learning and team projects. While recognizing the importance of competency and own characteristics, students will learn leadership competency and practice logical thinking, argument, and debate skills on the theme of technical and engineering issues, while applying this knowledge and considering the ethical points of views.
2	Logical thinking	
3	Argument	
4	Debate	
5	Ethical points of views	

Course Description and Expectations for Students

This course will offer group work and debate in class as a type of active learning.
In this class, students will understand and utilize their own characteristics and strength, acquire logical thinking and argumentation skills, and be able to express their own opinions on how to solve problems. Activities to practice logical thinking skill and argument skill by using technical and political issues in the field of IT and engineering as topics. After learning these skills, students will acquire practical skills through debate sessions conducted at the end of the semester.
Advice on taking this course:
•Have laptops or notebooks ready before class starts.
•Check e-syllabus often and download all files needed for lessons.
•Submit assignments on time.
•Enter a portfolio for self-records and review.
•Feel free to ask questions during office hour.

【Required Materials (textbooks, reference books, reserved books)】
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

No.	Program Objectives	Target Abilities for Students
①	c.d.e.f.i.	Students will be able to understand the essence of leadership competency.
②	a.g.i.	Students will be able to gather necessary information through reference research.
③	f.i.	Students will be able to understand the logical thinking method.
④	c.f.i.	Students will be able to understand the argument method.
⑤	c.d.f.	Students will be able to understand and practice in the debate method.
⑥	i	Students will be able to record their portfolio and look back on themselves.

Evaluation Criteria

	Evaluation Method / Total Percentage	Exams	Quizzes	Reports	Presentations	Works	Portfolio	Other	Total
	Total Percentage	0	0	40	40	0	20	0	100
Comprehensive Strength Criterion	Ability to capture knowledge	0	0	15	10	0	5	0	25
	Ability to think, reason and create	0	0	15	10	0	5	0	25
	Collaboration and leadership	0	0	0	10	0	0	0	10
	Announcement / Expression / Communication	0	0	10	10	0	5	0	35
	Attitude and motivation for learning	0	0	0	0	0	5	0	5

※ The numerical breakdown shown by Comprehensive Strength Criterion is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Report	①	✓	Report includes the research summary of argumentation and other activity report. The format will be instructed in class.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Presentation	①		Evaluate argument presentation and each student's role in the debate, as well as students' thinking and information literacy skills.
	②		
	③		
	④		
	⑤	✓	
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolio	①		Students will set their goals, evaluate, and reflect their own learning experience through the course. They need to record their change and growth in their portfolio as instructed.
	②		
	③		
	④		
	⑤		
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Students are able to demonstrate the leadership competency in various group projects. Students are able to understand the technical and social background of the energy field relating electric power system. Students are able to gather necessary information through reference research. Students are able to demonstrate the logical thinking and argument skill. Students are able to understand and practice in the debate method. Students are able to sufficiently record their portfolio and look back on themselves.	Students are able to understand the key points of leadership competency. Students understand the key issues in the energy field relating electric power system. Students are able to gather some information through reference research. Students are able to understand the logical thinking and argument method. Students are able to understand and practice in the debate method. Students are able to record their portfolio and look back on themselves.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Understanding the purpose and expectation of learning - Sharing the purpose of studies - Portfolio introduction	Lecture and group work	Students report on the reflections on their learning expectation.	15
2 /	Understanding competency - Understanding the own strength and weakness - Goal setting	Lecture and group work	Students report on the reflections on their competency.	15
3 /	Leadership Practice 1 - Practice group interaction and negotiation.	Lecture and group work	Students report on the reflections on their leadership experience.	15
4 /	Leadership Practice 2 - Understanding the key roles of leaders and teams. - Understanding the roles of effective feedback. Portfolio Check	Lecture and group work	Students report on the reflections on their key leadership competency.	15
5 /	Leadership Practice 3 - Reflect on own leadership competency though group interaction.	Lecture and group work	Students report on the reflections on their leadership practice.	15
6 /	Basic method of logical thinking and argument - Through exercises, student can isolate problems, discover essence, and consider solutions. Portfolio check	Learning and exercises on finding the essence of the problem and considering solutions to it.	Students report on the reflections on their logical thinking experience.	20
7 /	Argument skills on engineering topic 1 - Students learn about the topic and then improve their logical thinking skills by arguing their opinions on the relating subject.	An engineering related topic will be lectured, and students will write a report on their opinions on each topic.	Preparation for the argument on the energy-related subject	30
8 /	Portfolio midterm reflection	The week after the lecture, students will present their own opinions.	Students report on the reflections on their argument.	10
9 /	Argument skills on engineering topic 2 Students learn about the topic and then improve their logical thinking skills by arguing their opinions on the relating subject, utilizing the information Literacy skills	An engineering related topic will be lectured, and students will write a report on their opinions on each topic.	Preparation for the argument on the energy-related subject	30
10 /		The week after the lecture, students will present their own opinions. They will recognize the validity and vulnerability of their opinions and develop logical argumentation skills.	Students report on the reflections on their argument.	10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Debate 1 Basic method of the debate		Students prepare for the debate subject.	30
12 /	Debate 2 Prepare for the debate round #1	Introducing basic debate method	Students prepare for the debate subject.	30
13 /	Debate 3 Debate round #1 Portfolio check	Research for the topic of energy field and prepare for argument and counter argument of round #1	Students prepare for the debate subject.	30
14 /	Debate 4 Prepare for the debate round #2	Research for the topic of energy field and prepare for argument and counter argument of round #2	Students prepare for the debate subject.	30
15 /	Debate 5 Debate round #2 Final Portfolio reflection		Students report on the reflections on their learning experience through the activities.	10

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept.S Specialized Required	Fundamentals of Innovation	1	712600	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
1	MATSUSHITA, Omihito TSUDA, Akihiro MEBUSAYA, Rattiya	HC 101-201		

Course Objectives

	Keywords	Learning Objectives of the Course
1	innovation	Students will be able to identify the key factors of innovation: different customer needs, sources of value, competitors, and effective team work. Students will learn how to improve value proposition by iteration.
2	Customer needs	
3	Sources of value	
4	Competitors	
5	Value proposition	

Course Description and Expectations for Students

In this class, students will learn the important factors of innovation bases on the five disciplines of innovation introduced by SRI International. Students will practice its elevator pitch framework and idea iteration process called value creation forum by team.

Advice on taking this course:
•Have laptops or notebooks ready before class starts.
•Check e-syllabus often and download all files needed for lessons.
•Submit assignments on time.
•Enter a portfolio for self-records and review.
•Feel free to ask questions during office hour.

【Required Materials (textbooks, reference books, reserved books)】
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

Engineering Design IA: idea creation, value proposition
Academic Foundation: leadership competency, group discussion

No.	Program Objectives	Target Abilities for Students
①	a, g	Students will understand innovation and creativity
②	a, g	Students will obtain innovation mindset and skills
③	a, g	Students will be able to create and innovate their idea into the real innovation
④	c, d, e	Students will be able to improve their ideas efficiently working in teams.
⑤	d, e, f	Students will be able to provide effective feedback.
⑥	f, g	Students will utilize all the knowledge in the class to convey their innovative ideas to others
	a, b, i	Students will be able to record and creatively create portfolio and assess their own learning.

Evaluation Criteria

Evaluation Method / Total Percentage		Exams	Quizzes	Reports	Presentations	Works	Portfolio	Other	Total
Total Percentage		0	0	25	25	30	20	0	100
Comprehensive Strength Criterion	Ability to capture knowledge	0	0	5	5	7	5	0	22
	Ability to think, reason and create	0	0	5	5	7	5	0	22
	Collaboration and leadership	0	0	5	5	6	2	0	18
	Announcement / Expression / Communication	0	0	5	5	5	3	0	18
	Attitude and motivation for learning	0	0	5	5	5	5	0	20

※ The numerical breakdown shown by Comprehensive Strength Criterion is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Report	①	∠	Reports mainly include individual activity worksheet and reflection. The format of the report will be announced by the instructors.
	②	∠	
	③	∠	
	④		
	⑤		
	⑥		
Presentation	①	∠	Students will give oral presentation about their projects. The format of the presentations will be announced by instructors, Teachers will grade on presentation contents and presentation Etiquette, Rubric will be provided as a group and individually.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥		
Works	①	∠	Works mainly include group activity worksheet and presentation materials. The format of the works will be announced by the instructors.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥		
Portfolio	①	∠	Portfolios will include progress and final personal reflection reports on own learning experience through the semester. The format of the portfolio will be announced by the instructors.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Students are able to explain about innovation. Students are able to explain about the different customer types and values. Students are able to explain about different types of competitors. Students are able to improve their ideas based on the value proposition mechanism.	Students are able to understand about innovation. Students are able to understand about the different customer types and values. Students are able to understand about different types of competitors. Students are able to understand the value proposition mechanism.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1	Course guidance Creativity vs Invention vs Innovation, SRI Grouping/Project Theme Introduction Elevator pitch format	- Lecture - Team grouping	- Individuals prepare for the idea and elevator pitch - Self-reflection	20
2	Elevator pitch Understanding Stakeholders / User Needs	- Elevator pitch - Lecture - Group discussion	- Research: data list/collection - List of Users and Customers - Self-reflection	20
3	Empathy-Interview & Observation 1 Creating Potential Personas	- Lecture - Group discussion	- Questions for Interview - Observation technique (practice/exercise) - Self-reflection	20
4 /	Data Analysis - Sorting pieces of information to better understand users	- Lecture - Group discussion	- Interview data - Observation data - Self-reflection	20
5 /	Data Organization: - Sorting pieces of information for idea generation.	- Lecture - Group discussion	- VP Canvas - HMW Statement - Self-reflection	20
6	Benefit/Cost Understanding Competition	- Lecture - Group discussion	- Self-reflection	20
7	Team and Champion	- Lecture - Group discussion	- Self-reflection	20
8 /	Validation Innovation Impact Progress Report	- Lecture - Group discussion	- Getting user feedback - Self-reflection	20
9	NABC: Creating A Value Proposition	- Lecture - Group discussion	- Self-reflection	20
10	Introduction to Pitching Preparation for the 1st Pitch	- Lecture - Group discussion	- Pitching deck and script - Self-reflection	20
11 /	VCF#1 and Feedback	- Pitching - Give and received feedback - Reflection	- Pitching and feedback (1st time) - Self-reflection	20
12 /	Feedback Review and Pitch iteration	- Group discussion - Reflection	- Pitching iteration - Self-reflection	20
13	Pitching Practice	- Pitching practice - Reflection	- Final pitch deck and others - Self-reflection	20
14 /	VCF#2 (Final Pitch) and Feedback Pitching day	- VCF#2 Final Pitch - Give and received feedback - Reflection	- Feedback - Self-reflection	20
15 /	Wrap Up, Final Questions, Quiz	- Lecture - Group discussion	- Final reflection - Final Portfolio - Final group work report (in ppt) - Final development / improvement idea	20

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	国語表現IIA	1	620500	前学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
2年	黒田　譜美	白山麓C： 101.201		水曜　15:00-16:00

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	要約	文章やデータなどさまざまな情報を適切に判断し取捨選択する力や、筋道立てて考え、効果的に表現する力を伸ばす。課題文型・データ型小論文が書けるようになるために、課題文やデータを正確に読み取り、要約する力を鍛える。また、適切な根拠や具体例を示しながら自分の意見を展開する方法を学び、プレゼンテーション、ディベートなど話す技術へ応用できるようにする。さらに、聞き手の同意や共感を得るために、音声表現だけでなく、資料やスライド、身ぶりや表情といった非音声表現も積極的に工夫する実践的な態度を養う。
2	課題文型小論文	
3	データ型小論文	
4	レポート	
5	プレゼンテーション	

授業の概要および学習上の助言

■授業概要

国語表現IA、IBの続きとして、教科書『国語表現』（大修館書店）の下記範囲を学習する。

小論文・レポート入門

会話・議論・発表

なお、この授業ではアクティブラーニングの一環として、**ディスカッションや探究活動を行う。**

■学習上の助言

・課題は必ず提出すること。
・毎時の小テストは地道に取り組むこと。
・辞書は必ず用意すること。また、辞書を常に引くように心がけ、知らない言葉を確認し、着実に身につけること。
・さまざまなジャンルの本を読むよう心がけること。

【教科書および参考書・リザーブドブック】

教科書：『国語表現』大修館書店 ISBN:978-4-469-62396-3 『国語の常識 plus』明治書院 ISBN:978-4-469-625-23405-7

参考書：

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

国語表現IA、IBを履修し、日本語の読解力や文章表現力を身につけている。

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	e,f,i	常用漢字の読み書きの習得に積極的に努める。
②	e,f	課題文を正確に読み取り、的確に要約することができる。
③	e,f,h	グラフや図表など視覚資料から傾向・特徴を読み取り、論点を把握することができる。
④	e,f	適切な根拠や具体例を示しながら自分の意見を展開することができる。
⑤	e,f,d	**参考文献表の作成方法や引用方法を理解し、自分の意見と他者の意見を区別して書くことができる。**
⑥	e,f	音声表現・非音声表現を工夫して、効果的なプレゼンテーションを行うことができる。

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	20	70	10	0	0	0	100
総合力指標	知識を取り込む力	0	10	20	0	0	0	0	30
	思考・推論・創造する力	0	0	20	0	0	0	0	20
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	20	10	0	0	0	30
	学習に取組む姿勢・意欲	0	10	10	0	0	0	0	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	漢字小テストは6回実施し、計20点とする。
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①		レポートは4種類課し、計70点とする。 ①要約：10点 ②課題文型小論文（構成メモ・ノート・清書）：30点 ③データ型小論文：10点 ④探究型小論文（参考文献表・構成ノート）：20点
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		
成果発表 （口頭・実技）	①		成果発表（口頭・実技）は10点とする。 ①プレゼンテーション
	②		
	③		
	④	レ	
	⑤	レ	
	⑥	レ	
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
漢字を常に正確に読み書きできる。 文章の論点や主張を正確に読み取り、常に的確に要約できる。 グラフや図表など視覚資料から、論点を的確に把握することができる。 適切な根拠や具体例を示しながら、自分の意見を展開することができる。 参考文献表の作成方法や引用方法を正しく理解し、他者の意見を有効に引用しながら文章を論理的に展開することができる。 音声表現・非音声表現を工夫して、効果的なプレゼンテーションができる。	漢字の習得に積極的に努めることができる。 文章の論点や主張を読み取り、要約できる。 グラフや図表など視覚資料から、論点を把握することができる。 根拠や具体例を挙げ、自分の意見を書くことができる。 参考文献表の作成方法や引用方法を理解し、自分の意見と他者の意見を区別して書くことができる。 音声表現・非音声表現を意識して、プレゼンテーションができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	■科目ガイダンス ・科目の目的、内容、評価方法について理解する。	講義と質疑 プリント配布	復習：配布プリントを再読し、学習教育目標や行動目標を確認する。	30
2 ／	要約 ・要約の方法について理解する。 ・同一文章を異なる文字数で要約する。	小テスト① 要約提出 講義と質疑 プリント配布	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
3 ／	要約 ・過去の大学入学試験問題（要約）に取り組む。	小テスト② 小テスト①返却 要約返却 講義と質疑 プリント配布	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
4 ／	課題文型小論文 ・論点を把握し、課題文を要約する。 ・疑問点を書き出す。	小テスト③ 小テスト②返却 講義と質疑 プリント配布 グループワーク	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
5 ／	課題文型小論文 ・問いに対する自分の意見の根拠を挙げる。 ・反論を想定して展開を工夫する。 ・構成ノートを書く。	小テスト④ 小テスト③返却 構成ノート提出 講義と質疑 プリント配布	予習：構成ノートを作成する。 復習：教科書・ノートを見直す。	30
6 ／	課題文型小論文 ・添削内容を確認し、構成や展開を修正する。 ・清書する。	課題文型小論文提出 小テスト④返却 構成ノート返却 講義と質疑 プリント配布	予習：レポートを推敲する。 復習：清書を見直す。	30
7 ／	課題文型小論文 ・他学生の小論文を読み、相互評価する。	課題文型小論文返却 講義と質疑 プリント配布	予習：レポート②を仕上げる。 復習：相互評価を見直す。	30
8 ／	データ型小論文 ・グラフの種類と特徴を理解する。 ・相関関係と因果関係の違いを理解する。	講義と質疑 プリント配布	予習：データ型小論文について調べる。 復習：教科書・ノートを見直す。	30
9 ／	データ型小論文 ・データを読み取り、論点を把握する。 ・どのような解釈が可能か説明する。	データ型小論文提出 講義と質疑 プリント配布 グループワーク	予習：レポートを仕上げる。 復習：教科書・ノートを見直す。	30
10 ／	データ型小論文 ・他学生の読み取りや解釈を読み、相互評価する。	データ型小論文返却 講義と質疑 プリント配布	予習：教科書・ノートを見直す。 復習：相互評価を見直す。	30

授業明細表

ＣＬＩＰ学習プロセスについて

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※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	メディアと情報 ・メディアごとに立場や条件が異なり、情報の伝え方が異なることを理解する。 ・引用の方法、参考文献や注の示し方を理解する。	小テスト⑤ 講義と質疑 プリント配布 グループワーク	予習：情報の編集目的や方法について調べる。 復習：教科書・ノートを見直す。	30
12 ／	レポート（探究型小論文）を書く ・レポートの問いを絞る。	小テスト⑥ 小テスト⑤返却 講義と質疑 プリント配布 グループワーク	予習：テーマを考えておく。 復習：問いを見直す。	30
13 ／	レポート（探究型小論文）を書く ・先行研究を調べ、参考文献表に記入する。 ・文章構成・展開を考え、構成ノートを作成する。	レポート提出 小テスト⑥返却 プリント配布	予習：構成ノートを作成する。 復習：添削を見直す。	30
14 ／	プレゼンテーション ・プレゼンテーションの表現要素および表現技術について理解する。 ・プレゼンテーションの構成について理解する。	講義と質疑 プリント配布 グループワーク	予習：プレゼンテーションについて調べる。 復習：教科書・ノートを見直す。	30
15 ／	プレゼンテーション ・プレゼンテーションを行い、質疑応答する。 ・相互評価する。	実技：プレゼンテーション プリント配布 グループワーク アンケート実施	予習：発表の練習をする。 復習：相互評価を見直す。	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Expression II A	1	620600	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	TAYLOR, James	Hakusanroku C: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Writing	Students will come to prepared to speak and write in English. To progress in the class students will complete and submit tasks on time. Peer review and feedback are important parts of the writing process, so students will use every opportunity to communicate with classmates, respect others' ideas and opinions. It is crucial to ask classmates or the teacher for help when necessary.
2	Essays	
3	Genres	
4	Journal	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. Students will consider what they learnt in English Expression I A and I B and will expand on their knowledge by continuing to learn about and practice the writing process, including planning and peer review, to write essays. Through the writing process and targeted language activities, students will gain the skills to describe their ideas logically in written English. Short writing tasks will be completed on a weekly basis for homework to give students further opportunities to practice expressing themselves. Students will learn and practice the skills and language to achieve high scores on academic writing tasks.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books:

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate in written English.
Desire to improve writing skills through responding appropriately to receiving feedback and constructive criticism.
Work ethic to revise, edit, and rewrite drafts of an essay.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b, f	Students will be able to develop sentences and paragraphs in response to issues and themes raised in class.
②	e	Students will be able to draw on cultural knowledge and personal experience to express themselves.
③	d, f, g	Students will be able to use planning techniques and peer review to develop their and others' work.
④	e, f	Students will be able to achieve clarity of thought by identifying the features of various genres of writing.
⑤	f, g	Students will be able to use rhetorical appeals to express thoughts and opinions and to persuade others.
⑥	e, f, i	Students will be able to investigate and discuss authors' intentions and meanings in various examples.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	80	0	20	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	5	0	0	25
	Ability to think, reason and create	0	0	20	0	5	0	0	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	20	0	5	0	0	25
	Attitude and motivation for learning	0	0	20	0	5	0	0	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Students will write 2 different genres of essay, which will be graded according on Process (25), Task Achievement (25), Cohesion (25), Coherence (25). Essays will be submitted online. Feedback will be given online before the following lesson. Students will complete Academic Writing Task 1 and Task 2 at least twice each. These will be graded on Task Achievement (9), Coherence & Cohesion (9), Lexical Resource (9), Grammar (9). Feedback will be given online and in writing at the start of the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students will write a journal of at least 200 words on an assigned topic for homework after each of the first 14 lessons. The journals will be submitted online. Students will receive credit for journals of sufficient length submitted on time. Each journal is worth 10 points. Feedback will be given online before the following lesson.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students improve their writing drastically, go through the writing process, respond appropriately to feedback, and produce essays of various genres that are logically structured, well argued, and supported by evidence from reliable sources. Students complete and submit all work on time. Students achieve high scores on academic writing tasks.	Students improve their writing to some extent, go through the writing process, respond to some feedback, and produce essays of various genres that are for the most part logically structured, well argued, and supported by evidence from reliable sources. Students achieve reasonable scores on academic writing tasks.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: Students will read the syllabus. Academic Writing Task 1: Students will review the features and structures of effective Task 1 answers.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
2 /	Academic Writing Task 1: Students will attempt Task 1 under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
3 /	Academic Writing Task 2: Students will review the features and structures of effective Task 2 answers.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
4 /	Academic Writing Task 2: Students will attempt Task 2 under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
5 /	Process Essay 1: Students will review the features and structures of a process paragraph, review their own paragraph, then plan and write a process essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
6 /	Process Essay 2: Students will continue writing their process essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
7 /	Process Essay 3: Students will continue writing their process essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
8 /	Process Essay 4: Students will complete and submit their process essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
9 /	Academic Writing Tasks: Students will review Tasks 1 and 2, and will attempt the tasks under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
10 /	Comparison Essay 1: Students will review the features and structures of a comparison paragraph, review their own paragraph, then plan and write a comparison essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Comparison Essay 2: Students will continue writing their comparison essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
12 /	Comparison Essay 3: Students will continue writing their comparison essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
13 /	Comparison Essay 4: Students will complete and submit their comparison essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
14 /	Academic Writing Tasks: Students will review Tasks 1 and 2, and will attempt the tasks under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
15 /	Review: Students will review what was learnt in this course, reflect on their performance, and consider the next semester.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work		

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	国語表現IIB	1	620700	後学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
2年	黒田　譜美	白山麓C： 101.201		水曜　15:00-16:00

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	故事成語・慣用句	自分の思いや考えを多彩に表現したり、相手の声に共感をもって耳を傾けたりできるようになるために、言葉遊びやビブリオバトル、エッセイや物語の創作など多種多様な言語活動に取り組む。物語の創作では、ストーリーマップやキャラクターマップを用い、緻密な世界観や魅力のある登場人物を設定して、一貫性のある物語を構成・展開できるようにするとともに、言葉のリズムやレトリック等表現の細部を工夫できるようにする。また、ものの見方、感じ方、考え方を豊かにする読書の意義と効用について理解を深め、生涯にわたって読書に親しむ態度を育成する。
2	レトリック	
3	物語創作	
4	ビブリオバトル	
5	エッセイ	

授業の概要および学習上の助言

■授業概要

国語表現ⅡBでは、教科書『国語表現』（大修館書店）の下記内容に取り組む。

読書のひろば

言葉で遊ぶ

エッセイを書こう

加えて、『国語表現　改訂版』（教育出版）の下記内容を参考とする。

言葉遊び

絵から物語を作る

なお、この授業ではアクティブラーニングの一環として、グループワークを行う。

■学習上の助言

・課題は必ず提出すること。

・毎時の小テストは地道に取り組むこと。

・辞書は必ず用意すること。また、辞書を常に引くように心がけ、知らない言葉を確認し、着実に身につけること。

・さまざまなジャンルの本を読むよう心がけること。

【教科書および参考書・リザーブドブック】

教科書：『国語表現』大修館書店 ISBN:978-4-469-62396-3 『国語の常識 plus』明治書院 ISBN:978-4-469-625-23405-7

参考書：

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

国語表現IA、IB、ⅡAを履修し、日本語の読解力や文章表現力を身につけている。

No.	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	e,f,i	故事成語・慣用句の意味を理解し、実際に使うことができる。
②	e,f	比喩、押韻、季語といったレトリックの効果を理解し、実際に使うことができる。
③	e,f,g	絵を並べ替えて、起伏（発端、展開、クライマックス、結末）を意識して物語を書くことができる。
④	e,f,g	キャラクターマップやストーリーマップを用い、主人公が問題を解決する物語を書くことができる。
⑤	e,f	読み手を意識し、着眼点、構成、文体、語句などを工夫して、エッセイを書くことができる。
⑥	f,i	読書の意義と効用について理解を深め、読書経験を重ねることができる。

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	20	50	10	0	20	0	100
総合力指標	知識を取り込む力	0	20	0	0	0	0	0	20
	思考・推論・創造する力	0	0	30	0	0	10	0	40
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	20	10	0	10	0	40
	学習に取組む姿勢・意欲	0	0	0	0	0	0	0	0

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	漢字・故事成語・慣用句の小テスト：20点
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①	レ	レポートは3種類課し、計50点とする。 探究型小論文：10点 物語創作：30点（絵から物語10点、ストーリーマップ・キャラクターマップ10点、作品10点） エッセイ：10点
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
成果発表 （口頭・実技）	①		ビブリオバトル：10点
	②		
	③		
	④		
	⑤		
	⑥	レ	
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		レトリック：20点
	②	レ	
	③		
	④		
	⑤		
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
故事成語や慣用句の意味を理解し、効果的に用いることができる。 比喩、押韻、季語の効果を理解し、効果的に用いることができる。 絵を並べ替えて、起伏のある独創的な物語を書くことができる。 キャラクターマップやストーリーマップを活かし、構成や展開を工夫して独創的な物語を書くことができる。 着眼点、構成、文体、語句などを工夫して、心に響くエッセイを書くことができる。 読書の意義と効用について理解を深め、読書経験を重ねることができる。	故事成語や慣用句の意味を理解することができる。 比喩、押韻、季語の効果を理解し、例文を作ることができる。 絵を並べ替えて、起伏を意識して物語を書くことができる。 キャラクターマップやストーリーマップを用い、構成や展開を意識して物語を書くことができる。 着眼点、構成、文体、語句などを意識して、エッセイを書くことができる。 読書の意義と効用について理解し、読書経験ができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	■科目ガイダンス ・科目の目的、内容、評価方法について理解する。 レポート（探究型小論文） ・国語表現ⅡAで作成した構成ノートを見直す。	ポートフォリオ 講義と質疑 プリント配布	復習：配布プリントを再読し、学習教育目標や行動目標を確認する。	30
2 ／	レポート（探究型小論文） ・レポートを清書する。	小テスト① レポート提出 講義と質疑 プリント配布 グループワーク	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
3 ／	レトリック ・比喩の種類と効果について理解する。 ・押韻や類音の仕組みと効果について理解する。 ・自分の好きな歌の歌詞を挙げ、どのような技法が用いられているかを説明する。	小テスト② ポートフォリオ 講義と質疑 プリント配布 グループワーク 小テスト①返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
4 ／	アクロスティック・アナグラム ・言葉遊びの体験を通して、言語表現の多様な側面を理解し、その楽しさを知る。	小テスト③ 講義と質疑 プリント配布 グループワーク 小テスト②返却	予習：小テストのための学習をする。 復習：教科書・ノートを見直す。	30
5 ／	短歌と俳句 ・短歌、俳句という伝統的な文芸ジャンルについて理解を深め、実際に創作する。	ポートフォリオ 講義と質疑 プリント配布 グループワーク 小テスト③返却	予習：教科書・ノートを見直す。 復習：相互評価を見直す。	30
6 ／	絵から物語を作る ・発端、展開、クライマックス、結末の展開を意識して、4枚の絵から短い物語を作る。	小テスト④ レポート提出 講義と質疑 プリント配布 グループワーク	予習：小テストのための学習をする。 復習：作品を仕上げる。	30
7 ／	物語の鑑賞と批評 ・作品を朗読し、感想を伝え合う。 ・物語を面白くするためにどのような工夫がいるか、話し合う。	講義と質疑 プリント配布 グループワーク	予習：作品を読み直す。 復習：相互評価を見直す。	30
8 ／	五感を用いた描写文 ・比喩やオノマトペを用いて描写文を書く。	小テスト⑤ レポート提出 講義と質疑 プリント配布 グループワーク 小テスト④返却	予習：物語のテーマを決める。 復習：ノート・教科書を見直す。	30
9 ／	物語の設計図 ・ストーリーマップとキャラクターマップを利用して物語の設計図を作る。	レポート提出 講義と質疑 プリント配布 グループワーク 小テスト⑤返却	予習：ストーリーマップを読み直す。 復習：作品を仕上げる。	30
10 ／	物語の創作 ・設計図に沿って物語を書く。	小テスト⑥ 講義と質疑 プリント配布 グループワーク	予習：作品を添削する。 復習：　作品を仕上げる。	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	物語の鑑賞と批評 ・作品を朗読し、感想を伝え合う。	レポート提出 講義と質疑 プリント配布 グループワーク 小テスト⑥返却	予習： 作品を読み直す。 復習：相互評価を見直す。	30
12 ／	ビブリオバトル ・発表内容の主題を決め、構成や展開を考える。	小テスト⑦ 講義と質疑 プリント配布 グループワーク	予習：小テストのための学習をする。 復習：構成ノートを見直す。	30
13 ／	ビブリオバトル ・身ぶりや手ぶりや表情なども活用し、本の魅力を表現する。 ・発表を聞いて質問したり、感想を伝えたりする。	成果発表 講義と質疑 プリント配布 グループワーク 小テスト⑦返却	予習：発表の練習をする。 復習：相互評価を見直す。	30
14 ／	エッセイ ・優れたエッセイを観賞し、視点や描写の面白さを味わう。 ・書き出しや結びの工夫、レトリックの活用に挑戦して、実際にエッセイを書く。	レポート提出 講義と質疑 プリント配布 グループワーク	予習：エッセイのテーマを決める。 復習：エッセイを仕上げる。	30
15 ／	エッセイ ・作品を読み合い、相互評価する。 ・ふりかえりをする。	 講義と質疑 プリント配布 グループワーク	予習：エッセイを見直す。 復習：相互評価を見直す。	30
16 ／				
17 ／				
18 ／				
19 ／				
20 ／				

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Expression II B	1	620800	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	TAYLOR, James	Hakusanroku C: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Writing	Students will come to prepared to speak and write in English. To progress in the class students will complete and submit tasks on time. Peer review and feedback are important parts of the writing process, so students will use every opportunity to communicate with classmates, respect others' ideas and opinions. It is crucial to ask classmates or the teacher for help when necessary.
2	Essays	
3	Genres	
4	Journal	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. Students will consider what they learnt in English Expression I A, I B, and II A and will expand on their knowledge by continuing to learn about and practice the writing process, including planning and peer review, to write essays. Through the writing process and targeted language activities, students will gain the skills to describe their ideas logically in written English. Short writing tasks will be completed on a weekly basis for homework to give students further opportunities to practice expressing themselves. Students will learn and practice the skills and language to achieve high scores on academic writing tasks

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate in written English.
Desire to improve writing skills through responding appropriately to receiving feedback and constructive criticism.
Work ethic to revise, edit, and rewrite drafts of an essay.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b, f	Students will be able to develop sentences and paragraphs in response to issues and themes raised in class.
②	e	Students will be able to draw on cultural knowledge and personal experience to express themselves.
③	d, f, g	Students will be able to use planning techniques and peer review to develop their and others' work.
④	e, f	Students will be able to achieve clarity of thought by identifying the features of various genres of writing.
⑤	f, g	Students will be able to use rhetorical appeals to express thoughts and opinions and to persuade others.
⑥	e, f, i	Students will be able to investigate and discuss authors' intentions and meanings in various examples.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	80	0	20	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	5	0	0	25
	Ability to think, reason and create	0	0	20	0	5	0	0	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	20	0	5	0	0	25
	Attitude and motivation for learning	0	0	20	0	5	0	0	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Students will write 2 different genres of essay, which will be graded according on Process (25), Task Achievement (25), Cohesion (25), Coherence (25). Essays will be submitted online. Feedback will be given online before the following lesson. Students will complete Academic Writing Task 1 and Task 2 at least twice each. These will be graded on Task Achievement (9), Coherence & Cohesion (9), Lexical Resource (9), Grammar (9). Feedback will be given online and in writing at the start of the following lesson.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students will write a journal of at least 200 words on an assigned topic for homework after each of the first 14 lessons. The journals will be submitted online. Students will receive credit for journals of sufficient length submitted on time. Each journal is worth 10 points. Feedback will be given online before the following lesson.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students improve their writing drastically, go through the writing process, respond appropriately to feedback, and produce essays of various genres that are logically structured, well argued, and supported by evidence from reliable sources. Students complete and submit all work on time. Students achieve high scores on academic writing tasks.	Students improve their writing to some extent, go through the writing process, respond to some feedback, and produce essays of various genres that are for the most part logically structured, well argued, and supported by evidence from reliable sources. Students achieve reasonable scores on academic writing tasks.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: Students will read the syllabus. Academic Writing Task 1: Students will review the features and structures of effective Task 1 answers.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
2 /	Academic Writing Task 1: Students will review the features and structures of effective Task 1 answers.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
3 /	Academic Writing Task 1: Students will attempt Task 1 under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
4 /	Academic Writing Task 2: Students will review the features and structures of effective Task 2 answers.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
5 /	Academic Writing Task 2: Students will attempt Task 2 under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
6 /	Problem-Solution Essay 1: Students will review the features and structures of a problem-solution paragraph, review their own paragraph, then plan and write a problem-solution essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
7 /	Problem-Solution Essay 2: Students will continue writing their problem-solution essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
8 /	Problem-solution Essay 3: Students will continue writing their problem-solution essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
9 /	Problem-solution Essay 4: Students will complete and submit their problem-solution essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
10 /	Academic Writing Tasks 1 and 2: Students will review Tasks 1 and 2, and will attempt the tasks under exam conditions.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Persuasive Essay 1: Students will review the features and structures of a persuasive paragraph, review their own paragraph, then plan and write a persuasive essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
12 /	Persuasive Essay 2: Students will continue writing their persuasive essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
13 /	Persuasive Essay 3: Students will continue writing their persuasive essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
14 /	Persuasive Essay 4: Students will complete and submit their persuasive essay.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work	Journal	30
15 /	Review: Students will review what was learnt in this course, reflect on their performance, and consider their future English writing studies.	Worksheets, writing, brainstorming, discussion, peer review; individual, pair, and group work		

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	日本語ⅡA Japanese IIA	2	622200	前学期 1st semester	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
2年	筒井　昌子 TSUSUI, Masako	白山麓C 101.201		

授 業 科 目 の 学 習 教 育 目 標

	キーワード	学習教育目標
1	日本語	この科目では、先学期開講した「日本語ＩB」から継続して、日常の日本語でのコミュニケーション能力と文法表現・文字・語彙知識を向上させることをめざす。 Continuing from the Japanese IB class in the previous semester, students will aim to improve their daily communication proficiency while developing their knowledge in grammar expressions, kanji and vocabulary.
2	コミュニケーションスキル	
3	日本文化・社会	
4		
5		

授業の概要および学習上の助言

【授業概要】

この科目では、初中級の教材およびワークブックを用いて、コミュニケーション上で実践的に使える表現や漢字と語彙の知識を増やす学習を行う。

Using an beginner-intermediate level textbook and its workbooks students will engage in the work to increase their knowledge and practical skills in grammar expressions, kanji and grammar.

【学習上の助言】

・学習目標を常に意識すること。

・わからない言葉は辞書で調べること。

- Always be aware of your learning goals.

- Look up unfamiliar words in a dictionary.

※この授業ではアクティブラーニングの一環として、調査学習、体験学習、グループワークなどを行う。

* This class will include research, experiential learning, and group work as part of active learning.

【教科書および参考書・リザーブドブック】

教科書：「NIHONGO Fun & Easy」 ask

　　「漢字たまご 初中級」　凡人社

参考書：

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

日本語初級程度以上の語彙・文法知・漢字の知識と実際に使える技能

Knowledge and practical skill of beginning ~semi-intermediate level of kanji, vocabulary, grammar.

№	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	e,i	テキストで学んだ文型や語彙が用いられた日本語表現を聞いたり読んだりして、意味を理解できる。 Student will be able to listen to and read Japanese expressions in which sentence patterns and vocabulary learned are used and understand their meanings.
②	e,f,i	テキストで学んだ文型や語彙を用いながら話したり書いたりして、自分の意志を伝えることができる。 Student will be able to communicate his/her intentions by speaking and writing while using the sentence patterns and vocabulary learned.
③	e,i	スピーチレベル（丁寧体と普通体）の違いを理解し、使い分けができる。 Student will understand the difference between conversational levels (polite and casual) and be able to distinguish between the two and use them.
④	e,g,i	学習した漢字や言葉をもとに、必要な情報を収集することができる。 Student will be able to collect necessary information based on learned Kanji characters and words.
⑤	e,f,i	学習した漢字を使って、自己表現ができる。 Student will be able to express him/her self using the kanji they have learned.
⑥	e,g,i	自然な談話が展開できる。 Student will be able to have conversations flow naturally.

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	80	0	20	0	0	0	100
総合力指標	知識を取り込む力	0	65	0	2	0	0	0	67
	思考・推論・創造する力	0	10	0	3	0	0	0	13
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	5	0	5	0	0	0	10
	学習に取組む姿勢・意欲	0	0	0	10	0	0	0	10

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	✓	**クイズ・テスト**　Quizzes/Test
	②	✓	・漢字・　評価割合　40%
	③	✓	- Kanji　(40/100)
	④	✓	・語彙、表現等の筆記テスト　評価割合　40%
	⑤	✓	- A written test including such like new vocabulary, conversational sentences learned.　(40/100)
	⑥	✓	※1課ごとのクイズを行う。 * Quizzes will be given every chapter.
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		**口頭**　Oral
	②	✓	・各課のロールプレイ　評価割合　20%
	③	✓	-RP　(20/100)
	④		
	⑤		※評価内容は事前にルーブリックを提示する。
	⑥		* A rubric will be presented in advance of the evaluation content.
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・助詞を正しく使って、学習した文型で文を産出できる。 ・自分が言いたいことを、学習した文型や語彙を用いて、いくつかの単文で表現できる。 -Can produce sentences using the learned sentence patterns with correct use of particles. -Can express what he/she wants to say in several single sentences using the learned sentence patterns and vocabulary.	・時折、助詞の間違いなどはあるが、意味が通じる程度の正確さで学習した文型を産出できる。 ・自分が言いたいことを、ネイティブスピーカーに文型や語彙を助けてもらいながら、いくつかの単文で表現できる。 -Can produce the learned sentence patterns with enough accuracy to make sense, despite occasional errors with particles. -Able to express what they want to say in a few single sentences with the help of native speakers in terms of sentence structure and vocabulary.

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	Class Orientation Review on the previous studies	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
2 ／	Lesson 1 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
3 ／	Lesson2 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
4 ／	Lesson3 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
5 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
6 ／	**Vocabulary Quiz L1,2,3** Lesson 4 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
7 ／	**Grammar Quiz L1,2,3** Lesson 5 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	15
8 ／	Lesson 6 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
9 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
10 ／	**Vocabulary Quiz L4,5,6** Lesson 7 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
11 ／	**Grammar Quiz L4,5,6** Lesson 8 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
12 ／	Lesson 9 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
13 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
14 ／	Shodo	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
15 ／	**Vocabulary Quiz L7,8,9** Lesson 10 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
16 ／	**Grammar Quiz L7,8,9** Lesson 11 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
17 ／	Lesson 12 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
18 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
19 ／	**Vocabulary Quiz L10,11,12** Lesson 13 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
20 ／	**Grammar Quiz L10,11,12** Lesson 14 Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
21 ／	Lesson 15 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
22 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
23 ／	Lesson 16 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents	30
24 ／	Lesson 17 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course content	30
25 ／	Review 18 Kanji	講義・演習 Lecture・Practice	授業内容の復習 Review the course content クイズの準備 Prepare for quiz	30
26 ／	**Vocabulary Quiz L13,14,15** Review Kanji	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course content クイズの準備 Prepare for quiz	30
27 ／	**Grammar Quiz L13,14,15** Review Essay	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents	30
28 ／	Review	講義・演習 Lecture・Practice	授業内容の復習 Review the course content クイズの準備 Prepare for quiz	30
29 ／	**Vocabulary Quiz L16,17,18** Review	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	授業内容の復習 Review the course contents クイズの準備 Prepare for quiz	30
30 ／	**Grammar Quiz L16,17,18** Reflection & Self Evaluation	講義・演習 Lecture・Practice クイズ実施・採点・返却 Quiz, Grading & Return	*** Deadline for submitting a essay**	なし

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing II A (Writing Strategies)	1	622300	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	BAIRD, Pauline	Hakusanroku C 101.201		M-W 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	The reading and writing class is designed to help students become more efficient and effective in reading textbooks, required materials, and books. They will be able to improve vocabulary, comprehension, rate, and more reading skills. In the writing class, students will exercise advanced literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	TOEFL	

Course Description and Expectations for Students (10.5pt)

This course will offer collaboration, discovery, and experiential learning as types of active learning. This course is divided into 2 sections: Reading Strategies and Writing Strategies.

(Writing Strategies)
Mini-workshops, Journaling, Exercises, Note-taking
You need to submit all assignments on their due dates. They will be returned to you the next week.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: *Skills for Academic Success: Reading Choice.* 978-8214-17725-0
SRA Reading Laboratory 2a ad 2b by McGraw-Hill

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% Final exam (academic English proficiency test) includes TOEIC, EIKEN, and TOEFL style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	30%: (Reading) Each quiz will be given after each reading skill. (Writing) Final essays and personal projects. 10%: In-class Intensive writing (150-250 words) Journals will be graded and returned in class the following week 15%: Speed reading 10%: Vocabulary quiz (KIKUTAN) in Learning Session
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	(Reading) Complete the handouts and submit in time. The class handouts will be returned in class after a quiz. 25 % (Writing) Complete all notes, journals, exercises, and drafts. Submit them in class on the due date. All essays without a passing score must be rewritten after class (by appointment). All graded assignments will be available in class or online the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	**Syllabus** **Course Introduction** Focus: Writing Expectations Skills: Understanding the prompt, word count, timing Journal 1: Personal writing goals and past writing experiences	Activity: Analyze sample writing (IELTS Band 4.5 vs 5.0 essays	Read the syllabus Writing Journal + Daily SRA	20
2 /	**Sentence Structure for Task 2** Focus: Simple and compound sentences Skills: Avoiding fragments and run-ons Practice: Sentence combining Quiz 1: Sentence structure & basic grammar Journal 2: Challenges with English sentences	Practice: Sentence combining	Read the syllabus Writing Journal + Daily SRA	30
3 /	**Paragraph Basics (MEAL / TEEL Framework)** Focus: Topic sentence + example + explanation Skills: One clear idea per paragraph Journal 3: Reflect on paragraph writing	Practice: Writing one body paragraph	Writing Journal + Daily SRA	30
4 /	**Opinion Essay Questions** Focus: "Do you agree or disagree?" Skills: Stating a clear opinion Writing Task: Body paragraph 1 (guided) Quiz 2: Identifying question types	Writing Task: Body paragraph 1 (guided)	Writing Journal + Daily SRA	30
5 /	**Introduction Writing** Focus: Paraphrasing the question, thesis statement Skills: Simple paraphrasing strategies Writing Task: Full introduction Journal 4: What makes an introduction clear?	Workshop Exercise	Writing Journal + Daily SRA	30
6 /	**Developing Examples** Focus: Personal and general examples Skills: Explaining examples clearly Writing Task: Body paragraph with example **Journal 5**: Using examples in writing	Workshop Exercise	Writing Journal + Daily SRA	30
7 /	**Cohesion & Basic Linking Words** Focus: because, however, for example, therefore Skills: Logical flow between sentences Practice: Paragraph cohesion exercises Quiz 3: Linking words and cohesion	Practice: Paragraph cohesion exercises	Writing Journal + Daily SRA	30
8 /	**Discussion Essay Questions** Focus: "Discuss both views and give your opinion" Skills: Balanced structure Writing Task: Two body paragraph outlines Journal 6: Comparing two ideas in writing	Workshop Exercise	Writing Journal + Daily SRA	30
9 /	**Problem–Solution Essays** Focus: Identifying causes and solutions Skills: Clear problem explanation Writing Task: Body paragraph (problem) **Journal 7**: Writing about real-world problems	Workshop Exercise	Writing Journal + Daily SRA	30
10 /	**Conclusion Writing** Focus: Summarizing ideas, restating opinion Skills: Avoiding new ideas Writing Task: Write a full conclusion Quiz 4: Essay structure and parts	Workshop Exercise	Writing Journal + Daily SRA	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	**Grammar for Clarity (Band 5 Focus)** Focus: Verb tense consistency, subject–verb agreement Skills: Error awareness, self-editing Practice: Editing short paragraphs Journal 8: Common grammar mistakes I make	Workshop Exercise	Writing Journal + Daily SRA	30
12 /	**Full Essay Practice (Untimed)** Focus: Planning → writing → checking Writing Task: Full Task 2 essay (homework) Peer Review: Checklist-based feedback **Journal 9**: What I improved in this essay	Conference & peer review	Writing Journal + Daily SRA	30
13 /	**Timed Writing Practice** Focus: 40-minute IELTS conditions Writing Task: Timed Task 2 essay Teacher & Peer Feedback: Task response & clarity	Peer review	Writing Journal + Daily SRA	30
14 /	**Review & Exam Strategies** Focus: Planning quickly, avoiding common Band 5 problems Practice: Essay planning drills **Journal 10**: Strategies I will use in the exam	Workshop Exercise	Writing Journal + Daily SRA	30
15 /	**Final Assessment** **Final Timed IELTS Task 2 Essay** Course Reflection Discussion	Review & evaluate your progress	Writing Journal + Daily SRA	30
16 /	Final Exam	Review & evaluate your progress	Review the final exam	30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing II A (Advanced)	1	622300	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	REYNOLDS, Stephanie	Hakusanroku C 101.201		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	The reading class is designed to help students become more efficient and effective in reading textbooks, required materials, and books. They will be able to improve vocabulary, comprehension, rate, and reading skills. In the writing class, students will exercise advanced literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer group work, discussion, and reflection in class as a type of active learning. It will be divided into 5 sections; Reading Strategy, Grammar, Vocabulary, Extensive Reading, and Writing,

(Reading Strategy) In-class activities and exercises to practice academic reading skills.
(Grammar) In-class activities and exercises to practice sentence structure and word forms for academic writing.
(Vocabulary) Study sets, practice, and regular quizzes to measure growth of vocabulary understanding.
(Extensive Reading) Sustained silent-reading of 1 or more self-selected books at an independent reading level recorded in a reading log.
(Writing) In-class activities and exercises to practice grammar and organization of 4 types of paragraphs/essays.

You need to keep all your assignments and handouts in a folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books: Reflect: Reading & Writing 5 9780357448588 or Reflect: Reading & Writing 6 9780357448595
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
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③	i	(R) Students will be able to improve speed reading.
④	f, g, i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f, g, i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description writing styles.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% Final exam (academic English proficiency test) including TOEIC, EIKEN, and IELTS style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	30% : (Reading Strategy) In-class assignments focusing on reading skills and word forms 10% (Grammar) In-class assignments focusing on grammar and sentence structure. 15% : (Vocabulary) 5 quizzes will be given in classes 1, 3,7, 11, 15. 10% : (Extensive Reading Log) Students will read self-selected books/articles for homework 30 minutes each week for a total of 8 hours over 15 weeks. Feedback and graded assignments will be returned in class and/or online in the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: Students will write 4 original, distinct writing tasks, which will be graded according to the following criteria: Writing Process, Task Achievement, Cohesion and Coherence, Vocabulary, Grammar, Format. Students will submit drafts in class and typed assignments online, before the next class period. Verbal and written feedback will be given in writing conferences with the teacher during the following class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: Students will read the syllabus. Reading: Unit 1 Reading 1 Writing: Grammar Quiz 1	Individual and group exercises. Discussion	Read the syllabus. Complete unfinished assignments Extensive Reading Log	30
2 /	Reading: Unit 1 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
3 /	Reading: Quiz 2 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
4 /	Reading: Extensive Reading Writing: Feedback and Revision	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
5 /	Reading: Unit 2 Reading 1 Writing: Grammar	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
6 /	Reading: Unit 2 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
7 /	Reading: Quiz 3 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
8 /	Reading: Extensive Reading Writing: Feedback and Revision	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
9 /	Reading: Unit 3 Reading 1 Writing: Grammar	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
10 /	Reading: Unit 3 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Reading: Quiz 4 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
12 /	Reading: Extensive Reading Writing: Feedback and Revision, Grammar	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
13 /	Reading: Unit 4 Reading 1 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
14 /	Reading: Unit 4 Reading 2 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
15 /	Reading: Quiz 5 Writing: Feedback and revision	Discussion and peer conferencing. Review and evaluate your progress and understanding.		30
16 /	Final Exam	Review and evaluate your progress and understanding.	Review the final exam.	
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing II A (Reading Strategy)	1	622300	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	TSUDA, Akihiro	Hakusanroku C: 101. 201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	The reading class is designed to help students become more efficient and effective in reading textbooks, required materials, and books. They will be able to improve vocabulary, comprehension, rate, and more reading skills. In the writing class, students will exercise advanced literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer pair-work in class as a type of active learning.

This course is divided into 2 sections; Reading Strategy and Writing.

(Reading Strategy)
Lecture, exercise
You need to submit all the handouts after a quiz.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: キクタン Advanced 6000,（アルク社）9784757422070「英語 速読×速解テスト ActiveReader Upper-Intermediate」（いいずな書店）978-4-86460-798-8
Reserved books: *Reading Power 2* ISBN: 9780138143886 / *Reading Power 3* ISBN: 9780132089036

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions. Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% : Final exam (academic English proficiency test) includes TOEIC, EIKEN, and IELTS style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	30% : (Reading) Each quiz will be given after each reading skill. (Writing) A final draft of three (3) essays with your highest passing scores. 10% : Speed reading homework (Online) 15% : Vocabulary quiz (KIKUTAN) Based on the results, the quiz can be taken again. The results will be returned in the following week. 10%: In-class Critical Thinking Journals (150-250 words) Journals will be graded and returned in class the following week
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: (Reading) Complete the handouts and submit in time. The class handouts will be returned in class after a quiz. (Writing) Complete all exercises and drafts. Submit them in class on the due date. Assignments will be returned in class the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Vocabulary Quiz	Lecture Exercise	Read the syllabus Study vocabulary	20
2 /	Scanning	Lecture Exercise	Speed Reading L1-2 Review reading skills	30
3 /	Scanning	Lecture Exercise	Speed Reading L1-2 Review reading skills	30
4 /	Collocations	Lecture Exercise	Speed Reading L3-4 Review reading skills	30
5 /	Collocations Focusing on the Topic	Lecture Exercise	Speed Reading L5-6 Review reading skills	30
6 /	Focusing on the Topic	Lecture Exercise	Speed Reading L7-8 Review reading skills	30
7 /	Focusing on the Topic	Lecture Exercise	Speed Reading L7-8 Review reading skills	30
8 /	Understanding Paragraphs	Lecture Exercise	Speed Reading L9-10 Review reading skills	30
9 /	Understanding Paragraphs	Lecture Exercise	Speed Reading L11-12 Review reading skills	30
10 /	Understanding Paragraphs	Lecture Exercise	Speed Reading L13-14 Review reading skills	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Understanding Paragraphs	Lecture Exercise	Speed Reading L13-14 Review reading skills	30
12 /	IELTS Strategies	Lecture Exercise	Speed Reading L17-18 Review reading skills	30
13 /	IELTS Strategies	Lecture Exercise	Speed Reading L19-20 Review reading skills	30
14 /	IELTS Strategies	Lecture Exercise	Speed Reading L21-22 Review reading skills	30
15 /	IELTS Strategies	Lecture Exercise	Speed Reading L21-22 Review reading skills	30
16 /	Final Exam	Review and evaluate your progress and understanding	Review the final exam	30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking II A (Basic)	1	622400	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	STEVENSON, Ian	Hakusanroku C. 101-201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about things they like/dislike and their hobbies; describe people, things, events, and places using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group work and discussion, problem solving, discovery and experiential learning as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for students to be able exercise literacy skills including, speaking and listening and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the first 3 units of a textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 4: National Geographic Learning by (Eds). Amanda Jefferies, Lewis Lansford, Daniel Barber, (National Geographic Learning) 2018.* ISBN: 978-1-337-27715-0.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to set goals, make agree and disagree statements, and ask questions.
⑤	g, f, i	Students will be able to discuss past events and ask for, and make recommendations.
⑥	d, f	Students will be able to discuss time, explain causes, and give reasons.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Progress Quizzes in lessons 7 and 13. Quizzes will use TOEFL-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Students will do grammar, listening, speaking and vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be presentation activities in each unit. These activities will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will collaborate effectively to complete projects on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will collaborate to complete projects to a reasonable standard. Students will respond to most feedback and will occasionally seek help.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introductions: Teacher, Syllabus, Classroom tools and expectations. Textbook Units 1, 2 & 3	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Review the syllabus.	30
2 /	Textbook Units 1, 2 & 3	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
3 /	Textbook Units 1, 2 & 3	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
4 /	Textbook Units 1, 2 & 3	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
5 /	Textbook Units 1, 2 & 3	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
6 /	Presentation 1	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Textbook Units 4, 5 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
9 /	Textbook Units 4, 5 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
10 /	Textbook Units 4, 5 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Textbook Units 4, 5 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
12 /	Textbook Units 4, 5 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
13 /	Progress Quiz 2	Test questions.	Review the test questions.	30
14 /	Presentation 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
15 /	Wrap Up and Review	End of course questionnaire; self-assessment activities.		

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking II A (Low)	1	622400	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	BARNETSON, Hamish	Hakusanroku C. 101-201		Tuesday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about things they like/dislike and their hobbies; describe people, things, events, and places using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the first 3 units of a textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 4: National Geographic Learning by (Eds). Amanda Jefferies, Lewis Lansford, Daniel Barber, (National Geographic Learning) 2018.* ISBN: 978-1-337-27715-0.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Low/lower-intermediate English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to set goals, make agree and disagree statements, and ask questions.
⑤	g, f, i	Students will be able to discuss past events and ask for, and make recommendations.
⑥	d, f	Students will be able to discuss time, explain causes, and give reasons.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Progress Quizzes in lessons 7 and 13. Quizzes will use IELTS-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Students will do grammar/vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson in class. Each unit will contain a listening activity. This will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be at least one speaking activity in each unit. Speaking activities will be graded and returned with feedback by the following lesson in class. Students will complete a spoken reflection exercise at the end of each unit. Reflections will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Unit 1: Hopes and Dreams Grammar/Vocabulary	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Review the syllabus.	30
2 /	Unit 1: Hopes and Dreams Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
3 /	Unit 1: Hopes and Dreams Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
4 /	Unit 1: Hopes and Dreams Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
5 /	Unit 2: Reading the World Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
6 /	Unit 2: Reading the World Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Unit 2: Reading the World Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
9 /	Unit 2: Reading the World Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
10 /	Unit 3: Pristine Places Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 3: Pristine Places Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
12 /	Unit 3: Pristine Places Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
13 /	Progress Quiz 2	Test questions.	Review the test questions.	30
14 /	Unit 3: Pristine Places Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
15 /	Review & Catch-up	End of course questionnaire; self-assessment activities.		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking II A (Advanced)	1	622400	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	TAYLOR, James	Hakusanroku C. 101-201		Monday 16:30-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about things they like/dislike and their hobbies; describe people, things, events, and places using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the first 3 units of a textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 4: National Geographic Learning by (Eds). Amanda Jefferies, Lewis Lansford, Daniel Barber, (National Geographic Learning) 2018.* ISBN: 978-1-337-27715-0.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Advanced English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to set goals, make agree and disagree statements, and ask questions.
⑤	g, f, i	Students will be able to discuss past events and ask for, and make recommendations.
⑥	d, f	Students will be able to discuss time, explain causes, and give reasons.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There will be Progress Quizzes in lessons 7 and 13. Quizzes will use TOEFL-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	In each unit, students will do grammar/vocabulary activities followed by a quiz to check their understanding, which will be graded and returned with feedback by the following lesson in class. Each unit will contain at least one listening activity. These will be graded and returned with feedback by the following lesson in class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	There will be at least one speaking activity in each unit. Speaking activities will be graded and returned with feedback by the following lesson in class. Students will complete a spoken reflection exercise at the end of each unit. Reflections will be graded and returned with feedback by the following lesson in class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Unit 1: Hopes and Dreams Grammar/Vocabulary	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Review the syllabus.	30
2 /	Unit 1: Hopes and Dreams Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
3 /	Unit 1: Hopes and Dreams Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
4 /	Unit 1: Hopes and Dreams Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
5 /	Unit 2: Reading the World Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
6 /	Unit 2: Reading the World Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Unit 2: Reading the World Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
9 /	Unit 2: Reading the World Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
10 /	Unit 3: Pristine Places Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 3: Pristine Places Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
12 /	Unit 3: Pristine Places Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
13 /	Progress Quiz 2	Test questions.	Review the test questions.	30
14 /	Unit 3: Pristine Places Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
15 /	Review	End of course questionnaire; self-assessment activities.		

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	日本語ⅡB Japanese IIB	2	622500	後学期 2nd semester	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
2年	筒井　昌子 TSUSUI, Masako	白山麓C 101.201		

授 業 科 目 の 学 習 教 育 目 標

	キーワード	学習教育目標
1	日本語	この科目では、伝わる日本語を身につけるために知識をさらに増やす。 In this course, students will further increase their knowledge in order to acquire Japanese language skills that can be communicated.
2	コミュニケーションスキル	
3	日本文化・社会	
4		
5		

授業の概要および学習上の助言

【授業概要】

この科目では、中級教材およびワークブックを用いて、コミュニケーション上で実践的に使える表現や漢字と語彙の知識を増やす学習を行う。

Using an intermediate level textbook and its workbooks students will engage in the work to increase their knowledge and practical skills in grammar expressions, kanji and grammar.

【学習上の助言】

・学習目標を常に意識すること。

・わからない言葉は辞書で調べること。

- Always be aware of your learning goals.

- Look up unfamiliar words in a dictionary.

※この授業ではアクティブラーニングの一環として、調査学習、体験学習、グループワークなどを行う。

* This class will include research, experiential learning, and group work as part of active learning.

【教科書および参考書・リザーブドブック】

教科書：授業開始後に学習者のレベルと習得目標に合わせて決定する。

参考書：

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

日本語初中級程度以上の漢字・語彙・文法知識および実際に使える技能

Knowledge and practical skill of beginning ~semi-intermediate level of kanji, vocabulary, grammar.

№	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	e,i	テキストで学んだ文型や語彙が用いられた日本語表現を聞いたり読んだりして、意味を理解できる。 Student will be able to listen to and read Japanese expressions in which sentence patterns and vocabulary learned are used and understand their meanings.
②	e,f,i	テキストで学んだ文型や語彙を用いながら話したり書いたりして、自分の意志を伝えることができる。 Student will be able to communicate his/her intentions by speaking and writing while using the sentence patterns and vocabulary learned.
③	e,i	スピーチレベル（丁寧体と普通体）の違いを理解し、使い分けができる。 Student will understand the difference between conversational levels (polite and casual) and be able to distinguish between the two and use them.
④	e,g,i	学習した漢字や言葉をもとに、必要な情報を収集することができる。 Student will be able to collect necessary information based on learned Kanji characters and words.
⑤	e,f,i	学習した漢字を使って、自己表現ができる。 Student will be able to express him/her self using the kanji they have learned.
⑥	e,g,i	まとまりのある長さの文章を読んで理解できる。 Student will be able to read and comprehend sentences of coherent length.

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	80	0	0	0	20	0	100
総合力指標	知識を取り込む力	0	60	0	0	0	2	0	62
	思考・推論・創造する力	0	10	0	0	0	3	0	13
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	10	0	0	0	5	0	10
	学習に取組む姿勢・意欲	0	0	0	0	0	10	0	10

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	✓	**クイズ・テスト**　Quizzes/Test
	②	✓	・文字（漢字を含む）・語彙　評価割合　40% - Letters (include Kanji), vocabulary　(40/100)
	③	✓	・学習した語彙、文型、会話文、作文等を含む筆記テスト　評価割合　40%
	④	✓	- A written test will be given, including new vocabulary, sentence patterns, and conversational sentences learned.　(40/100)
	⑤	✓	
	⑥	✓	※1課または数課ごとにクイズを行う。回数や実施日は学習進度によって変わるため学生と相談の上決定する。 * Quizzes will be given every 1chapter or few chapters. The number of quizzes and dates will depend on the progress of the students and will be decided in consultation with the students.
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		**プロジェクト**　Project
	②	✓	・日本語能力の向上を目的とした活動を企画・実施する。　評価割合　20% - Plan and implement activities aimed at improving Japanese language skills.　(20/100)
	③	✓	
	④		※実際の日本語の上達度合いや成果物だけではなく、活動のプロセスも評価する。
	⑤	✓	* The process of the activity will be evaluated, not only the actual level of progress in Japanese or the deliverables.
	⑥		※評価内容は事前にルーブリックを提示する。 * A rubric will be presented in advance of the evaluation content.
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・助詞を正しく使って、学習した文型で文を産出できる。 ・自分が言いたいことを、学習した文型や語彙を用いて、いくつかの単文で表現できる。 ・辞書を使いながらまとまった長さの文章をひとりで読んで、大意を正しく理解できる。 -Can produce sentences using the learned sentence patterns with correct use of particles. -Can express what he/she wants to say in several single sentences using the learned sentence patterns and vocabulary. -Able to read sentences of a coherent length on one's own using a dictionary and correctly understand the main idea.	・時折、助詞の間違いなどはあるが、意味が通じる程度の正確さで学習した文型を産出できる。 ・自分が言いたいことを、ネイティブスピーカーに文型や語彙を助けてもらいながら、いくつかの単文で表現できる。 ・教師に助言をもらいながらまとまった長さの文章を読んで、大意をおおよそ理解できる。 -Can produce the learned sentence patterns with enough accuracy to make sense, despite occasional errors with particles. -Able to express what they want to say in a few single sentences with the help of native speakers in terms of sentence structure and vocabulary. -With the help of a teacher, be able to read sentences of a coherent length and understand the main idea.

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	Class Orientation Review on the previous studies Q&A Conversation Explanation of Presentation Planning for the class schedule	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画書の仕上げと確認 Finalizing and confirming the study plan	30
2 ／	Textbook (Follow own study plan) or Prepare for the presentation	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
3 ／	Textbook (Follow own study plan) or Prepare for the presentation	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
4 ／	Textbook (Follow own study plan) or Prepare for the presentation	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan 発表の準備 Prepare for the presentation (not yet fixed)	30
5 ／	Textbook (Follow own study plan) Presentation (not yet fixed)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
6 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan クイズの準備 Prepare for the quiz	30
7 ／	Textbook (Follow own study plan) Quiz (not fixed)	講義・演習 Lecture・Practice クイズの採点・返却 Grading and return of quizzes	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
8 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
9 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
10 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan クイズの準備 Prepare for the quiz	30
11 ／	Textbook (Follow own study plan) Quiz (not fixed)	講義・演習 Lecture・Practice クイズの採点・返却 Grading and return of quiz	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
12 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
13 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30

授業明細表

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※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
14 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
15 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan テストの準備 Prepare for the test	30
16 ／	Textbook (Follow own study plan) Test (not fixed)	講義・演習 Lecture・Practice テストの採点・返却 Grading and return of test	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
17 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
18 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
19 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
20 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan クイズの準備 Prepare for the quiz	30
21 ／	Textbook (Follow own study plan) Quiz (not fixed)	講義・演習 Lecture・Practice クイズの採点・返却 Grading and return of quizzes	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
22 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
23 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
24 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
25 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan クイズの準備 Prepare for the quiz	30
26 ／	Textbook (Follow own study plan) Quiz (not fixed)	講義・演習 Lecture・Practice クイズの採点・返却 Grading and return of quizzes	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30
27 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
28 ／	Textbook (Follow own study plan)	講義・演習 Lecture・Practice	授業内容の復習 Review the course contents 学習計画の見直し Review of study plan テストの準備 Prepare for the test	30
29 ／	Textbook (Follow own study plan) Finalize the report (not fixed yet) Test (not fixed)	講義・演習 Lecture・Practice テストの採点・返却 Grading and return of test	授業内容の復習 Review the course contents レポートの完成 Finalize the report	30
30 ／	Reflection & Self Evaluation	講義・演習 Lecture・Practice	* Deadline for the Report (not fixed yet)	なし

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing II B (Writing Strategies)	1	622600	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	BAIRD, Pauline	Hakusanroku C 101.201		M-W 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	The reading class is designed to help students become more efficient and effective in reading textbooks, required materials, and books. They will be able to improve vocabulary, comprehension, rate, and more reading skills. In the writing class, students will exercise advanced literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course offers discovery, investigation, and problem-solving as active learning. This course is divided into 2 sections: Reading Strategy and Writing Strategies.

(Writing Strategies)
Mini-workshops, exercises, interviews, guest lecture
You need to submit all assignments on their due dates. They will be returned to you the next week.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: None (Handouts)
Reference books: *Skills for Academic Success: Reading Choice.* 978-8214-17725-0

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% Final exam (academic English proficiency test) includes TOEIC, EIKEN, and TOEFL style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	30%: (Reading) Each quiz will be given after each reading skill. (Writing) Complete unit topics and personal projects with a passing score. 10%: Speed reading homework (Manaba) 15%: Vocabulary quiz (KIKUTAN) in Learning Session 10%: Journals (150-250 words) Journals will be graded and returned in class the following week
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	(Reading) Complete the handouts and submit them in time. The class handouts will be returned in class after a quiz. 25 % (Writing) Complete all exercises and drafts. Submit them in class on the due date. Assignments will be returned in class the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus & Introduction Course Review & Academic Topics Overview Journal 1: My strengths and weaknesses in Task 2 writing	Diagnostic Test Exercise	Read the syllabus Study vocabulary +SRA	20
2 /	**Technology & Daily Life (Opinion Essay)** Quiz 1: Topic vocabulary + sentence clarity Journal 2: Technology I use every day	Workshop Exercise *Personal Project*	Review and complete assignments. +SRA	30
3 /	**Education Systems & Learning** Focus: Explaining advantages and disadvantages Journal 3: My ideal education system	Workshop Exercise	Review and complete assignments. +SRA	30
4 /	**Society & Social Change** Focus: Cause–effect structure Journal 4: A social change in my country	Conferencing and peer review	Review and complete assignments. +SRA	30
5 /	**Technology & Work** Focus: Problem–solution essays Quiz 2: Essay structures Journal 5: Technology and future jobs	*Personal Project*	Review and complete assignments. +SRA	30
6 /	**Health & Lifestyle** Focus: Developing examples clearly Journal 6: A healthy habit I want to improve	Workshop Exercise *Personal Project*	Review and complete assignments. +SRA	30
7 /	**Environment & Climate Issues** Focus: Paragraph cohesion Quiz 3: Linking words and cohesion	Workshop Exercise	Review and complete assignments. +SRA	30
8 /	**Media & Communication** Focus: Discuss both views essays Journal 7: Social media and communication	Conferencing and peer review *Personal Project*	Review and complete assignments. +SRA	30
9 /	**Culture & Traditions** Focus: Comparing ideas Journal 8: An important tradition in my culture	Workshop Exercise	Review and complete assignments. +SRA	30
10 /	**Government & Public Policy** Focus: Stating opinions carefully Quiz 4: Task response & clarity	Workshop Exercise	Review and complete assignments. +SRA	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	**Science & Innovation** Focus: Grammar accuracy (Band 5–5.5) Journal 9: A scientific invention that changed life	*Personal Project* *Prepare an essay for publication*	Review and complete assignments. +SRA	30
12 /	**Global Issues (Poverty, Migration, Equality)** Focus: Full essay drafting Peer review activity	Workshop Exercise	Review and complete assignments. +SRA	30
13 /	Timed Writing Practice (40 minutes) Focus: Planning and checking	Workshop Exercise	Review and complete assignments. +SRA	30
14 /	Publishing the Essay on Posters	*Personal Project*	Review and complete assignments. +SRA	30
15 /	Post-Instruction assessment Reflections and Course Evaluation	Conferencing and review	Review and prepare for exam	30
16 /	Final Exam	Review & evaluate your progress	Review the final exam	30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing II B Advanced	1	622600	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	REYNOLDS, Stephanie	Hakusanroku C 101.201		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	The reading class is designed to help students become more efficient and effective in reading textbooks, required materials, and books. They will be able to improve vocabulary, comprehension, rate, and reading skills. In the writing class, students will exercise advanced literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer group work, discussion, and reflection in class as a type of active learning. It will be divided into 5 sections; Reading Strategy, Grammar, Vocabulary, Extensive Reading, and Writing,

(Reading Strategy) In-class activities and exercises to practice academic reading skills.
(Grammar) In-class activities and exercises to practice sentence structure and word forms for academic writing.
(Vocabulary) Study sets, practice, and regular quizzes to measure growth of vocabulary understanding.
(Extensive Reading) Sustained silent-reading of 1 or more self-selected books at an independent reading level recorded in a reading log.
(Writing) In-class activities and exercises to practice grammar and organization of 4 types of paragraphs/essays.

You need to keep all your assignments and handouts in a folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books: Reflect: Reading & Writing 5 9780357448588 or Reflect: Reading & Writing 6 9780357448595
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions.
Students can speak and write basic sentences in English to complete homework activities, to communicate with other students and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% Final exam (academic English proficiency test) including TOEIC, EIKEN, and IELTS style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	30% : (Reading Strategy) In-class assignments focusing on reading skills and word forms 10% (Grammar) In-class assignments focusing on grammar and sentence structure. 15% : (Vocabulary) 5 quizzes will be given in classes 1, 3,7, 11, 15. 10% : (Extensive Reading Log) Students will read self-selected books/articles for homework 30 minutes each week for a total of 8 hours over 15 weeks. Feedback and graded assignments will be returned in class and/or online in the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: Students will write 4 original, distinct writing tasks, which will be graded according to the following criteria: Writing Process, Task Achievement, Cohesion and Coherence, Vocabulary, Grammar, Format. Students will submit drafts in class and typed assignments online, before the next class period. Verbal and written feedback will be given in writing conferences with the teacher during the following class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction: Students will read the syllabus. Reading: Unit 5 Reading 1 Writing: Grammar Quiz 1	Individual and group exercises. Discussion	Read the syllabus. Complete unfinished assignments Extensive Reading Log	30
2 /	Reading: Unit 5 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
3 /	Reading: Quiz 2 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
4 /	Reading: Extensive Reading Writing: Feedback and Revision	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
5 /	Reading: Unit 6 Reading 1 Writing: Grammar	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
6 /	Reading: Unit 6 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
7 /	Reading: Quiz 3 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
8 /	Reading: Extensive Reading Writing: Feedback and Revision	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
9 /	Reading: Unit 7 Reading 1 Writing: Grammar	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
10 /	Reading: Unit 7 Reading 2 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Reading: Quiz 4 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
12 /	Reading: Extensive Reading Writing: Feedback and Revision, Grammar	Individual and group exercises. Discussion and peer conferencing.	Complete unfinished assignments Extensive Reading Log	30
13 /	Reading: Unit 8 Reading 1 Writing: Analyze the Model	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
14 /	Reading: Unit 8 Reading 2 Writing: Plan and Write	Individual and group exercises. Discussion	Complete unfinished assignments Extensive Reading Log	30
15 /	Reading: Quiz 5 Writing: Feedback and revision	Discussion and peer conferencing. Review and evaluate your progress and understanding.		30
16 /	Final Exam	Review and evaluate your progress and understanding.	Review the final exam.	30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Reading and Writing II B (Reading Strategy)	1	622600	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	TSUDA, Akihiro	Hakusanroku C: 101. 201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	The reading class is designed to help students become more efficient and effective in reading textbooks, required materials, and books. They will be able to improve vocabulary, comprehension, rate, and more reading skills. In the writing class, students will exercise advanced literacy skills to organize ideas for academic writing. Students will also be able to use written organizational skills to share ideas with others using English.
2	Writing	
3	Vocabulary	
4	Grammar	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer pair-work in class as a type of active learning.

This course is divided into 2 sections; Reading Strategy and Writing.

(Reading Strategy)
Lecture, exercise
You need to submit all the handouts after a quiz.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: キクタン Advanced 6000,（アルク社）9784757422070「英語 速読×速解テスト ActiveReader Advanced（for 共通テスト）」（いいずな書店） 978-4-86460-799-5
Reserved books: *Reading Power 2* ISBN: 9780138143886 / *Reading Power 3* ISBN: 9780132089036

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to communicate about personal activities and events: work, school, daily life, and leisure. Can describe experiences and provide explanations, opinion, and plans. Can also ask questions, read simple instructions, and take directions. Students can speak and write basic sentences in English to complete homework activities, to communicate with other students, and the teacher.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	(R) Students will be able to improve academic reading skills.
②	i	(R) Students will be able to improve vocabulary knowledge.
③	i	(R) Students will be able to improve speed reading.
④	f,g,i	(W) Students will be able to make sentences, paragraphs, and essays in response to issues and themes.
⑤	f,g,i	(W) Students will be able to use comparison, narration, persuasion, process, problem solution and description.
⑥	i	(W) Students will be able to practice writing by studying samples using templates.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		10	65	25	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	55	15	0	0	0	0	80
	Ability to think, reason and create	0	10	10	0	0	0	0	20
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	10% : Final exam (academic English proficiency test) includes TOEIC, EIKEN, and IELTS style questions.
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	30% : (Reading) Each quiz will be given after each reading skill. (Writing) A final draft of three (3) essays with your highest passing scores. 10% : Speed reading homework (Online) 15% : Vocabulary quiz (KIKUTAN) Based on the results, the quiz can be taken again. The results will be returned in the following week. 10%: In-class Critical Thinking Journals (150-250 words) Journals will be graded and returned in class the following week
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	25%: (Reading) Complete the handouts and submit in time. The class handouts will be returned in class after a quiz. (Writing) Complete all exercises and drafts. Submit them in class on the due date. Assignments will be returned in class the following week.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can apply reading skills to understand academic and non-academic texts. Students can write and organize ideas logically.	Students can use reading skills to understand reading materials in and out of class. Students can express ideas based on a controlling idea.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Review (IELTS Strategies) Vocabulary Quiz	Lecture Exercise	Read the syllabus Study vocabulary	20
2 /	IELTS Training	Lecture Exercise	Speed Reading L1-2 Review reading skills	30
3 /	IELTS Training	Lecture Exercise	Speed Reading L3-4 Review reading skills	30
4 /	IELTS Training	Lecture Exercise	Speed Reading L5-6 Review reading skills	30
5 /	IELTS Training	Lecture Exercise	Speed Reading L7-8 Review reading skills	30
6 /	IELTS Training	Lecture Exercise	Speed Reading L9-10 Review reading skills	30
7 /	IELTS Training	Lecture Exercise	Speed Reading L11-12 Review reading skills	30
8 /	IELTS Training	Lecture Exercise	Speed Reading L13-14 Review reading skills	30
9 /	IELTS Training (Review)	Lecture Exercise	Speed Reading L15-16 Review reading skills	30
10 /	IELTS Training (Review)	Lecture Exercise	Speed Reading L17-18 Review reading skills	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Skimming	Lecture Exercise	Speed Reading L19-20 Review reading skills	30
12 /	Skimming	Lecture Exercise	Speed Reading L21-22 Review reading skills	30
13 /	Making Inference	Lecture Exercise	Speed Reading L23-24 Review reading skills	30
14 /	Making Inference	Lecture Exercise	Review reading skills	30
15 /	Making Inference	Lecture Exercise	Review reading skills	30
16 /	Final Exam	Review and evaluate your progress and understanding	Review the final exam	30
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking II B (Low)	1	622700	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	BARNETSON, Hamish	Hakusanroku C.: 101.201		Tuesday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about things they like/dislike, their hobbies and to describe people, things, events, and places using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group work and discussion, problem solving, discovery and experiential learning as a type of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for students to be able exercise literacy skills including, speaking and listening and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the last 5 units of the textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 4 (Advanced): National Geographic Learning* by (Eds). Lewis Lansford, Daniel Barber, Amanda Jefferies. ISBN 978-1-337-27715-0

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Advanced English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to set goals, make agree and disagree statements, and ask questions.
⑤	g, f, i	Students will be able to discuss past events and ask for, and make recommendations.
⑥	d, f	Students will be able to discuss time, explain causes, and give reasons.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Proficiency Quizzes in lessons 7 and 13. Quizzes will use IELTS-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Students will do grammar, listening, speaking and vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be presentation activities in each unit. These activities will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will collaborate effectively to complete projects on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will collaborate to complete projects to a reasonable standard. Students will respond to most feedback and will occasionally seek help.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introductions: Teacher, Syllabus, Classroom tools and expectations. Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
2 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
3 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
4 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
5 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
6 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
7 /	Progress Quiz 1	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
8 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
9 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
10 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
12 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
13 /	Progress Quiz 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
14 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30
15 /	Wrap Up and Review Focus: Reflection on semester	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Completion of unfinished classwork and preparation for quiz	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking II B (Advanced)	1	622700	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	TAYLOR, James	Hakusanroku C. 101-201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about things they like/dislike and their hobbies; describe people, things, events, and places using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group discussion and group work as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for the students to be able to exercise literacy skills including, speaking, listening, and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through 3 chapters of the textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 4: National Geographic Learning by (Eds). Amanda Jefferies, Lewis Lansford, Daniel Barber, (National Geographic Learning) 2018.* ISBN: 978-1-337-27715-0.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Advanced English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to set goals, make agree and disagree statements, and ask questions.
⑤	g, f, i	Students will be able to discuss past events and ask for, and make recommendations.
⑥	d, f	Students will be able to discuss time, explain causes, and give reasons.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There will be Progress Quizzes in lessons 7 and 13. Quizzes will use TOEFL-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	In each unit, students will do grammar/vocabulary activities followed by a quiz to check their understanding, which will be graded and returned with feedback by the following lesson in class. Each unit will contain at least one listening activity. These will be graded and returned with feedback by the following lesson in class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	There will be at least one speaking activity in each unit. Speaking activities will be graded and returned with feedback by the following lesson in class. Students will complete a spoken reflection exercise at the end of each unit. Reflections will be graded and returned with feedback by the following lesson in class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will work efficiently to complete tasks on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will work somewhat efficiently to complete tasks on time and to a reasonable standard. Students will respond to most feedback appropriately and occasionally seek help when necessary.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction Unit 4: Discovery Grammar/Vocabulary	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Review the syllabus.	30
2 /	Unit 4: Discovery Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
3 /	Unit 4: Discovery Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
4 /	Unit 4: Discovery Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
5 /	Unit 6: Education Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
6 /	Unit 6: Education Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Unit 6: Education Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
9 /	Unit 6: Education Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
10 /	Unit 8: The Real Me Grammar/Vocabulary	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Unit 8: The Real Me Grammar/Vocabulary & Listening	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
12 /	Unit 8: The Real Me Listening & Speaking	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
13 /	Progress Quiz 2	Test questions.	Review the test questions.	30
14 /	Unit 8: The Real Me Speaking & Reflection	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
15 /	Review	End of course questionnaire; self-assessment activities.		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Listening and Speaking II B (Basic)	1	622700	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	STEVENSON, Ian	Hakusanroku C. 101-201		Monday 16:30-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Listening	Students will develop oral communication abilities for classes taught in academic English and to be able to function socially in an English-speaking environment. Students will be able to talk about things they like/dislike and their hobbies; describe people, things, events, and places using a variety of vocabulary and grammatical structures. Also, students will improve their understanding of topics and vocabulary used in their classes.
2	Speaking	
3	Communication	
4	Study skills	
5	Presentation skills	

Course Description and Expectations for Students (10.5pt)

This course will offer group work and discussion, problem solving, discovery and experiential learning as types of active learning. This course emphasizes the use of basic English language for oral communication. Its main purpose is for students to be able exercise literacy skills including, speaking and listening and notetaking for learning in their academic classes. Students will also be able to interact with others using English. This course will be taught through the first 3 units of a textbook.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: *Perspectives 4: National Geographic Learning by (Eds). Amanda Jefferies, Lewis Lansford, Daniel Barber, (National Geographic Learning) 2018.* ISBN: 978-1-337-27715-0.

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic English listening and speaking ability.

No.	Program Objectives	Target Abilities for Students (9pt)
①	f	Students will be able to greet and introduce themselves to new acquaintances and talk about emotions.
②	f	Students will be able to discuss and give opinions about hobbies, sports, and travel.
③	d, h	Students will be able to discuss and describe food, photos, work, shopping, and the human body.
④	f, i	Students will be able to set goals, make agree and disagree statements, and ask questions.
⑤	g, f, i	Students will be able to discuss past events and ask for, and make recommendations.
⑥	d, f	Students will be able to discuss time, explain causes, and give reasons.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	50	25	25	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	5	5	0	0	0	35
	Ability to think, reason and create	0	0	5	5	0	0	0	10
	Collaboration and leadership	0	0	5	5	0	0	0	10
	Announcement / Expression / Communication	0	25	5	5	0	0	0	35
	Attitude and motivation for learning	0	0	5	5	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	There will be Progress Quizzes in lessons 7 and 13. Quizzes will use TOEFL-style questions. Quizzes are designed to show the progress of students' English ability during the semester. Each quiz will have a target score required to pass. Failure to achieve the minimum target score will require the student to take a retest. Quizzes will be graded and returned with feedback by the following lesson in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Students will do grammar, listening, speaking and vocabulary activities in each unit, which will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	There will be presentation activities in each unit. These activities will be graded and returned with feedback by the following lesson.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will collaborate effectively to complete projects on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will collaborate to complete projects to a reasonable standard. Students will respond to most feedback and will occasionally seek help.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introductions: Teacher, Syllabus, Classroom tools and expectations. Textbook Units 6, 7 & 8	Syllabus; stations; textbook; worksheets; online activities; individual, pair, and group activities.	Review the syllabus.	30
2 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
3 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
4 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
5 /	Textbook Units 6, 7 & 8	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
6 /	Presentation 1	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
7 /	Progress Quiz 1	Test questions.	Review the test questions.	30
8 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
9 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
10 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
12 /	Textbook Units 9, 10 & Review	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete unfinished classwork and submit before the next lesson.	30
13 /	Progress Quiz 2	Test questions.	Review the test questions.	30
14 /	Presentation 2	Stations; textbook; worksheets; online activities; individual, pair, and group activities.	Complete the reflection and submit before the next lesson.	30
15 /	Wrap Up and Review	End of course questionnaire; self-assessment activities.		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Certification Training -Listening and Speaking	1	622900	First Intensive	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	STEVENSON, Ian	Hakusanroku C.: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Listening	Students will develop their abilities in the 4 skills assessed by TOEFL, through a variety of activities. These activities include, but are not limited to, exam preparation, exercises, worksheets, projects, etc.
2	Speaking	
3	Communication	
4	Study skills	
5		

Course Description and Expectations for Students (10.5pt)

This course will offer group work, problem solving, discovery and experiential learning as types of active learning. Demonstrating a range of English language abilities is important for students' future goals including universities, colleges, and workplaces around the world. This course covers the specific skills and tasks for TOEFL preparation: Listening, Reading, Writing, and Speaking. Students will participate in sessions towards improving students' accuracy and fluency through active learning and use of English via in and out of class activities, assignments, and projects.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate English ability

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, i, g, h	Students will be able to design and carryout a series of benchmark tasks
②	a, i, g, h	Students will be able to combine the tasks to complete a self-designed project
③	a, i, g, h	Students will be able to develop test taking abilities through tasks and activities
④		
⑤		
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	25	0	25	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	5	0	0	0	15
	Ability to think, reason and create	0	0	10	5	0	10	0	25
	Collaboration and leadership	0	0	10	5	0	0	0	15
	Announcement / Expression / Communication	0	0	10	5	0	10	0	25
	Attitude and motivation for learning	0	0	10	5	0	5	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	∠	Listening & Speaking (25%) In class activities for practice, review and preparation. Feedback will be given in class. Reading & Writing syllabus (25%)
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	Listening & Speaking (25%) Plan, design and complete a series of bench marked activities to demonstrate achievement and learning. Feedback will be given in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	∠	Reading & Writing (25%) In-class worksheets or assignment handouts for class preparation and review. Feedback will be given in the next class session.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will significantly improve their skills in Reading, Writing, Listening and Speaking. They will demonstrate their improvement via a variety of tasks and assessments.	Students will improve their skills in Reading, Writing, Listening and Speaking. They will demonstrate their improvement via a variety of tasks and assessments.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Reading and Writing #1	This includes but is not limited to: Worksheets, Exercises, etc.	Review: Ss will review previously acquired Reading and Writing skills and abilities	30
2 /	Listening and Speaking #1	This includes but is not limited to: Discussion, Pair work, etc.	Ss will review previously learned Listening and Speaking skills	30
3 /	Reading and Writing #2	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
4 /	Listening and Speaking #2	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
5 /	Reading and Writing #3	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
6 /	Listening and Speaking #3	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
7 /	Reading and Writing #4	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
8 /	Listening and Speaking #4	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
9 /	Reading and Writing #5	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
10 /	Listening and Speaking #5	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Reading and Writing #6	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
12 /	Listening and Speaking #6	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
13 /	Reading and Writing #7	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
14 /	Listening and Speaking #7	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
15 /	Review, Wrap up and Reflect	Final Assessment: TBD		30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Certification Training -Listening and Speaking	1	622900	First Intensive	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	BARNETSON, Hamish	Hakusanroku C.: 101.201		Monday 16:30-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Listening	Students will develop their abilities in the 4 skills assessed by IELTS, through a variety of activities. These activities include, but are not limited to, exam preparation, exercises, worksheets, projects, etc.
2	Speaking	
3	Communication	
4	Study skills	
5		

Course Description and Expectations for Students (10.5pt)

This course will offer group work, problem solving, discovery and experiential learning as types of active learning. Demonstrating a range of English language abilities is important for students' future goals including universities, colleges, and workplaces around the world. This course covers the specific skills and tasks for IELTS preparation: Listening, Reading, Writing, and Speaking. Students will participate in sessions towards improving students' accuracy and fluency through active learning and use of English via in and out of class activities, assignments, and projects.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate English ability

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, i, g, h	Students will be able to design and carryout a series of benchmark tasks
②	a, i, g, h	Students will be able to combine the tasks to complete a self-designed project
③	a, i, g, h	Students will be able to develop test taking abilities through tasks and activities
④		
⑤		
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	25	0	25	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	5	0	0	0	15
	Ability to think, reason and create	0	0	10	5	0	10	0	25
	Collaboration and leadership	0	0	10	5	0	0	0	15
	Announcement / Expression / Communication	0	0	10	5	0	10	0	25
	Attitude and motivation for learning	0	0	10	5	0	5	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	∠	Listening & Speaking (25%) In class activities for practice, review and preparation. Feedback will be given in class. Reading & Writing syllabus (25%)
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①	∠	Listening & Speaking (25%) Plan, design and complete a series of bench marked activities to demonstrate achievement and learning. Feedback will be given in class.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	∠	Reading & Writing (25%) In-class worksheets or assignment handouts for class preparation and review. Feedback will be given in the next class session.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will significantly improve their skills in Reading, Writing, Listening and Speaking. They will demonstrate their improvement via a variety of tasks and assessments.	Students will improve their skills in Reading, Writing, Listening and Speaking. They will demonstrate their improvement via a variety of tasks and assessments.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Reading and Writing #1	This includes but is not limited to: Worksheets, Exercises, etc.	Review: Ss will review previously acquired Reading and Writing skills and abilities	30
2 /	Listening and Speaking #1	This includes but is not limited to: Discussion, Pair work, etc.	Ss will review previously learned Listening and Speaking skills	30
3 /	Reading and Writing #2	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
4 /	Listening and Speaking #2	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
5 /	Reading and Writing #3	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
6 /	Listening and Speaking #3	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
7 /	Reading and Writing #4	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
8 /	Listening and Speaking #4	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
9 /	Reading and Writing #5	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
10 /	Listening and Speaking #5	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Reading and Writing #6	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
12 /	Listening and Speaking #6	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
13 /	Reading and Writing #7	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
14 /	Listening and Speaking #7	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
15 /	Review, Wrap up and Reflect	Final Assessment: TBD		30

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	English Certification Training -Reading & Writing-	1	622900	First Intensive	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	UTSUNOMIYA, Takako	Hakusanroku C: 101.201		TBD

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Reading	Students will develop their abilities in the 4 skills assessed by TOEFL through a variety of activities. These activities include, but are not limited to, exam preparation, exercises, worksheets, projects, etc.
2	Writing	
3	Listening	
4	Speaking	
5	IELTS	

Course Description and Expectations for Students (10.5pt)

This course will offer group work, problem-solving, discovery, and experiential learning in class as types of active learning. Demonstrating a range of English language abilities is important for students' future goals, including universities, colleges, and workplaces around the world. This course covers the specific skills and tasks for TOEFL preparation: Listening, Reading, Writing, and Speaking. Students will participate in sessions towards improving their accuracy and fluency through active learning and the use of English via in-class and out-of-class activities, assignments, and projects.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: None (Handouts)
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate English ability

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Ss will be able to analyze English sentence structures, write clear responses, and express their opinions effectively in writing.
②	h, i	Ss will be able to develop new vocabulary.
③	h, i	Ss will be able to develop test-taking skills for a range of reading comprehension questions.
④		
⑤		
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	25	0	25	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	5	0	0	0	15
	Ability to think, reason and create	0	0	10	5	0	10	0	25
	Collaboration and leadership	0	0	10	5	0	0	0	15
	Announcement / Expression / Communication	0	0	10	5	0	10	0	25
	Attitude and motivation for learning	0	0	10	5	0	5	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Reading & Writing (25%) In-class worksheets or assignment handouts for class preparation and review. Feedback will be given in the next class session. Listening & Speaking (25%)
	②	✓	
	③	✓	
	④		
	⑤		
	⑥		
Presentations	①		Listening & Speaking (25%) Plan, design and complete a series of bench marked activities to demonstrate achievement and learning. Feedback will be given in class.
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	Reading & Writing (25%) Understanding the structure and layout of the reading materials. Writing about visual data in a time limit. Feedback will be given in the next class session.
	②	✓	
	③	✓	
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Ss will significantly improve their skills in Reading, Writing, Listening and Speaking. They will demonstrate their improvement via a variety of tasks and assessments.	Ss will improve their skills in Reading, Writing, Listening and Speaking. They will demonstrate their improvement via a variety of tasks and assessments.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

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1 /	Reading and Writing #1	This includes but is not limited to: Worksheets, Exercises, etc.	Review: Ss will review previously acquired Reading and Writing skills and abilities	30
2 /	Listening and Speaking #1	This includes but is not limited to: Discussion, Pair work, etc.	Ss will review previously learned Listening and Speaking skills	30
3 /	Reading and Writing #2	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
4 /	Listening and Speaking #2	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
5 /	Reading and Writing #3	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
6 /	Listening and Speaking #3	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
7 /	Reading and Writing #4	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
8 /	Listening and Speaking #4	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
9 /	Reading and Writing #5	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
10 /	Listening and Speaking #5	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Reading and Writing #6	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
12 /	Listening and Speaking #6	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
13 /	Reading and Writing #7	This includes but is not limited to: Worksheets, Exercises, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
14 /	Listening and Speaking #7	This includes but is not limited to: Discussion, Pair work, etc.	Preview: Ss will practice skills and topics studied in the previous class Review: Ss will review activities completed in class	30
15 /	Review, Wrap up and Reflect	Final Assessment: TBD		

令和8年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科目名	単位	科目コード	開講時期	授業形態
国際理工学科 一般科目 選択	歴史文化II（日本語）	1	623700	前学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
2年	上田　清史	白山麓C 101.201		月曜日・木曜日 16：30 - 17：30

授業科目の学習教育目標

キーワード		学習教育目標
1	白山地域	この授業は白山地域の歴史文化とこの地域の事象から見た日本歴史と文化を探求する。またその自然環境や地域社会に関心を持ち、解決方法を提案するために、地域の現状や問題点を正確に把握する。さらに白山地域の学習を追求することにより、学生は自らの行動の礎となる理念を養う。
2	歴史文化	
3	自然環境	
4	地域性・国際性	
5	自然災害	

授業の概要および学習上の助言

地域社会はさまざまな構成要素によって成り立っている。学生が学び生活する白山地域の歴史，文化，信仰，生活習慣，産業，地形，自然などを総合的に学ぶことにより, 同地域への理解を深める。白山地域の歴史文化とその事象から見た日本の歴史と文化を探求する。

学生は自主的に五つの課題に取り組み、この基礎知識をもとに期末試験に備えてもらいます。また、クラス内で二回の発表があるので教員の指示に従ってテーマの選定と発表に向けての準備（リサーチを含む）を主体的に行ってもらいます。

【教科書および参考書・リザーブドブック】

教科書：ハンドアウト
参考書：
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

日本語を読み書きする能力（日本の高校生レベル）
歴史文化ＩＡ（日本語）
歴史文化ＩＢ（日本語）

№	教育目標(DP)（記号表記）	学生が達成すべき行動目標
①	b, e	白山地域の持つ歴史や文化の特色を理解し、共有することができる
②	b, e	白山地域の自然環境や地域社会に関心を持ち現状を理解することができる
③	b, e	白山地域の事象から日本の歴史・文化を考え理解する事ができる
④	a, b, e, g, h	地域社会の持つ問題点を正確に捉え, 解決する方法を考える事ができる
⑤	b, c, e, i	白山地域の学習を通じて、自らの行動の礎となる理念を養うことができる
⑥		

達成度評価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作品	ポートフォリオ	その他	合計
総合評価割合		20	0	20	40	0	20	0	100
総合力指標	知識を取り込む力	8	0	5	10	0	5	0	28
	思考・推論・創造する力	4	0	8	15	0	5	0	32
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	8	0	7	10	0	5	0	30
	学習に取組む姿勢・意欲	0	0	0	5	0	5	0	10

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①	✔	定期試験。論述式問題の答案を４つの基準から評価する。①「歴史の流れ」に対する理解度。②解答の内容における史実の正確性。③試験問題に対する解答の関係性と論理性。④簡潔な文と文章構成。（20%）
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①	✔	５つの課題：効果的な「考え方」や「書き方」などを説明する。 課題は授業で配布され次の授業の始まりに提出する。翌週の授業までに採点され返却される。（20%）
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		二回のグループ発表：学期中に１回と学期末に１回。学生は教員と相談した上で白山地域の問題点 と解決策に関する発表を行う。 グループ発表の次の点を評価する：内容、スタイル（方法）、パワーポイントなどの補助資料、資料（史料）の提示、各発表者がグループ内で果たした役割など。翌週の授業までに発表の評価を受 ける。（20%＋20%＝40%）
	②		
	③		
	④	✔	
	⑤	✔	
	⑥	✔	
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①	✔	ポートフォリオにはリフレクションペーパー・配布資料（メモを取ること）・５つの課題・発表の 補助資料（２点）や関係のある場合はその他を添えること。これらを「学習に取り組む姿勢・意 欲」などと総合的に評価する。これは学期末に提出する。（20%）
	②	✔	
	③	✔	
	④	✔	
	⑤	✔	
	⑥	✔	
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
白山地域の持つ歴史や文化の特色を理解し、共有することができる 白山地域の自然環境や地域社会に関心を持ち現状を理解することができる 白山地域の事象から日本の歴史・文化を考え理解する事ができる 地域社会の持つ問題点を正確に捉えることができる 地域社会の持つ門題点を解決する方法を考える事ができる 白山地域の学習を通じて、自らの行動の礎となる理念を養うことができる	白山地域の持つ歴史や文化の特色に触れ学ばせていただく。 白山地域の自然環境や地域社会と出会い現状と向き合う。 白山地域の深い歴史文化の一端に触れさせてもらう。 地域社会の持つ問題点の一部を教示していただく。 地域社会の持つ問題点の一部に真摯に取り組む姿勢を持つ。 白山地域の学習を通じて、困難な問題に取り組む心を養う。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	白山地域の位置づけ：白山地域の地理的・歴史的な位置づけを理解する。 学生達が生活する白山地域の地形、自然を学ぶことにより、地域社会、自然環境の興味関心を高めるとともに、 地域や自然を敬う気持ちを涵養する	白山地域の地理的・歴史的な位置づけを講義する	白山地域の地理的・歴史的な位置づけを調べる 授業内容を確認する	30 15
2 ／	白山地域の自然と環境① 白山地域の自然環境の特色を理解し、その地形が人々の生活にどのような影響を与えたか理解する。また資源を含めたその潜在的可能性について考える	白山地域の地形・資源について講義する 課題①を配布する	白山地域の地形を調べる。 授業内容を確認する	30 15
3 ／	白山地域の自然と環境② 白山地域の自然環境の特色を理解し、国内的・国際的観点から自然環境保護問題について考える	白山の動植物と自然環境保護の取り組みについて講義する 課題①を提出する	白山の動植物について調べる 授業内容を確認する	30 15
4 ／	白山地域の信仰① 白山地域を通じて日本の信仰を理解する 白山地域での信仰の在り方を学び、地域の宗教や信仰の多様性や独自性を知る。 日本の「中世」と山岳信仰を通して「日本人の宗教観」を考え、~~諸外国と比較する。~~	白山の信仰について講義する	白山信仰について調べる 授業内容を確認する	30 15
5 ／	白山地域の信仰② 白山山岳信仰と他の地域(国内・海外)における山岳信仰を比較する	白山と他の地域の信仰について講義する 課題②を配布する	白山信仰と他の地域の山岳信仰を調べる 授業内容を確認する。	30 15
6 ／	白山地域の生活・文化：白山地域の人々の生活や文化を理解する 山岳部での人々の生活を通して日本の「古代」を考え、その現代的意義について考察する。	白山地域の人々の生活や文化について講義する 課題②を提出する	白山地域の人々の生活や文化を調べる。 授業内容を確認する	30 15
7 ／	中間・発表 白山地域の持つ問題点 白山地域の持つ問題点をグループ討議で明らかにする	白山地域を総合的に学習した上で、~~グループ討議により~~地域の持つ問題点~~及び解決策~~を探る。	各自で問題点を考える 発表の準備をする	60 45
8 ／	白山地域から見る日本の歴史① 白山地域から日本の戦国社会を考える 白山地域と日本全体の歴史を比較しながら学ぶことにより、地域の事象を広い視点で捉える方法を学ぶ。また、場所や時代の違いによる、多様な価値観や社会の変遷を知る	日本の戦国社会について講義する。 課題③を配布する 課題③を提出する	戦国日本について調べる 授業内容を確認する	30 15
9 ／	白山地域から見る日本の歴史② 白山地域から日本の近世社会を考える 白山と城下町・金沢の成立とその重要性について 諸外国における城を中心とする社会を比較する	日本の近世社会について講義する 課題④を配布する	近世の日本について調べる 授業内容を確認する	30 15
10 ／	白山地域から見る日本の歴史③ 白山地域から日本の近・現代社会を考える 非西洋社会における近代化の諸課題を理解する。	日本の近・現代社会について講義する 課題④を提出する	近現代の日本について調べる 授業内容を確認する	30 15

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
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回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	白山地域の産業 白山地域で行われる産業について歴史的観点から理解する。 白山地域の産業や生活・文化を通して、地域の持つ課題や文化の多様性を知る	白山地域で行われている産業について講義する	白山地域の産業について調べる。 授業内容を確認する	30 15
12 ／	石川県における自然災害について考える 水害や令和六年・能登大震災を中心に	水害や能登大震災について講義する 課題⑤を配布する	水害や能登大震災について調べる 授業内容を確認する	30 15
13 ／	震災後の石川県の復興について考える	被災地の復興について講義する 課題⑤を提出する	復興について調べる 授業内容を確認する	30 15
14 ／	白山地域の抱える諸問題の特殊性と普遍性を通して今後の日本そして世界を考える	この地域の現状を通して今後の日本と国際社会が直面する諸問題について講義する	現在と今後の日本と国際社会について考える。 授業内容を確認する	60 45
15 ／	問題点と改善案の発表① 問題点・解決策を発表し、他の人に的確に伝える	解決策を発表し、 他のグループ発表の内容 について検討する	各自で解決策を考え、発表の準備を行う 他の発表の内容について考える	60 45
16 ／	定期試験	学生の科目に対する全体的な理解を評価する	授業内容を学習する 試験内容・結果を確認する	60 15
17 ／	自己点検			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	History and Culture II (English)	1	623800	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	UEDA, Kiyoshi	Hakusanroku.C 101.201		Monday and Thursday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Hakusan Region	This course guides students in exploring the history/culture of Hakusan region and Japanese history/culture via regional phenomena. It leads them to develop an interest in the natural environment and local communities to accurately assess their current circumstances and issues in hope of suggesting solutions. Students will also learn to nurture a set of principles as a foundation for their actions by studying the region.
2	History and Culture	
3	Nature and Environment	
4	Locality and Internationality	
5	Natural Disaster	

Course Description and Expectations for Students (10.5pt)

Local communities consist of a number of components. This course will guide students in learning basic skills to cooperate with the various local communities of the Hakusan region by comprehensively exploring the history, culture, religion, livelihood, industry, geography, and natural environment of Mt. Hakusan where they live and learn. The course will also nurture a sense of mission in finding solutions for social issues as students reach out to diverse communities in the region.

Students will independently work on five assignments, preparing themselves for the final exam according to basic knowledge they acquire from these assignments and lectures. Two presentations will take place in class; students are expected to take the initiative in selecting topics and preparing (including research) for them.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: Handout
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to read and write English language (at the high-school level)
History and Culture IA (English) and History and Culture IB (English)

No.	Program Objectives	Target Abilities for Students (9pt)
①	b, e	Students will understand the characteristics of the history/culture of Hakusan region and share them.
②	b, e	Students will develop an interest in the natural environment and local communities of Hakusan region, thus learning to understand their present circumstances.
③	b, e	Students will be able to think about/understand Japanese history/culture via the phenomena of Hakusan region.
④	a, b, e, g, h	Students will be able to grasp issues of the local communities accurately and to develop solutions to the problems of local communities.
⑤	b, c, e, i	Students will nurture a set of principles as a foundation for their actions by studying Hakusan region.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		20	0	20	40	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	8	0	5	10	0	5	0	28
	Ability to think, reason and create	4	0	8	15	0	5	0	32
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / expression / communication	8	0	7	10	0	5	0	30
	Attitude and motivation for learning	0	0	0	5	0	5	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✔	Final examination. Answers to essay-type questions will be evaluated on the basis of 4 criteria. First, a level of comprehension of the "course of history." Second, the accuracy of historical facts in the contents of an answer. Third, the relevance and logic of answers to the examination question. Fourth, the use of concise sentences and good textual structure. (20%)
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✔	There will be five assignments; the instructor will explain "how to think" and "how to write" effectively. Each assignment will be distributed in class and submitted at the beginning of the next class. Assignments will be evaluated and returned the following week. (20%)
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
Presentations	①		There will be two presentations: one in the middle of the semester and one at the end of the semester. Students will make group presentations on issues challenging the Hakusan region and solutions to them in consultation with the instructor. Group presentations will be evaluated on the following points: contents, style (method), supporting material such as power-point presentations, the indication of sources, the role of an individual presenter for the group, etc. The presentation will be evaluated and returned the following week. (20%＋20%＝40%)
	②		
	③	✔	
	④	✔	
	⑤	✔	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✔	Portfolios must include a reflection paper, all handouts, 5 assignments, supporting material for one presentation, and others when relevant. Work will be comprehensively evaluated, together with the student's "volition and attitudes toward learning." Students will submit the portfolio with a reflection paper by the end of the semester. (20%)
	②	✔	
	③	✔	
	④	✔	
	⑤	✔	
	⑥	✔	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can understand the characteristics of the history/culture of Hakusan region and share them; ・show an interest in the natural environment and local communities of Hakusan region, thus understanding their present circumstances; ・think about/understand Japanese history/culture via the phenomena of Hakusan region; ・grasp issues of local communities; ・develop solutions to the problems of local communities; ・nurture a set of principles as a foundation for their actions by studying Hakusan region.	Students can learn the characteristics of the history/culture of Hakusan region by being exposed to them; ・encounter the natural environment and local communities of Hakusan region and face present circumstances; ・experience a part of the profound history of Hakusan region; ・seek guidance in identifying some of the issues of local communities; ・work on some of the issues with which local communities struggle; ・nurture their hearts (kokoro) to challenge difficult problems through the study of Hakusan region.

Course Schedule

* The standard time required for the specified assignment is provided in the "Time" column of the assignments. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Geographical/historical positioning of Hakusan region, explaining the geographical and historical location. Students will develop an interest in the natural environment and a sense of respect for Hakusan region by learning about the geography and history of the region where they reside.	Lecture on the geographical and historical location of Hakusan region.	Study the geographical and historical location of Hakusan region. Review course content.	30 15
2 /	Nature and environment of Hakusan region. ① Students will understand particularities of the natural environment of Hakusan region and how its landscape affected people's livelihood. They will also consider its potential, including resources.	Lecture on the geography and resources of Hakusan region. Distribute assignment ①	Study the geography of Hakusan region. Review course content.	30 15
3 /	Nature and environment of Hakusan region. ② Students will understand particularities of the natural environment of Hakusan region and consider the issue of preserving the natural environment from domestic and international perspectives.	Lecture on plants and animals in Hakusan region and preservation of natural environment. Submit assignment ①	Study plants and animals in Hakusan region. Review course content.	30 15
4 /	Worship in Hakusan region. ① Students will study modes of worship in Hakusan region and understand the diversity and characteristics of religion/worship in the region. Students will understand "Japanese attitudes towards religion" through Japan's medieval period and mountain worship, comparing them with those of various countries.	Lecture on Hakusan worship.	Study Hakusan worship and "Japanese attitudes towards religion." Review course content.	30 15
5 /	Worship in Hakusan region. ② Students will understand Japanese religion by comparing Hakusan mountain worship with mountain worship in various regions (domestic and overseas).	Lecture comparing the Hakusan worship with those of other areas. Distribute assignment ②	Study Hakusan worship with mountain worship in various regions both domestic and overseas. Review course content.	30 15
6 /	Livelihood and culture of Hakusan region. Students will think about Japan's "ancient" (kodai) through examination of the livelihood of people in its mountainous areas, reflecting on its contemporary implications.	Lecture on the livelihood and culture of Hakusan region. Submit assignment ②	Study the cultural heritage of Hakusan region. Review course content.	30 15
7 /	Presentation: Regional issues in Hakusan. Highlight the issues faced by Hakusan region and develop solutions through group discussion.	Explore a solution for the issues faced by Hakusan region through discussion. Distribute assignment ③	Examine regional issues. Prepare presentations. Summarize the issues through group discussion。	60 45
8 /	Japanese history from the standpoint of Hakusan region. ① Students will learn how to put the local phenomena of Hakusan region into a broader perspective. They will study the diversification of value systems and social transformations in different locations and time-periods. Students will understand Sengoku society of Japan through the history of Hakusan region.	Lecture on Sengoku society in Japan. Submit assignment ③	Study Sengoku society of Japan. Review course content.	30 15
9 /	Japanese history from the standpoint of Hakusan region. Students will understand early modern society of Japan through the history of Hakusan region, including Hakusan and its significance to the establishment of Kanazawa as a castle town. They will compare it with societies revolving around castles in various countries overseas.	Lecture on early modern society of Japan. Distribute assignment④	Study early modern Japan. Review course content.	30 15
10 /	Japanese history from the standpoint of Hakusan region. Students will understand modern/contemporary society of Japan through the history of Hakusan region and various issues of modernization in non-Western societies.	Lecture on modern/ contemporary society of Japan. Submit assignment ④	Examine modern/ contemporary Japan. Review course content.	30 15

Course Schedule

* The standard time required for the specified assignment is provided in the "Time" column of the assignments. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Industry in Hakusan region. Students will understand local industries of Hakusan region from an historical point of view. They will learn the issues and understand the cultural diversity of Hakusan region by studying its industry, livelihood, and culture.	Lecture on local industries of Hakusan region.	Study industries in the Hakusan region. Review course content.	30 15
12 /	Natural disasters in Ishikawa prefecture: flood damage and the Noto Great Earthquake of 2024.	Lecture on flood damage and the Noto Great Earthquake. Distribute assignment⑤	Study flood damage and the Noto Great Earthquake. Review course content.	30 15
13 /	Reconstruction of Ishikawa prefecture after the earthquake.	Lecture on disaster-stricken areas. Distribute assignment⑤	Study the reconstruction. Review course content.	30 15
14 /	Predicting futures of Japan and the world by examining particularities and universalities of various issues the Hakusan region is facing.	Lecture on various issues Japan and international communities will face in the future through the current conditions of this region.	Examine Japan and international communities and today and in the future. Review course content	30 15
15 /	Presentation: Regional issues and improvement plans. Students will make a presentation on an issue (or issues) and offer a solution.	Present a solution and assess the content of others' presentations.	Each student explores a solution in a presentation to the class. Assess the content of others' presentations critically.	60 45
16 /	Final exam	Evaluate students' overall understanding of the subject.	Study overall course content. Review the content of the exam.	50 10
17 /	Self-check			

令和8年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	社会科学（日本語）	1	624000	後学期	講義／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
2年	上田　清史	白山麓 101.201		月曜日・木曜日 16：30―17：30

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	近現代史	世界の色々な地域における諸事象を地理的かつ歴史的観点からとらえることによって学生にとっての「今」をより理解できる「物の見方」を養ってゆく。将来日本や海外で活動するために諸地域に関する基礎知識を習得するとともに、これらの地域と日本の歴史的関わりについても学んでゆく。
2	国際関係・国際情勢	
3	地理	
4	紛争	
5	平和	

授業の概要および学習上の助言

この授業では「現在」の出来事の成り立ちや原因を究明し理解するため「過去」にさかのぼり考察する。同時に「現在」と「過去」をより理解するために世界各地の地理的条件に関する基本知識を身につけてゆく。またこれらの地理的条件から「人間はなぜ歴史から学ばず同じこと（成功と失敗）を繰り返すのか？」という大きな問いにも考えをめぐらしてゆく。これによって現在の国際関係を動かす力学の一端に触れてゆく。学生には貴重な情報を提供する資料としての地図を「読む」ことを始め、同時に国内外のメディア報道から世界各地の情勢を知るなかで、根拠が示された歴史書を紐解くことが日々の習慣となるように努力を始めてほしい。

学生は自主的に五つの課題に取り組み、この基礎知識をもとに中間テストと期末試験に備えてもらいます。また、クラス内の発表があるので教員の指示に従ってテーマの選定と発表に向けての準備（リサーチを含む）を主体的bに行ってもらいます。この授業では国語（日本語）で世界の地政学を学ぶので、国語での読み書きにしっかりと向き合い、そこから得た確かな知識を土台に国際的観点から世界と日本を考える姿勢を身に付けてください。

【教科書および参考書・リザーブドブック】
教科書：配布プリント
参考書：
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

日本語を読み書きする能力（日本の高校生レベル）
歴史文化IA（日本語）と歴史文化IB（日本語）
歴史文化IIA（日本語）

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	b,e	東アジアにおける国際関係を歴史的かつ地理的観点から説明することができる。
②	b,c	「インド」と「中近東」を歴史的かつ地理的観点から理解し今後の国際社会での役割を説明できる
③	a,b,e	旧・大英帝国とその遺産を歴史的かつ地理的観点から理解し現在の国際社会の土台を説明することができる。
④	a,b,g,h	ロシアと周辺国との関係を歴史的かつ地理的観点から理解し今後の国際社会の動向を説明できる。
⑤	e,c,e,i	北極を歴史的かつ地理的に理解し今後の国際社会に与える影響を説明できる。

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		20	20	20	20	0	20	0	100
総合力指標	知識を取り込む力	8	8	5	5	0	5	0	31
	思考・推論・創造する力	4	4	8	8	0	5	0	29
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	8	8	7	7	0	5	0	35
	学習に取組む姿勢・意欲	0	0	0	0	0	5	0	5

総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①	✔	定期試験。論述式問題の答案を四つの基準から評価する。①「歴史の流れ」と「地理的条件」に対する理解度。②解 答に内容における史実と事実（ファクト）の正確性。③試験問題に対する解答の関係性と論理性。④簡潔な文と文章構成。（20%）
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
クイズ 小テスト	①	✔	中間テスト。論述式問題の解答を四つの基準から評価する。①「歴史の流れ」と「地理的条件」に対する理解度。② 解答の内容における史実と事実（ファクト）の正確性。③試験問題に対する解答の関係性と論理性。④簡潔な文と 文章 構成。翌週の授業までに採点され返却される。（20%）
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
レポート	①	✔	５つの課題：効果的な「考え方」や「書き方」などを指導する。 課題は次の授業の 始まりに提出する。翌週の授業までに採点され返却される。（20%）
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		１回の発表：教員と相談した上で「歴史の流れ」と「地理的条件」に関するテーマを決定する。 個人発表の次の点を評価する：内容、スタイル（方法）、パワーポイントなどの補助資料、資料（史料）の 提示など。翌週の授業までに発表の評価を受ける。（20%）
	②		
	③		
	④	✔	
	⑤	✔	
	⑥	✔	
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①	✔	ポートフォリオにはリフレクションペーパー・配布資料（メモを取ること）・５つの課題・中間テ スト・発表の補助資料（１点）や関係のある場合はその他を添えること。これは学期末（最後の授 業）に提出する。（20%）
	②	✔	
	③	✔	
	④	✔	
	⑤	✔	
	⑥	✔	
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
- 東アジアにおける国際関係を歴史的かつ地理的観点から説明することができる。 - 「インド」を歴史的かつ地理的観点から理解し今後の国際社会での役割を説明できる。 - 「中近東」を歴史的かつ地理的観点から理解し現在に続く諸問題を説明できる。 - 旧・大英帝国とその遺産を歴史的かつ地理的観点から理解し現在の国際社会の土台を説明することができる。 - ロシアと周辺国との関係を歴史的かつ地理的観点から理解し今後の国際社会の動向を説明できる。 - 北極を歴史的かつ地理的に理解し今後の国際社会に与える影響を説明できる。	- 東アジアにおける国際関係の歴史とその地理的条件についての基礎知識を学ぶ。 - 現在の「インド」に至る歴史とその地理的条件についての基礎知識を学ぶ。 - 「中近東」の歴史とその地理的条件についての基礎知識を学ぶ。 - 旧・大英帝国の歴史とその地理的条件の基礎知識を学ぶ。 ロシアと周辺諸国の歴史とその地理的条件の基礎知識を学ぶ。 ―北極の歴史や地理的条件の基礎知識を学ぶ。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	イントロダクション	地理・歴史・国際関係について講義する。	ノート（プリント）を見直して補完する。	30 10
2 ／	中国	中国が直面する諸問題について講義する。 課題①を配布する	ノート（プリント）を見直して補完する。	30 10
3 ／	朝鮮半島	朝鮮半島をめぐる諸問題について講義する。 課題①を提出する	ノート（プリント）を見直して補完する。	30 10
4 ／	東南アジア	多様性のある東南アジア地域の抱える諸問題について講義する。 課題②を配布する	ノート（プリント）を見直して補完する。	30 10
5 ／	南アジア：「インド」を中心に	インドの重要性と諸問題について講義する。 課題②を提出する	ノート（プリント）を見直して補完する。	30 10
6 ／	「中近東」	中近東の重要性と諸課題について講義する。 課題③を配布する	ノート（プリント）を見直して補完する。	30 10
7 ／	アフリカ大陸	アフリカ大陸の歴史とこの大陸が持つ可能性と諸問題について講義する。 課題③を提出する	ノート（プリント）を見直して補充する。	30 10
8 ／	植民地政策の遺産：旧・大英帝国を中心に	旧・大英帝国が残した遺産についていくつかの国の例を挙げて講義する。	ノート（プリント）を見直して補完する。	60 10
9 ／	ロシアと東ヨーロッパ（バルカン半島を含む） 中間テスト（60分）	ロシアの対外政策と周辺国との関係について講義する。	ノート（プリント）を見直して補完する。 授業内容を学習する。 試験内容・結果を確認する	30 10
10 ／	北極	北極をめぐる諸問題について講義する。 課題④を配布する	ノート（プリント）を見直して補完する。	30 10

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	北・南アメリカ大陸	両大陸の関係性や諸問題について講義する。 課題④を提出する	ノート（プリント）を見直して補完する。	30 10
12 ／	中央アジア	中央アジアをめぐる諸問題について講義する。	ノート（プリント）を見直して補完する。	30 10
13 ／	太平洋諸島	太平洋諸島をめぐる諸問題について講義する。 課題⑤を配布する	ノート（プリント）を見直して補完する。	30 10
14 ／	「宇宙」	「宇宙」という領域をめぐる大国の思惑について講義する。 課題⑤を提出する	ノート（プリント）を見直して補完する。	30 10
15 ／	発表	内容・発表の態度・関係資料の作成などを評価する。	発表の準備をする。	60 10
16 ／	定期試験	定期試験（50分）	授業内容を学習する。 試験内容・結果を確認する。	50 10
17 ／	試験返却（自己点検）			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Social Science (English)	1	624100	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	UEDA, Kiyoshi	Hakusanroku 101.201		Mondays /Thursday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Modern/Contemporary History	This course is designed to help students develop a way of looking at things "now" by grasping various phenomena occurring in various regions of the world from both geographical and historical perspectives. To be able to perform in Japan, as well as abroad in the future, students will acquire basic knowledge on various regions and study Japan's historical involvement in those regions.
2	International Relations/Affairs	
3	Geography	
4	Conflict	
5	Peace	

Course Description and Expectations for Students (10.5pt)

This course was designed to inquire into the origins and development of present events by tracing their past. To understand "present" and "past," students will also obtain basic knowledge about geographical conditions of various parts of the world. Based on those geographical conditions, the course will consider broader questions: Why do humans not learn from history? Why do they repeat the same things, both success and failure? By so doing, students will become familiar with some aspects of dynamics mobilizing international relations today. Students will be encouraged to start "reading" a map as a reference providing invaluable information. Students will become familiar with history, while continually updating their knowledge about current affairs in various areas of the world.

Students will independently work on five assignments, preparing themselves for a mid-term test and final exam according to basic knowledge they acquire from these assignments and lectures. Also, one presentation will take place in class; students are expected to take the initiative in selecting a topic and preparing (including research) for it.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to read and write English language (at the high-school level)
History and Culture IA (English) and History and Culture IB (English)
History and Culture IIA (English)

No.	Program Objectives	Target Abilities for Students (9pt)
①	b,e	Students will be able to explain international affairs of East Asia from historical and geographical perspectives.
②	b,c	Students will be able to understand India and the Middle East explain their roles in the international community in the future from historical and geographical perspectives.
③	a,b,e	Students will be able to understand the former British Empire and its legacies as the foundation of the international community today from historical and geographical perspectives.
④	a,b,g,h	Students will be able to understand Russia and its neighboring countries from historical and geographical perspectives.
⑤	e,c,e,i	Students will be able to explain the North Pole from historical and geographical perspectives and understand its future impact on the international community.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		20	20	20	20	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	8	8	5	5	0	5	0	31
	Ability to think, reason and create	4	4	8	8	0	5	0	29
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / expression / communication	8	8	7	7	0	5	0	35
	Attitude and motivation for learning	0	0	0	0	0	5	0	5

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✔	Final Examination. Answers to essay-type questions will be evaluated on the basis of 4 criteria. First, a level of comprehension of the "course of history" and "geographical condition." Second, the accuracy of historical facts in the contents of an answer. Third, the relevance and logic of answers to the examination question. Fourth, the use of concise sentences and good textual structure. (20%)
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
Quizzes	①	✔	Mid-term Test. Answers to essay-type questions will be evaluated on the basis of 4 criteria. First, a level of comprehension of the "course of history" and "geographical condition." Second, the accuracy of historical facts (*shijitsu*) and facts (*jijitsu*) in the contents of an answer. Third, the relevance and logic of answers to the examination question. Fourth, the use of concise sentences and good textual structure. (20%)
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
Reports	①	✔	There will be five assignments; the instructor will explain how to think and how to write effectively. Each assignment will be distributed in class and submitted at the beginning of the next class. Assignments will be evaluated and returned the following week. (20%)
	②	✔	
	③	✔	
	④		
	⑤		
	⑥		
Presentations	①		There will be one presentation at the end of the semester. Students will choose topics on the "course of history" and "geographical condition" in consultation with the instructor. Individual presentations will be evaluated on the following points: contents, style, method, supporting material such as power-point, the indication of sources, the role of an individual presenter for the group, etc. The presentation will be evaluated and returned the following week. (20%＋20%＝40%)
	②		
	③		
	④	✔	
	⑤	✔	
	⑥	✔	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✔	Portfolio must include reflection paper, all handouts, 5 assignments, supporting material for one presentation, and others when relevant. Work will be comprehensively evaluated, together with students' volition and attitudes to learning. Students will submit the portfolio by the end of the semester. (20%)
	②	✔	
	③	✔	
	④	✔	
	⑤	✔	
	⑥	✔	
Others	①		'
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will be able to explain the international affairs of East Asia from both historical and geographical perspectives. Students will be able to understand India and explain its role in the international community in future from both historical and geographical perspectives. Students will be able to understand the Middle East and explain its various problems that continue today from both historical and geographical perspectives. Students will be able to understand the former British Empire and its legacies as the foundation of the international community today from both historical and geographical perspectives. Students will be able to understand Russia and its neighboring countries from both historical and geographical perspectives. Students will explain the North Pole from both historical and geographical perspectives and its impacts on the international community in future.	Students will learn basic knowledge about the history of international affairs and geographical conditions in East Asia. Students will learn basic knowledge about the history behind the formation of India and its geographical conditions. Students will learn basic knowledge about the history of the Middle East and its geographical conditions Students will learn basic knowledge about the history of the former British Empire and its geographical conditions. Students will learn basic knowledge about the history of Russia and its neighboring countries and their geographical conditions. Students will learn basic knowledge about the history of the North Pole and its geographical conditions.

Course Schedule

* The standard time required for the specified assignment is provided in the "Time" column of the assignments. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction	Lecture on geography, history, and international relations.	Review course content.	30 10
2 /	China	Lecture on various issues China faces. Distribute Assignment ①	Review course content.	30 10
3 /	The Korean Peninsula	Lecture on various issues surrounding the Korean Peninsula. Submit Assignment ①	Review course content.	30 10
4 /	Southeast Asia	Lecture on various issues in Southeast Asia. Distribute Assignment ②	Review course content.	30 10
5 /	South Asia: India as its center	Lecture on the significance of India and its various issues. Submit Assignment ②	Review course content	30 10
6 /	Middle East	Lecture on the importance of the Middle East and its various issues.	Review course content.	30 10
7 /	African Continent	Lecture on the history of the African Continent and its various challenges. Distribute Assignment ③	Review course content.	30 10
8 /	Legacies of colonial policies: the former British Empire	Lecture on the legacies of the former British Empire by selecting examples of a few countries. Submit Assignment ③	Review course content.	30 10
9 /	Russia and Eastern Europe (including the Balkan Peninsula) Mid-term test (60 minutes)	Lecture on Russia's external policies and its relations with its neighboring countries.	Study course content. Review the contents of the test and the results.	60 10
10 /	The North Pole	Lecture on various issues surrounding the North Pole. Distribute Assignment ④	Review course content.	30 10

Course Schedule

* The standard time required for the specified assignment is provided in the "Time" column of the assignments. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	North and South Americas	Lecture on various issues of the two continents. Submit Assignment ④	Review course content.	30 10
12 /	Central Asia	Lecture on various issues surrounding Central Asia.	Review course content.	30 10
13 /	The Pacific Islands	Lecture on various issues surrounding the Pacific islands. Distribute Assignment ⑤	Review course content.	30 10
14 /	“Space”	Lecture on ulterior motives of Great Powers over the area called “space”. Submit Assignment ⑤	Review course content.	30 10
15 /	Presentation	Present a topic of the student’s choice.	Prepare for presentation. Evaluate one’s presentation and others	60 45
16 /	Final Exam	Final exam (50 minutes)	Study overall course content. Review the content of the exam and the results.	50 10
17 /	Self-check			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Calculus A	2	611200	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	KIHARA, Hitsohi	Hakusanroku C: 101.201		(M-F) 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Limits	Students will be able to master the concept of a limit, show how a limit help us define the derivative, consider different techniques of differentiation, know how to use derivatives to sketch the graphs of numerous functions, learn how to apply the concept of derivatives to real-world problems, and how sequences can be useful to convey numbers.
2	Continuity	
3	Derivatives	
4	Graphs	
5	Sequences	

Course Description and Expectations for Students (10.5pt)

In this course, we will learn how the study of calculus came to be and why calculus is important for many different fields in science and technology. The course will start with the idea of limits and how we use limits to understand how functions behave at certain points and at infinity. We will then learn the notion of continuity and how limits and continuity help us understand the notion of a derivative. Once we know what a derivative is, we will learn many techniques of differentiation and applications to differentiation. We will finish the course with a basic introduction to sequences which will get us ready for the next course.
This course will offer peer teaching in class as a type of active learning.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: Calculus Early Transcendentals 9th Edition by James Stewart (Cengage Learning) ISBN-13: 978-1337613927
Reference books: Pre-Calculus Mathematics for Calculus 7th Edition by James Stewart (Brooks/Cole Pub Co) ISBN-13: 978-1305071759
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have a decent understanding of the concepts covered in Pre-Calculus about functions, their graphs and their properties. It is advised that students should feel comfortable asking questions in and outside of the class. Further, students should take the worksheet problems in class serious in order to understand the topics covered in class. Students should eventually understand that making mistakes is crucial for their learning.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, d, g, i	Students will be able to understand the purpose of finding the limits of functions.
②	a, d, g, i	Students will be able to understand the meaning of a derivative.
③	a, d, g, i	Students will be able to understand how to apply different techniques of differentiation.
④	a, d, g, i	Students will be able to understand how to sketch graphs of functions by using derivatives.
⑤	a, d, g, i	Students will be able to understand different applications of derivatives.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		25	45	20	10	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	20	5	0	0	0	0	35
	Ability to think, reason and create	15	25	5	4	0	0	0	49
	Collaboration and leadership	0	0	5	3	0	0	0	8
	Announcement / Expression / Communication	0	0	5	3	0	0	0	8
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	There will be one exam, the final exam which will cover material for latter half of this semester. It is worth 25% of your final grade. It is crucial that you study all your notes, homework and quizzes before a test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be one quiz in each lecture which will cover material from the previous lesson. The average of all your quizzes will be your final score which is worth 20% of your final grade. These quizzes are meant to make sure you are keeping up with the class. And there will be one mid-term test which will cover material for the former half of this semester. It is worth 25% of your grade, so 45% of your final grade will be obtained through these quizzes and mid-term test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students will have to submit an output-activity assignment in each lecture. In this activity, you need to make your own problem and its answer, and then explain them to your classmates. The grading criteria are as follows. Additional points will be the number of classmates' signatures (maximum of 3) you were able to get in class time. Losing points will be how many worksheets you have signed on which include some mistakes, big gaps in logic or insufficient explanations. In total, your assignment will equate to 20% of your final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	There will be two Math-battle activities. In these activities, each student as a team member will create their own problems and solve problems which the other teams created. The more problems you can create or solve, the more points your team will get. It is worth 10% of your final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are curious, ask a lot of questions and show willingness to try new ideas, no matter of failure. Further, students understand that making mistakes is crucial to learning. Therefore, students go back and correct any mistakes they might have encountered in their work/HW/quizzes/exams. In essence, students learn the procedure of learning.	Students address their weaknesses in specific topics and form a plan in order to succeed in Calculus.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus/Class Introduction	Lecture	Read the syllabus.	0
2 /	The Limit and Continuity	Lecture Worksheet	Read Section 2.2 and 2.5 Finish worksheet/HW.	30
3 /	Calculating Limits 1	Quiz Lecture Worksheet	Read Section 2.3 and 2.6 Finish worksheet/HW.	30
4 /	Calculating Limits 2	Quiz Lecture Worksheet	Read Section 2.3 and 2.6 Finish worksheet/HW.	30
5 /	Calculating Limits 3	Quiz Lecture Worksheet	Read Section 2.3 and 2.6 Finish worksheet/HW.	30
6 /	Calculating Limits 4	Quiz Lecture Worksheet	Read Section 2.3 and 2.6 Finish worksheet/HW.	30
7 /	Tangent Lines	Quiz Lecture Worksheet	Read Section 2.7 Finish worksheet/HW.	30
8 /	Derivatives	Quiz Lecture Worksheet	Read Section 2.8 Finish worksheet/HW.	30
9 /	Differentiation	Quiz Lecture Worksheet	Read Section 3.1 Finish worksheet/HW.	30
10 /	The Product and Quotient Rules	Quiz Lecture Worksheet	Read Section 3.2 Finish worksheet/HW.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	The Chain Rule	Quiz Lecture Worksheet	Read Section 3.4 Finish worksheet/HW.	30
12 /	Derivatives of Trigonometric Functions	Quiz Lecture Worksheet	Read Section 3.3 Finish worksheet/HW.	30
13 /	Derivatives of Exponential/Logarithmic Functions	Quiz Lecture Worksheet	Read Section 3.6 Finish worksheet/HW.	30
14 /	Summary of Derivatives	Quiz Lecture Worksheet	Finish worksheet/HW.	30
15 /	Math Battle	Presentation Group work	Review materials from #1 to #14	30
16 /	Review for Mid-term Test	Self-Study / Q&A	Review for Mid-term Test.	30
17 /	Mid-term Test	Mid-term Test Self-Study	Review materials from #1 to #14.	120
18 /	Implicit Differentiation	Test return Lecture Worksheet	Read Section 3.5 Finish worksheet/HW.	30
19 /	Linear Approximations	Quiz Lecture Worksheet	Read Section 3.10 Finish worksheet/HW.	30
20 /	Related Rates	Quiz Lecture Worksheet	Read Section 3.9 Finish worksheet/HW.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Graphs of Functions	Quiz Lecture Worksheet	Read Section 4.1 Finish worksheet/HW.	30
22 /	Maximum and Minimum Values	Quiz Lecture Worksheet	Read Section 4.1 Finish worksheet/HW.	30
23 /	Concavity and Inflection Points	Quiz Lecture Worksheet	Read Section 4.3 Finish worksheet/HW.	30
24 /	L'Hospital's Rule 1	Quiz Lecture Worksheet	Read Section 4.4 Finish worksheet/HW.	30
25 /	L'Hospital's Rule 2	Quiz Lecture Worksheet	Read Section 4.4 Finish worksheet/HW.	30
26 /	L'Hospital's Rule 3	Quiz Lecture Worksheet	Read Section 4.5 Finish worksheet/HW.	30
27 /	L'Hospital's Rule 4	Quiz Lecture Worksheet	Read Section 4.5 Finish worksheet/HW.	30
28 /	Optimization Problems	Quiz Lecture Worksheet	Read Section 4.7 Finish worksheet/HW.	30
29 /	Math Battle	Presentation Group work	Review materials from #18 to #28	30
30 /	Review for Final Exam	Self-Study / Q&A	Review for Final Exam.	30

Course schedule

* In the “Time” column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
31 ／	Final Exam		Review materials from #18 to #28.	120
32 ／	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Calculus B	2	611300	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	KIHARA, Hitsohi	Hakusanroku C: 101.201		(M-F) 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Anti-Derivatives	Students will be able to know the concept of an anti-derivative, show the relationship between the integral and the derivative, understand various methods of integration, use integration as a tool in finding areas and volumes.
2	Riemann's Sum	
3	Integrals	
4	Areas	
5	Volumes	

Course Description and Expectations for Students (10.5pt)

This course will start with the idea of how to find the area under curves using limits and summations. We will then understand how using limits and summations to find areas under curves is using the idea of Riemann's Sum. This then allows us to understand how calculating area under curves brings out the notion of integration. The Fundamental Theorem of Calculus connects what we learned in the first semester of differentiation to the new notion of integration. Different integration techniques will be studied, followed by how to calculate areas and volumes of different shapes by integration. This course will offer peer teaching in class as a type of active learning.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Calculus Early Transcendentals 9th Edition by James Stewart (Cengage Learning) ISBN-13: 978-1337613927

Reference books: Pre-Calculus Mathematics for Calculus 7th Edition by James Stewart (Brooks/Cole Pub Co) ISBN-13: 978-1305071759

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have a decent understanding of the concepts covered in Calculus A.
It is advised that students should feel comfortable asking questions in and outside of the class. Further, students should take the worksheet problems in class serious in order to understand the topics covered in class. Students should eventually understand that making mistakes is crucial for their learning.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, d, g, i	Students will be able to understand the relationship between the derivative and the antiderivative.
②	a, d, g, i	Students will be able to understand the meaning of Reimann's Sum method.
③	a, d, g, i	Students will be able to understand how to find the value of definite integrals.
④	a, d, g, i	Students will be able to understand how to use the properties of definite integrals.
⑤	a, d, g, i	Students will be able to understand how to use the various methods of integration.
⑥	a, d, g, i	Students will be able to understand how to use the integral to find the area and volume of objects.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		25	45	20	10	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	20	5	0	0	0	0	35
	Ability to think, reason and create	15	25	5	4	0	0	0	49
	Collaboration and leadership	0	0	5	3	0	0	0	8
	Announcement / Expression / Communication	0	0	5	3	0	0	0	8
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	There will be one exam, the final exam which will cover material for latter half of this semester. It is worth 25% of your final grade. It is crucial that you study all your notes, homework and quizzes before a test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be one quiz in each lecture which will cover material from the previous lesson. The average of all your quizzes will be your final score which is worth 20% of your final grade. These quizzes are meant to make sure you are keeping up with the class. And there will be one mid-term test which will cover material for the former half of this semester. It is worth 25% of your grade, so 45% of your final grade will be obtained through these quizzes and mid-term test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students will have to submit an output-activity assignment in each lecture. In this activity, you need to make your own problem and its answer, and then explain them to your classmates. The grading criteria are as follows. Additional points will be the number of classmates' signatures (maximum of 3) you were able to get in class time. Losing points will be how many worksheets you have signed on which include some mistakes, big gaps in logic or insufficient explanations. In total, your assignment will equate to 20% of your final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	There will be one or two Math-battle activities. In these activities, each student as a team member will create their own problems and solve problems which the other teams created. The more problems you can create or solve, the more points your team will get. It is worth 10% of your final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are curious, ask a lot of questions and show willingness to try new ideas, no matter of failure. Further, students understand that making mistakes is crucial to learning. Therefore, students go back and correct any mistakes they might have encountered in their work/HW/quizzes/exams. In essence, students learn the procedure of learning.	Students address their weaknesses in specific topics and form a plan in order to succeed in Calculus.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus/Class Introduction Antiderivatives 1	Lecture Worksheet	Read Section 4.9. Read the syllabus. Finish worksheet/HW.	30
2 /	Antiderivatives 2	Quiz Lecture Worksheet	Read Section 4.9. Finish worksheet/HW.	30
3 /	Riemann Sum 1	Quiz Lecture Worksheet	Read Section 5.1. Finish worksheet/HW.	30
4 /	Riemann Sum 2	Quiz Lecture Worksheet	Read Section 5.1. Finish worksheet/HW.	30
5 /	The Definite Integral 1	Quiz Lecture Worksheet	Read Section 5.2 and 5.3. Finish worksheet/HW.	30
6 /	The Definite Integral 2	Quiz Lecture Worksheet	Read Section 5.2. Finish worksheet/HW.	30
7 /	Properties of the Definite Integral 1	Quiz Lecture Worksheet	Read Section 5.2. Finish worksheet/HW.	30
8 /	Properties of the Definite Integral 2	Quiz Lecture Worksheet	Read Section 5.2 and 5.5. Finish worksheet/HW.	30
9 /	The Substitution Rule 1	Quiz Lecture Worksheet	Read Section 5.5. Finish worksheet/HW.	30
10 /	The Substitution Rule 2	Quiz Lecture Worksheet	Read Section 5.5. Finish worksheet/HW.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	The Substitution Rule 3	Quiz Lecture Worksheet	Read Section 5.5. Finish worksheet/HW.	30
12 /	The Substitution Rule 4	Quiz Lecture Worksheet	Read Section 7.3. Finish worksheet/HW.	30
13 /	Math Battle	Presentation Group work	Review materials from #1 to #12	30
14 /	Review for Mid-term Test	Self-Study / Q&A	Review for Mid-term Test.	30
15 /	Mid-term Test	Mid-term Test Self-Study	Review materials from #1 to #12.	120
16 /	Integration by Parts 1	Test return Lecture Worksheet	Read Section 7.1. Finish worksheet/HW.	30
17 /	Integration by Parts 2	Quiz Lecture Worksheet	Read Section 7.1. Finish worksheet/HW.	30
18 /	Integration by Part 3	Quiz Lecture Worksheet	Read Section 7.1. Finish worksheet/HW.	30
19 /	Integration of Rational Functions 1	Quiz Lecture Worksheet	Read Section 7.4. Finish worksheet/HW.	30
20 /	Integration of Rational Functions 2	Quiz Lecture Worksheet	Read Section 7.4. Finish worksheet/HW.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Integration of Rational Functions 3	Quiz Lecture Worksheet	Read Section 7.4. Finish worksheet/HW.	30
22 /	Trigonometric Integrals 1	Quiz Lecture Worksheet	Read Section 7.2. Finish worksheet/HW.	30
23 /	Trigonometric Integrals 2	Quiz Lecture Worksheet	Read Section 7.2. Finish worksheet/HW.	30
24 /	Areas Between Curves 1	Quiz Lecture Worksheet	Read Section 6.1. Finish worksheet/HW.	30
25 /	Areas Between Curves 2	Quiz Lecture Worksheet	Read Section 6.1. Finish worksheet/HW.	30
26 /	Areas Between Curves 3	Quiz Lecture Worksheet	Read Section 6.1. Finish worksheet/HW.	30
27 /	Solids of Revolution 1	Quiz Lecture Worksheet	Read Section 6.2. Finish worksheet/HW.	30
28 /	Solids of Revolution 2	Quiz Lecture Worksheet	Read Section 6.2. Finish worksheet/HW.	30
29 /	Solids of Revolution 3	Quiz Lecture Worksheet	Read Section 6.2. Finish worksheet/HW.	30
30 /	Review for Final Exam or Math Battle	Self-Study / Q&A or Presentation Group work	Review for Final Exam.	30

Course schedule

* In the “Time” column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
31 ／	Final Exam		Review materials from #16 to #29.	120
32 ／	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Algebra and Geometry A	2	611600	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	HUSSIEN, Alaa	Hakusanroku C 101. 201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Matrices – Linear equations	Students will be able to define a matrix and recognize its properties, understand how to use matrices for solving linear equations, solve some real life application problems using matrices, know the equations for a parabola, ellipse and hyperbola, and understand some applications from the real life that uses such shapes.
2	Determinants – Cramer rule	
3	Conic Sections-Parabolas	
4	Ellipse	
5	Hyperbola	

Course Description and Expectations for Students (10.5pt)

In the first part of this course, students will study the notion of basic linear algebra. That is, they will look at simultaneous equations and convert them into matrices. Then, they will learn how to solve linear equations using matrices and apply their knowledge to solve some real-life application problems. Students will also learn the algebra and properties of matrices. In the second part, students will learn about conic sections such as parabolas, ellipses, and hyperbolas. They will study the equations of each shape and the proofs of those equations. In addition, they will learn how such shapes are used in useful and different real-life applications. It is advised that students pay attention to understand the topic of each class very well, ask questions during the class, and submit the assignments on time. The lecture style of this course is conducted through a discussion and Q&A between the teacher and students in order to get them involved in to the class. In addition, students help each other through peer learning during the work sheet solving time. These are two types of the active learning applied in the class.

【Required Materials (textbooks, reference books, reserved books)】

Textbooks: Pre-Calculus Mathematics for Calculus 7th Edition by James Stewart- CENGAGE-ISBN 978-1305071759

Reference books: Calculus Early Transcendentals 7th Edition by James Stewart- CENGAGE-ISBN 978-0538497909

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have a basic understanding of equations and geometry.
It is advised that students should feel comfortable asking questions in and outside of the class. Further, students should take the worksheet problems in class serious to understand the topics covered in class. Students should eventually understand that making mistakes is crucial for their learning.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, g, i	Students will be able to define a matrix and recognize its properties.
②	a, d, g, i	Students will be able to understand how to use matrices for solving systems of linear equations.
③	a, d, f, g	Students will be able to find the determinant and inverse of a matrix.
④	a, d, g, i	Students will be able to solve different real life applications problems using matrices.
⑤	a, d, g, i	Students will be able to define a parabola, ellipse, hyperbola, graph them and recognize their properties.
⑥	a, g, i	Students will be able to understand how such shapes are useful in making some daily used devices

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	40	20	0	0	10	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	20	10	0	0	0	0	45
	Ability to think, reason and create	15	20	10	0	0	0	0	45
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	10	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	There will be one exam, the final exam which will cover materials studied in the whole semester. It is worth 30% of your final grade. It is crucial that you study all your notes, homework, and quizzes before the exam.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be one quiz each class which will cover material from the previous lesson. The average of all your quizzes will be your final score which is worth 20% of your final grade. There will be two-chapter tests, each test is worth 10% of the final grade for a total of 20%. So 40% of your score will be obtained through the quizzes and the chapter tests.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students will have to submit a HW/worksheet assignment every class and the deadline will be the end of the learning session of the class day. The grading criteria will be based on whether you have checked your answer and have corrected your mistakes completely. In total, your assignment will equate to 20% of your final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	The portfolio aspect of the grade is meant to make sure the student is keeping up with all the daily material in a neat and organized manner. There will be a rubric that will determine your final score for your portfolio. The rubric will measure the following: 1-Notebook – Did the student take a decent amount of notes for each lecture? 5% 2-Binder – Are the papers of all sections well organized? 2% 3-Work– Did the student go back to correct mistakes in their work/HW/quizzes/exams? 3%
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
1-Students learn different methods for solving linear equations using matrices and determinants. 2-Detrmine whether the system is dependent or inconsistent. 3-Apply that in many real life applications such as graphics, cryptography, chemical reactions, etc. 4-Students know the definitions and graphs of conic sections and finding their equations. 5-Uderstand how conics sections are useful to make some daily used devices such as antennas and navigations system 6-Students are curious, ask a lot of questions and show willingness to try new ideas, no matter of failure.	1-Students learn how to solve linear equations using matrices and determinants. 2-Determine whether the system is dependent or inconsistent. 3-know the definitions and graphs of basic conic sections and some applications. 4-Students address their weaknesses in specific topics and form a plan to succeed in the course.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus/Class Introduction		Read the syllabus. Preview content for L.#2	30
2 /	System of Linear Equations in Two Variables	Lecture Worksheet #1	Finish worksheet/HW. Preview content for L.#3	30
3 /	System of Linear Equations in Several Variables	Lecture Worksheet #2	Finish worksheet/HW. Preview content for L.#4	30
4 /	Matrices and Systems of Linear Equations Part I	Lecture Worksheet #3	Finish worksheet/HW. Preview content for L.#5	30
5 /	Matrices and Systems of Linear Equations Part II	Lecture Worksheet #4	Finish worksheet/HW. Preview content for L.#6	30
6 /	The Algebra of Matrices Part I	Lecture Worksheet #5	Finish worksheet/HW. Preview content for L.#7	30
7 /	The Algebra of Matrices Part II	Lecture Worksheet #6	Finish worksheet/HW. Preview content for L.#8	30
8 /	Inverses of Matrices and Matrix Equations Part I	Lecture Worksheet #7	Finish worksheet/HW. Preview content for L.#9	30
9 /	Inverses of Matrices and Matrix Equations Part II	Lecture Worksheet #8	Finish worksheet/HW. Preview content for L.#10	30
10 /	Determinants	Lecture Worksheet #9	Finish worksheet/HW. Preview content for L.#11	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Cramer's Rule	Lecture Worksheet #10	Finish worksheet/HW. Preview content for L.#12	30
12 /	Systems of Non-Linear Equations	Lecture Worksheet #11	Finish worksheet/HW. Preview content for L.#11	30
13 /	Systems of Inequalities	Lecture Worksheet #12	Finish worksheet/HW. Preview content for L.#13	30
14 /	Applications of Matrices Part I	Lecture Worksheet #13	Finish worksheet/HW. Preview content for L.#13	30
15 /	Applications of Matrices Part II	Lecture Worksheet #14	Finish worksheet/HW. Preview content for L.#14	30
16 /	Applications of Matrices Part III	Lecture Worksheet #15	Finish worksheet/HW. Preview content for L.#15	30
17 /	Applications of Matrices Part IV	Lecture Worksheet #16	Finish worksheet/HW. Preview content for L.#16	30
18 /	Applications of Matrices Part V	Lecture Worksheet	Finish worksheet/HW. Review content for Test I.	30
19 /	Review for TEST I	Self-Study / Q&A	Review content for Test I	80
20 /	TEST I		Preview content for L.#21	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Conic Sections: Parabolas	Lecture Worksheet #17	Finish worksheet/HW. Preview content for L.#22	30
22 /	Applications of Parabolas	Lecture Worksheet #18	Finish worksheet/HW. Preview content for L.#23	30
23 /	Conic Sections: Ellipses	Lecture Worksheet #19	Finish worksheet/HW. Preview content for L.#24	30
24 /	Applications of Ellipses	Lecture Worksheet #20	Finish worksheet/HW. Preview content for L.#25	30
25 /	Conic Sections: Hyperbolas	Lecture Worksheet #21	Finish worksheet/HW. Preview content for L.#26	30
26 /	Applications of Hyperbolas	Lecture Worksheet #22	Finish worksheet/HW. Preview content for L.#27	30
27 /	Shifted Parabolas/Ellipses/Hyperbolas	Lecture Worksheet #23	Finish worksheet/HW. Review content for Test II	30
28 /	Review for TEST II	Self-Study / Q&A	Review content for Test II.	80
29 /	TEST II		Review for Final Exam.	30
30 /	TEST II return Review for Final Exam	Self-Study / Q&A	Review for Final Exam.	120

Course schedule

* In the “Time” column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
31 ／	Final Exam		Review all materials	120
32 ／	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Algebra and Geometry B	2	611700	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	HUSSIEN, Alaa	Hakusanroku C 101. 201		Tuesday 16:30-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Hyperbolic functions.	Students will learn about hyperbolic functions and how they are related to hyperbolas and understand how to represent equations in polar form, understand the difference between scalar quantities and vector quantities, learn about the properties of vectors and vector operations in 2D and 3D, look at different applications that incorporate vectors, know how to find the dot and cross product of two vectors, learn how to find vector equations of lines and planes in 3D, and study some vector applications in real-life.
2	Polar coordinates.	
3	Vectors(2D)-Vectors(3D)	
4	Dot product-Cross Product(3D)	
5	Equations of lines-Equations of planes	

Course Description and Expectations for Students (10.5pt)

This course is divided into 3 parts, the first part is related to hyperbolic functions and polar coordinates. The second part is related to vectors in 2D and the third part is related to vectors in 3D. Students will learn the definition of hyperbolic functions and its relation to hyperbola. They will know about the polar coordinates and how to represent and graph equations using polar system. Then they will learn about definition and properties of vectors in 2D, how to do different operations on vectors in 2D such as addition subtraction and multiplying by a scalar, and their applications in real life. The dot product of two vectors in 2D is important as it has many applications in real life, so student will know how to find it. After studying the vectors in 2D, students will learn about vectors in 3D and how to find the dot and cross product of two vectors in 3D and know about different applications. In 3D they will also learn about how to find equations of lines and planes and their applications. It is advised that students do their best by asking questions to understand the topic of each class very well as the topic of next classes depends up on the previous ones. The lecture style of this course is conducted through a discussion and Q&A between the teacher and students in order to get them involved in to the class. In addition, students help each other through peer learning during the work sheet solving time. These are two types of the active learning applied in the class.

【Required Materials (textbooks, reference books, reserved books)】
Textbooks: Pre-Calculus Mathematics for Calculus 7th Edition by James Stewart- CENGAGE-ISBN 978-1305071759
Reference books: Calculus Early Transcendentals 7th Edition by James Stewart- CENGAGE-ISBN 978-0538497909
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have a basic understanding of equations and geometry, and remember the definition of hyperbola from the first term. It is advised that students should feel comfortable asking questions in and outside of the class. Further, students should take the worksheet problems in class serious in order to understand the topics covered in class. Students should eventually understand that making mistakes is crucial for their learning.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, g, i	Students will be able to understand the definition hyperbolic functions and polar coordinates system.
②	a, d, g, i	Students will be able to understand the properties of vectors and vector operations in two dimensions.
③	a, d, f, g	Students will be able to solve application problems using vectors to model force, displacement & velocity.
④	a, d, g, i	Students will be able to define a vector and understand its properties in three dimensions.
⑤	a, d, g, i	Students will be able to find the dot product and cross product of vectors in three dimensions.
⑥	a, g, i	Students will be able to find equations of lines and planes in three dimensions.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	40	20	0	0	10	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	20	10	0	0	0	0	45
	Ability to think, reason and create	15	20	10	0	0	0	0	45
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	10	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	There will be one exam, the final exam which will cover materials studied in the whole semester. It is worth 30% of your final grade. It is crucial that you study all your notes, homework, and quizzes before the exam.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be one quiz each class which will cover material from the previous lesson. The average of all your quizzes will be your final score which is worth 20% of your final grade. There will be two-chapter tests, each test is worth 10% of the final grade for a total of 20%. So 40% of your score will be obtained through the quizzes and the chapter tests.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students will have to submit a HW/worksheet assignment every class and the deadline will be the end of the learning session of the class day. The grading criteria will be based on whether you have checked your answer and have corrected your mistakes completely. In total, your assignment will equate to 20% of your final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	The portfolio aspect of the grade is meant to make sure the student is keeping up with all the daily material in a neat and organized manner. There will be a rubric that will determine your final score for your portfolio. The rubric will measure the following: 1-Notebook – Did the student take a decent amount of notes for each lecture? 5% 2-Binder – Are the papers of all sections well organized? 2% 3-Work– Did the student go back to correct mistakes in their work/HW/quizzes/exams? 3%
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
1-Students learn about hyperbolic functions, polar coordinates and graph equations in polar system. 2-Students learn about vectors in 2D, their properties, operations, dot product 3-How to use vectors in 2D for velocity and force modeling applications in physics. 4-Learn about vectors in 3D, their properties, operations, dot and cross product. 5-Use vectors in 3D for torque modeling and distance calculation application. 6-Students are curious, ask a lot of questions try new ideas.	1-Students learn about the hyperbolic functions and polar system. 2-Know the definition of vectors, properties, and basic operations in 2D. 3-Undertsand some applications related to physics 4-Learn about 3D coordinates, definition of vectors in 3D and basic operations and some applications. 5-Students address their weaknesses in specific topics and form a plan to succeed in the course.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus/Class Introduction Hyperbolic function	Lecture Worksheet #1	Read the syllabus. Preview content for L.#2	30
2 /	Polar coordinate system part I	Lecture Worksheet #2	Finish worksheet/HW. Preview content for L.#3	30
3 /	Polar coordinate system part II	Lecture Worksheet #3	Finish worksheet/HW. Preview content for L.#4	30
4 /	Vectors Introduction Vectors in Two Dimensions Part I	Lecture Worksheet #4	Finish worksheet/HW. Preview content for L.#5	30
5 /	Vectors in Two Dimensions Part II	Lecture Worksheet #5	Finish worksheet/HW. Preview content for L.#6	30
6 /	Applications of Vectors in Two Dimensions	Lecture Worksheet #6	Finish worksheet/HW. Preview content for L.#7	30
7 /	The Dot Product of Vectors	Lecture Worksheet #7	Finish worksheet/HW. Preview content for L.#8	30
8 /	Applications of the Dot Product Part I	Lecture Worksheet #8	Finish worksheet/HW. Preview content for L.#9	30
9 /	Applications the Dot Product Part II	Lecture Worksheet #9	Finish worksheet/HW. Preview content for L.#10	30
10 /	Applications of the Dot Product Part III	Lecture Worksheet #10	Finish worksheet/HW. Preview content for L.#11	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Applications of the Dot Product Part IV	Lecture	. Review all contents for Test #1	30
12 /	Review for Test I	Self-Study / Q&A	Review content for Test #1	30
13 /	TEST I		Preview content for L.#14	30
14 /	Three-Dimensional Coordinate Geometry Part I	Lecture Worksheet #11	Finish worksheet/HW. Preview content for L.#15	30
15 /	Three-Dimensional Coordinate Geometry Part II	Lecture Worksheet #12	Finish worksheet/HW. Preview content for L.#16	30
16 /	Vectors in Three Dimensions Part I	Lecture Worksheet #13	Finish worksheet/HW. Preview content for L.#17	30
17 /	Vectors in Three Dimensions Part II	Lecture Worksheet #14	Finish worksheet/HW. Preview content for L.#18	30
18 /	Vectors in Three Dimensions Part III	Lecture Worksheet #15	Finish worksheet/HW. Preview content for L.#19	30
19 /	The Cross Product Part I	Lecture Worksheet #16	Finish worksheet/HW. Preview content for L.#20	80
20 /	The Cross Product Part II	Lecture Worksheet #17	Finish worksheet/HW. Preview content for L.#21	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Applications of the Cross Product	Lecture Worksheet #18	Finish worksheet/HW. Preview content for L.#22	30
22 /	Equations of Lines	Lecture Worksheet #19	Finish worksheet/HW. Preview content for L.#23	30
23 /	Applications of Lines Part I	Lecture Worksheet #20	Finish worksheet/HW. Preview content for L.#24	30
24 /	Applications of Lines Part II	Lecture Worksheet #21	Finish worksheet/HW. Preview content for L.#25	30
25 /	Equations of Planes	Lecture Worksheet #22	Finish worksheet/HW. Preview content for L.#26	30
26 /	Applications of Planes Part I	Lecture Worksheet #23	Finish worksheet/HW. Preview content for L.#27	30
27 /	Applications of Planes Part II	Lecture Worksheet #24	Finish worksheet/HW. Review content for Test II	30
28 /	Review for Test II	Self-Study / Q&A	Finish worksheet/HW. Review content for Test II	80
29 /	TEST II		Review for Final Exam.	30
30 /	TEST II return Review for Final Exam	Self-Study / Q&A	Review for Final Exam.	120

Course schedule

* In the “Time” column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
31 ／	Final Exam		Review all materials	120
32 ／	Final Exam Return			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Physics A	2	612000	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	ITO, Meguru	Hakusanorku C 101.201		Mon.-Fri. 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Electricity	Physics cultivates the ability to think systematically and logically about phenomena that are important to learn natural science and engineering. In this course, students will be able to deepen their knowledge about physical phenomena about electricity and magnetism. Students will also learn heat and thermodynamics.
2	Magnetism	
3	Heat	
4	Thermodynamics	
5		

Course Description and Expectations for Students (10.5pt)

In this course,

- Students must submit all exercises, quizzes, and preview checks.
- Late submission may reduce students' score.
- All classes are conducted in English.
- Students must take notes and submit them each month.

Advice for students:

- Physics A is a course that forms the base of Physics B, specialized courses in 4th and 5th grade. Be sure to understand the contents. If you have any questions, ask during classes, learning sessions, and/or schedule a meeting with a teacher during posted office hours.

This course consists of preparations (preview check), classes (exercise/class work/quiz), and reviews. Be sure to work on preparations because understanding during classes will improve greatly.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books: Physics (HMH) ISBN 978-0-544-81773-9

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge of Fundamental Physics A and B

Fundamental skills of calculation

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to understand factors of electricity (field, potential, current etc.).
②	h,i	Students will be able to understand magnetism.
③	h,i	Students will be able to understand relationship between electricity and magnetism.
④	h,i	Students will be able to understand heat and thermodynamics.
⑤	d,h,i	Students will be able to understand physical phenomena through experiments and inquiry project.
⑥	i	Students will be able to participate classes actively and review what you achieved.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	20	20	0	0	10	10	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	10	0	0	0	0	40
	Ability to think, reason and create	20	10	10	0	0	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	5	5
	Attitude and motivation for learning	0	0	0	0	0	10	5	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	An exam will be administered at end of semester. The exam covers all topics that students learned in the semester.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①	✓	Students will have short quizzes in class to check understanding of the content.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Exercises and Preview checks will be done in most classes. The exercises should be done in class time. But if students could not finish exercise in class time, it should be finished by the next class, or the due date designated by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		Students must take notes in class. Students' notebook will be graded based on the content and organization level of the notes.
	②		
	③		
	④		
	⑤		
	⑥	✓	
Others	①		Students are able to give feedback about classes.
	②		
	③		
	④		
	⑤		
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to identify and understand actual phenomena correctly with physical interpretation. Students are able to calculate and solve questions correctly using formulae. Students are able to understand units and their dimensions for each physical value discussed in the course.	Students are able to understand physical phenomena. Students are able to calculate and solve questions using formulae. Students are able to understand units of physical values.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Review of Buoyancy Understanding through the experiment	Guidance and experiment	Reading the given documents Reading textbook, then preview check	30
2 /	Electrostatics Understanding Coulomb's law and electrostatic forces	Lecture and exercise	Confirming the unclear points	15
3 /	Electrostatics Understanding Coulomb's law and electrostatic forces	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
4 /	Electric Field Understanding the electric fields	Lecture and exercise Quiz	Confirming the unclear points	15
5 /	Electric Field Understanding the electric fields	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
6 /	Electric Potential Understanding the electric potential energy and electric potential	Lecture and exercise Quiz	Confirming the unclear points	15
7 /	Electric Potential Understanding the electric potential energy and electric potential	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
8 /	Capacitance Understanding the capacitance	Lecture and exercise Quiz	Confirming the unclear points	15
9 /	Capacitance Understanding the capacitance	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
10 /	Current and Resistance Understanding the electric current, Ohm's law, electric power, and Joule's heat.	Lecture and exercise Quiz	Finishing exercise and reviewing the class Reading textbook, then preview check	45

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Magnets and Magnetic Fields Understanding the magnetic fields	Lecture and exercise	Confirming the unclear points	15
12 /	Magnets and Magnetic Fields Understanding the magnetic fields	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
13 /	Magnetism from Electricity Understanding the Right-hand rule	Lecture and exercise Quiz	Confirming the unclear points	15
14 /	Magnetism from Electricity Understanding the Ampere's law	Lecture and exercise	Finishing exercise and reviewing class Reading textbook, then preview check	45
15 /	Electricity from Magnetism Understanding the electromagnetic induction	Lecture and exercise Quiz	Confirming the unclear points	15
16 /	Electricity from Magnetism Understanding the Faraday's law	Lecture and exercise	Finishing exercise and reviewing class Reading textbook, then preview check	45
17 /	Generators, Motors, Mutual inductance, and Transformers Understanding the mutual induction	Lecture and exercise Quiz	Confirming the unclear points	30
18 /	Heat transfer Understanding the various types of heat transfer	Lecture and exercise	Finishing exercise and reviewing class	15
19 /	Heat Understanding the specific heat capacity of matter	Lecture and exercise	Confirming the unclear points	45
20 /	Heat Understanding the heat expansion	Lecture and exercise	Finishing exercise and reviewing class	15

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Change in Phase Understanding the latent heat and phase change	Lecture and exercise Quiz	Finishing exercise and reviewing class Reading textbook, then preview check	45
22 /	The First Law of Thermodynamics Understanding the processes of thermodynamics	Lecture and exercise	Confirming the unclear points	15
23 /	The First Law of Thermodynamics Understanding the adiabatic process	Lecture and exercise	Finishing exercise and reviewing class Reading textbook, then preview check	45
24 /	The Second Law of Thermodynamics Understanding the heat engines and entropy	Lecture and exercise Quiz	Finishing exercise and reviewing class	30
25 /	The Second Law of Thermodynamics Understanding the Carnot cycle	Lecture and exercise	Confirming the unclear points	15
26 /	Inquiry Based Project Researching the physical phenomenon, creating student’s idea, and writing a report	Project Quiz	Continuing the assignment	15
27 /	Inquiry Based Project Researching the physical phenomenon, creating student’s idea, and writing a report	Project	Continuing the assignment	15
28 /	Inquiry Based Project Researching the physical phenomenon, creating student’s idea, and writing a report	Project	Finishing the report	45
29 /	Exercise Understanding the learned contents	Exercise	Reviewing the contents so far. Checking wrong answer	45
30 /	Exercise Understanding the learned contents	Exercise	Reviewing the contents so far. Checking wrong answer	45
31	Final exam		Review all materials	

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
32	Final exam return			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Physics B	2	612100	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	ITO, Meguru	Hakusanorku C 101.201		Mon.-Fri. 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Vibration	Physics cultivates the ability to think systematically and logically about phenomena that are important to learn natural science and engineering. In this course, students will be able to deepen their knowledge about the phenomena of wave motion, sound, and light. Students will also learn the fundamentals of nuclear physics and atomic energy.
2	Wave	
3	Sound	
4	Light	
5	Radioactivity and nuclear reaction	

Course Description and Expectations for Students (10.5pt)

In this course,

- Students must submit all exercises, quizzes, and preview checks.
- Late submission may reduce students' score.
- All classes are conducted in English.
- Students must take notes and submit them each month.

Advice for students:

- Physics A is a course that forms the base of Physics B, specialized courses in 4th and 5th grade. Be sure to understand the contents. If you have any questions, ask during classes, learning sessions, and/or schedule a meeting with a teacher during posted office hours.

This course consists of preparations (preview check), classes (exercise/class work/quiz), and reviews. Be sure to work on preparations because understanding during classes will improve greatly.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books: Physics (HMH) ISBN 978-0-544-81773-9

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge of Fundamental Physics A, B and Physics A

Fundamental skills of calculation

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to understand concept of simple harmonic motion.
②	h,i	Students will be able to understand characteristics of sound wave and light wave.
③	h,i	Students will be able to understand physics of refraction and interference of wave.
④	h,i	Students will be able to understand concept of radioactivity and nuclear reaction.
⑤	d,h,i	Students will be able to understand physical phenomena through experiments and inquiry project.
⑥	i	Students will be able to participate classes actively and review what you achieved.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	20	20	0	0	10	10	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	10	0	0	0	0	40
	Ability to think, reason and create	20	10	10	0	0	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	5	5
	Attitude and motivation for learning	0	0	0	0	0	10	5	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	An exam will be administered at end of semester. The exam covers all topics that students learned in the semester.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①	✓	Students will have short quizzes in class to check understanding of the content.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Exercises and Preview checks will be done in most classes. The exercises should be done in class time. But if students could not finish exercise in class time, it should be finished by the next class, or the due date designated by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		Students must take notes in class. Students' notebook will be graded based on the content and organization level of the notes.
	②		
	③		
	④		
	⑤		
	⑥	✓	
Others	①		Students are able to give feedback about classes.
	②		
	③		
	④		
	⑤		
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to identify and understand actual phenomena correctly with physical interpretation. Students are able to calculate and solve questions correctly using formulae. Students are able to understand units and their dimensions for each physical value discussed in the course.	Students are able to understand physical phenomena. Students are able to calculate and solve questions using formulae. Students are able to understand units of physical values.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Vibration Understanding the Hooke's Law	Lecture and exercise	Confirming the unclear points	15
2 /	Vibration Understanding the Hooke's Law	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
3 /	Simple Harmonic Motion Understanding the motion of simple harmonic motion	Lecture and exercise Quiz	Confirming the unclear points	15
4 /	Simple Harmonic Motion Understanding the motion of simple harmonic motion	Lecture and exercise	Finishing exercise and reviewing the class	30
5 /	Simple Harmonic Motion Understanding the motion of single pendulum	Lecture and exercise Quiz	Finishing exercise and reviewing the class Reading textbook, then preview check	45
6 /	Properties of Waves Understanding the transverse and the longitudinal wave	Lecture and exercise	Confirming the unclear points	15
7 /	Properties of Waves Understanding the transverse and the longitudinal wave	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
8 /	Sounds Understanding the features of sounds	Lecture and exercise Quiz	Confirming the unclear points	15
9 /	Sounds Understanding the features of sounds	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
10 /	Sounds Understanding the standing wave and Doppler effect	Lecture and exercise Quiz	Confirming the unclear points	15

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Sounds Understanding the standing wave and Doppler effect	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
12 /	Light Understanding the concept of light	Lecture and exercise Quiz	Confirming the unclear points	15
13 /	Color Understanding the characteristics of color	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
14 /	Experiment Understanding the characteristics of light through the experiment	Experiment	Finishing exercise and reviewing the class	15
15 /	Reflection and Refraction Understanding reflection and refraction of light	Lecture and exercise	Finishing exercise and reviewing the class Reading textbook, then preview check	45
16 /	Lenses Understanding the characteristics of lenses	Lecture and exercise	Confirming the unclear points	15
17 /	Lenses Understanding the characteristics of lenses	Lecture and exercise	Confirming the unclear points	30
18 /	Mirrors Understanding the characteristics of mirrors	Lecture and exercise Quiz	Finishing exercise and reviewing the class Reading textbook, then preview check	45
19 /	Diffraction and Interference Understanding the diffraction and interference of light	Lecture and exercise	Confirming the unclear points	15
20 /	Diffraction and Interference Understanding the diffraction and interference of light	Lecture and exercise	Finishing exercise and reviewing the class	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Interference Understanding the interference of light in complex situation	Lecture and exercise Quiz	Finishing exercise and reviewing the class	30
22 /	Inquiry Based Project Researching the physical phenomenon, creating student's idea, and writing a report	Project	Continuing the assignment	15
23 /	Inquiry Based Project Researching the physical phenomenon, creating student's idea, and writing a report	Project	Continuing the assignment	15
24 /	Inquiry Based Project Researching the physical phenomenon, creating student's idea, and writing a report	Project	Finishing the report	45
25 /	Radioactivity Understanding the radioactivity and half-life	Lecture and exercise	Confirming the unclear points	15
26 /	Radioactivity Understanding the radioactivity and half-life	Lecture and exercise	Finishing exercise and reviewing class Reading textbook, then preview check	45
27 /	Nuclear fission and fusion Understanding the nuclear fission and fusion	Lecture and exercise Quiz	Confirming the unclear points	15
28 /	Nuclear fission and fusion Understanding the nuclear fission and fusion	Lecture and exercise	Finishing exercise and reviewing class	30
29 /	Exercise Understanding the learned contents	Exercise Quiz	Reviewing the contents so far. Checking wrong answer	45
30 /	Exercise Understanding the learned contents	Exercise	Reviewing the contents so far. Checking wrong answer	45
31	Final exam		Review all materials	

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
32	Final exam return			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Chemistry A	1	612400	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	RASHED, Nagwa Fekri	Hakusanroku C 101.201		Wednesday 15:00~

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Properties of Solutions	In this course, students will determine solution concentrations and colligative properties. They will identify the direction of energy transfer in chemical and physical processes and distinguish between exothermic and endothermic processes. They will also explore reaction rates, reversible reactions, and the factors that determine equilibrium. Additionally, they will connect these theories to biochemical, industrial, and daily life applications.
2	Thermochemistry	
3	Enthalpy	
4	Entropy	
5	Reaction Rates & Equilibrium	

Course Description and Expectations for Students (10.5pt)

Chemistry A will include flipped classes, interactive discussions, lab demonstrations, problem-solving exercises, group experiments, peer teaching, investigative learning, and reflective learning, which are types of active learning.

For better course achievements, please consider the following:
- Students` safety comes first, so be constantly aware of your safety by following the Safety in the Chemistry Lab Rules.
- Check eSyllabus regularly for updates.
- Preview the specified sections in the textbook and other resources before attending class.
- Take notes and summarize the topics of the following class by reading relevant book pages and watching the class videos, or accessing other related online resources before class time.
- Use class time to confirm concepts by initiating discussions, answering practice problems, exercises, and conducting group experiments.
- Participate actively in the discussions by asking questions and sharing your ideas with the course professor and classmates.
- To build your portfolio, keep all the materials, such as class notes, experiment reports, and other assignments, in your folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: SAVVAS Chemistry (SAVVAS) ISBN 978-1-323-21353-7
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

- Analysis and problem-solving
- Time management and organization
- Written and oral communication
- Monitoring/maintaining records and data
- Teamwork and research

No.	Program Objectives	Target Abilities for Students (9pt)
①	d, h, i	Students will be able to express the concentration of solutions as molarity, percent by volume, or percent by mass.
②	d, h, i	Students will be able to describe how the freezing-point depression and boiling-point elevation are related to molality.
③	d, h, i	Students will be able to distinguish between endothermic and exothermic processes.
④	d, h, i	Students will be able to determine the amount of energy absorbed or released in a chemical or physical process.
⑤	d, h, i	Students will be able to determine whether a reaction is spontaneous.
⑥	d, h, i	Students will be able to explore the role of energy and the methods used to control chemical reactions.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	20	15	0	0	20	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	10	4	0	0	5	4	38
	Ability to think, reason and create	15	10	4	0	0	5	4	38
	Collaboration and leadership	0	0	0	0	0	0	3	3
	Announcement / Expression / Communication	0	0	3	0	0	5	0	8
	Attitude and motivation for learning	0	0	4	0	0	5	4	13

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	-The final exam is a cumulative exam for all taught chapters/topics.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	- Chapter General Tests will be held for each chapter.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students are expected to do the following: (Refer to the Report Grading Rubrics on eSyllabus) − Include lesson title, student`s full name, and number at the top of each submitted page. − Submit self-checked answers to the assigned textbook and worksheet questions on time. − Write the correct answers to the mistaken questions in a different color. − Turn in any other online assignments on the eSyllabus on time. (A 10 % deduction is applied for each day of delay in submitting an assignment.)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	- The purpose of the portfolio is to provide evidence of students' chemistry knowledge, learning development, process skills, and attitudes. - Portfolio evaluation is based on documentation of learning evidence, themed research, and reflective journal entries, and a letter to reviewers that reflects students' understanding of the learning skills they have gained. (Refer to the Portfolio Grading Criteria on eSyllabus)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①	✓	Grading criteria of this section are as follows (Refer to the Note Taking Rubric on eSyllabus): 1- Clear and organized class notes showing all the covered topics. 2- Clear and organized lab reports of the performed experiments 3- Response in a proper manner to orally asked Qs by teachers or classmates 4- Safety procedures are followed at all times. 5- Cleanliness of the laboratory and hygiene that leads to efficiency in all procedures and class time.
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to: - answer and give explanations of the essential questions by applying the taught chemistry knowledge and concepts. - design and perform experiments safely to find solutions or propose an explanation. - apply their problem-solving skills to solve complex problems whose solutions require multiple steps. - analyze, evaluate, or design a solution to a real-world problem by connecting their gained chemistry knowledge to daily lives and other subjects or fields of study	Students are able to: -answer the essential questions by applying the taught chemistry knowledge. - perform experiments safely, make observations, analyze given data, and use scientific thinking to draw conclusions - apply their problem-solving skills to solve problems whose solutions require multiple steps. - to connect their gained chemistry knowledge to daily lives and other subjects or fields of study.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Properties of Solutions -Identify the factors that affect how fast a substance dissolves. - Describe the equilibrium in a saturated solution and the factors that affect the solubility of a substance.	- Lecture - Practice problems - Exercises - Lesson 16.1 Book Qs	- Make notes and summaries of Lesson 16.1 before class. - Make notes and summaries of Lesson 16.2.	30
2 /	Concentrations of Solutions - Calculate the molarity of a solution. - Describe the effect of dilution on the total moles of solute in solution. -Express solution concentration as a percent by volume or percent by mass.	- Lecture - Practice problems - Exercises - Lesson 16.2 Book Qs.	- Make notes and summaries of Lessons 16.3 & 16.4.	30
3 /	Colligative Properties of Solutions - Explain how colligative properties can be explained on a particle basis. - Identify the two ways of expressing the ratio of solute to solvent in a solution.	- Practice problems - Exercises - Lesson 16.3 and Lesson 16.4 Book Qs.	- Read Small-Scale lab p. 545	30
4 /	Colligative Properties of Solutions -Describe how the freezing-point depression and boiling-point elevation are related to molality.	- Practice problems - Exercises - Lesson 16.3 and Lesson 16.4 Book Qs. - Small-Scale Lab	- Prepare for Chapter 16 General Test. - Make notes and summaries of Lesson 17.1.	30
5 /	The Flow of Energy - Explain how energy changes can occur. - Explain the law of conservation of energy. - Identify two factors on which the heat capacity of an object depends.	- Chapter 16 General Test - Class activity - Lesson 17.1 Book Qs	- Make notes and summaries of Lesson 17.2.	30
6 /	Measuring and Expressing Enthalpy - Describe how to measure the change in enthalpy of a reaction. - Describe how to express the enthalpy change for a reaction in a chemical equation.	- Teacher demo - Class activity - Practice problems - Exercises - Lesson 17.2 Book Qs.	- Make notes and summaries of Lesson 17.3.	30
7 /	Heat Changes of State - Compare the quantity of heat absorbed by a melting solid to the quantity released when the state of matter changes. - Describe the thermochemical changes that occur when a solution forms.	- Experiment - Practice Problems - Exercises - Lesson 17.3 Book Qs.	- Make notes and summaries of Lesson 17.4. - Read and prepare for Small-Scale Lab p. 583	30
8 /	Calculating Heats of Reaction - Identify two ways to determine the heat of the reaction when it cannot be directly measured.	- Lecture - Lesson 17.4 Book Qs. - Small-Scale Lab	-Prepare for Chapter 17 General Test. - Read Quick Lab p. 600 - Make notes and summaries of Lesson 18.1.	30
9 /	Rates of Reaction - Describe how to express the rate of a chemical reaction. - Identify four factors that influence the rate of a chemical reaction.	- Chapter 17 General Test. - Quick Lab - Exercises - Lesson 18.1 Book Qs.	- Make notes and summaries of Lesson 18.2.	30
10 /	The progress of Chemical Reactions - Describe the relationship between the specific rate constant's value and the chemical reaction's speed. - Describe how most reactions progress from start to finish.	- Lecture - Class Activity - Practice Problems - Exercises - Lesson 18.2 Book Qs.	- Make notes and summaries of Lesson 18.3.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Reversible Reactions and Equilibrium - Describe what happens at the molecular level in a chemical system at equilibrium. -Describe what the size of an equilibrium constant indicates about a system at equilibrium.	- Class Activity - Practice problems - Exercises - Lesson 18.3 Book Qs.	- Make notes and summaries of Lesson 18.4.	30
12 /	Solubility Equilibrium - Describe the relationship between the solubility product constant and the solubility of a compound. -Predict whether precipitation will occur when two solutions are mixed.	- Teacher Demo - Practice problems - Exercises - Lesson 18.4 Book Qs.	- Make notes and summaries of Lesson 18.5.	30
13 /	Free Energy and Entropy - Identify the part entropy plays in a chemical reaction. - Identify the two factors that determine whether a reaction is spontaneous.	- Lecture - Practice problems - Exercises - Lesson 18.5 Book Qs.	- Read Small-Scale Lab p. 635	30
14 /	Free Energy and Entropy - Identify the part entropy plays in a chemical reaction. - Identify the two factors that determine whether a reaction is spontaneous.	- Small-Scale Lab	- Prepare for Chapter 18 General Test.	30
15 /	General Review - Review Chapters 16, 17, and 18.	- Chapter 18 General Test - Evaluating and reflecting on the progress of one's learning. - School Questionnaire	- Prepare for the Final Exam - Finalize the Portfolio	30
16 /	Final Exam	- Evaluating the progress of one's learning. - Submit the Chemistry A Portfolio.		30
17 /	Returning Final Exam results.	- Return the graded exams and portfolios - Evaluating and reflecting on the progress of one's learning.		30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Chemistry B	1	612500	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	RASHED, Nagwa Fekri	Hakusanroku C 101.201		Wednesday 15:00~

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	pH	In this course, students will use pH to classify solutions as neutral, acidic, or basic and learn about neutralization. They will also describe redox reactions and relate them to electrochemical processes. Students will also explore the physical and chemical properties of organic compounds, which comprise most natural substances such as fuels, foods, and petrochemicals. Furthermore, they will connect the concepts covered to industrial and daily life applications.
2	Neutralization Reactions	
3	Redox Reactions	
4	Electrochemistry	
5	Organic chemistry	

Course Description and Expectations for Students (10.5pt)

Chemistry B will include flipped classes, interactive discussions, lab demonstrations, problem-solving exercises, group experiments, peer teaching, investigative learning, and reflective learning, which are types of active learning.

For better course achievements, please consider the following:
- Students` safety comes first, so be constantly aware of your safety by following the Safety in the Chemistry Lab Rules.
- Check eSyllabus regularly for updates.
- Preview the specified sections in the textbook and other resources before attending class.
- Take notes and summarize the topics of the following class by reading relevant book pages and watching the class videos, or accessing other related online resources before class time.
- Use class time to confirm concepts by initiating discussions, answering practice problems, exercises, and conducting group experiments.
- Participate actively in the discussions by asking questions and sharing your ideas with the course professor and classmates.
- To build your portfolio, keep all the materials, such as class notes, experiment reports, and other assignments, in your folder.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: SAVVAS Chemistry (SAVVAS) ISBN 978-1-323-21353-7
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

- Analysis and problem-solving
- Time management and organization
- Written and oral communication
- Monitoring/maintaining records and data
- Teamwork and research

No.	Program Objectives	Target Abilities for Students (9pt)
①	d, h, i	Students will be able to define acids, bases, and salts.
②	d, h, i	Students will be able to identify the meaning of pH and the neutralization reactions.
③	d, h, i	Students will be able to describe oxidation-reduction reactions.
④	d, h, i	Students will be able to relate redox reactions to electrochemical processes.
⑤	d, h, i	Students will be able to name and classify basic organic compounds.
⑥	d, h, i	Students will be able to explore the properties of organic compounds.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	20	15	0	0	20	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	10	4	0	0	5	4	38
	Ability to think, reason and create	15	10	4	0	0	5	4	38
	Collaboration and leadership	0	0	0	0	0	0	3	3
	Announcement / Expression / Communication	0	0	3	0	0	5	0	8
	Attitude and motivation for learning	0	0	4	0	0	5	4	13

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	-The final exam is a cumulative exam for all taught chapters/topics.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	- Chapter General Tests will be held for each chapter.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students are expected to do the following: (Refer to the Report Grading Rubrics on eSyllabus) − Include lesson title, student`s full name, and number at the top of each submitted page. − Submit self-checked answers to the assigned textbook and worksheet questions on time. − Write the correct answers to the mistaken questions in a different color. − Turn in any other online assignments on the eSyllabus on time. (A 10 % deduction is applied for each day of delay in submitting an assignment.)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	- The purpose of the portfolio is to provide evidence of students' chemistry knowledge, learning development, process skills, and attitudes. - Portfolio evaluation is based on documentation of learning evidence, themed research, and reflective journal entries, and a letter to reviewers that reflects students' understanding of the learning skills they have gained. (Refer to the Portfolio Grading Criteria on eSyllabus)
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①	✓	Grading criteria of this section are as follows (Refer to the Note Taking Rubric on eSyllabus): 1- Clear and organized class notes showing all the covered topics. 2- Clear and organized lab reports of the performed experiments 3- Response in a proper manner to orally asked Qs by teachers or classmates 4- Safety procedures are followed at all times. 5- Cleanliness of the laboratory and hygiene that leads to efficiency in all procedures and class time.
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to: - answer and give explanations of the essential questions by applying the taught chemistry knowledge and concepts. - design and perform experiments safely to find solutions or propose an explanation. - apply their problem-solving skills to solve complex problems whose solutions require multiple steps. - analyze, evaluate, or design a solution to a real-world problem by connecting their gained chemistry knowledge to daily lives and other subjects or fields of study	Students are able to: -answer the essential questions by applying the taught chemistry knowledge. - perform experiments safely, make observations, analyze given data, and use scientific thinking to draw conclusions - apply their problem-solving skills to solve problems whose solutions require multiple steps. - to connect their gained chemistry knowledge to daily lives and other subjects or fields of study.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Acid-Base Theories - Define an acid and a base according to Arrhenius and Lewis. - Distinguish an acid from a base in Bronsted-Lowery theory.	- Lecture - Practice Problems - Exercises - Lesson 19.1 Book Qs.	- Make notes and summaries of Lesson 19.1 before class. - Make notes and summaries of Lesson 19.2	30
2 /	Hydrogen Ions and Acidity - Describe how $[H^+]$ and $[OH^-]$ are related in an aqueous solution. - Using pH, classify a solution as neutral, acidic, or basic, and identify two methods to measure pH.	- Teacher Demo - Practice Problems - Exercises - Lesson 19.2 Book Qs.	- Make notes and summaries of Lessons 19.3,19.4 and 19.5	30
3 /	Strength of Acids and Bases &Neutralization Reactions and Salts in Solutions - Describe how acids and bases are described as strong or weak. - Identify the products that form when an acid and a base react and the equivalence point.	-Teacher Demo - Practice Problems - Exercises - Lessons 19.3,19.4 and 19.5	- Prepare for Chapter 19 General Test - Make notes and summaries of Lesson 20.1	30
4 /	The Meaning of Oxidation and Reduction - Describe what happens to a substance that undergoes oxidation and a substance that undergoes reduction. -Explain how the presence of salts and acids accelerates the corrosion of metals.	- Chapter 19 General Test - Practice Problems - Exercises - Lesson 20.1 Book Qs.	- Make notes and summaries of Lesson 20.2 & 20.3	30
5 /	Oxidation Numbers &Describing Redox Equations - State the general rules for assigning oxidation numbers. - Define oxidation and reduction in terms of a change in oxidation number - Identify the two classes of chemical reactions.	- Practice Problems - Exercises - Lesson 20.2 and 20.3 Book Qs.	- Make notes and summaries of Lesson 21.1	30
6 /	Electrochemical Cells - Describe how a voltaic cell produces electrical energy. - Identify the current applications that use electrochemical processes to produce electrical energy.	- Experiment - Practice Problems - Exercises - Lesson 21.1 Book Qs.	- Make notes and summaries of Lesson 21.2	30
7 /	Half-cells and Cell Potentials - Identify what causes the electrical potential of an electrochemical cell. - Determine the standard reduction potential of a half-cell and whether a redox reaction is spontaneous or nonspontaneous.	- Experiment - Exercises - Practice Problems - Exercises - Lesson 21.2 Book Qs.	- Make notes and summaries of Lesson 21.3 - Read Quick Lab p.750 and Small-Scale Lab p. 752	30
8 /	Electrolytic Cells - Distinguish between electrolytic and voltaic cells. - Describe some applications that use electrolytic cells.	- Experiment - Exercises - Practice Problems - Lesson 21.3 Book Qs.	- Prepare for Chapter 20 &21 General Test. - Make notes and summaries of Lesson 22.1	30
9 /	Hydrocarbons - Explain why a carbon atom forms four covalent bonds. - Identify two possible arrangements of carbon atoms in an alkane.	- Chapters 20 & 21 General Test - Class Activity - Practice Problems - Lesson 22.1 Book Qs.	- Make notes and summaries of Lessons 22.2 and 22.3	30
10 /	Unsaturated Hydrocarbons and Isomers - Describe the structural characteristics of alkenes and alkynes -Explain how the properties of constitutional isomers differ. -Identify two types of stereoisomers.	- Class Activity - Practice Problems - Lessons 22.2 and 22.3 Book Qs.	- Make notes and summaries of Lessons 22.4 and 22.5	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Hydrocarbon Rings and Hydrocarbons from Earth`s Crust - Identify the general structure of a cyclic hydrocarbon and bonding in a benzene ring - Identify the hydrocarbons in natural gas and the first step in refining petroleum.	- Class activity - Practice Problems - Exercises - Lessons 22.4 and 22.5 Book Qs.	- Make notes and summaries of Lesson 23.1	30
12 /	Introduction to Functional Groups - Classify organic compounds. -Identify the general formula of a halocarbon. -Describe how substitutional reactions are used in organic chemistry. Alcohols, Ethers, and Amines - Identify the general formula of an alcohol, an ether, and an ester - Explain how addition reactions are used in organic chemistry.	- Class activity - Practice problems - Exercises - Lessons 23.1 & 23.2 Book Qs	- Make notes and summaries of Lesson 23.3	30
13 /	Carbonyl Compounds and Polymers - Identify the structural characteristics that an aldehyde and acetone share. - Identify the general formula of a carboxylic acid and an ester.	-Practice Problems - Exercises - Lesson 23.3 Book Qs. - Experiment	- Make notes and summaries of Lesson 23.4	30
14 /	Polymers - Describe how polymers are formed. - Classify polymerization reactions as addition or condensation reactions.	- Practice Problems - Exercises - Lessons 23.4 - Experiment	- Prepare for Chapter22 & 23 General Test.	30
15 /	General Review - Review Chapters 19, 20, 21, 22, and 23	- Chapters 22 &23 General Test - Evaluating and reflecting on the progress of one's learning. - School Questionnaire	- Prepare for the Final Exam - Finalize the Portfolio	30
16 /	Final Exam	- Evaluating the progress of one's learning. - Submit the Chemistry B Portfolio.		30
17 /	Returning Final Exam Results.	- Return the graded exams and portfolios - Evaluating and reflecting on the progress of one's learning.		30

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Biology A	1	624500	First	Experiment Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	ATILLO, Krishia	Hakusanroku C: 101.201		Monday-Friday 12:30-21:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Life	In this course, students will understand the basics of life and the principles of ecology. Students will explore and analyze the lessons through various hands-on and engaging activities that spark their interest in biology. Furthermore, this course teaches how different parts work together and is transferable to engineering, wherein systems thinking is essential for designing and improving everything from machines to software.
2	Cells	
3	Photosynthesis	
4	Cellular Respiration	
5	Ecology	

Course Description and Expectations for Students (10.5pt)

The course will offer a variety of hands-on learning activities, inquiry-based lectures, and discussions.
This course will tackle the scientific study of life, cells, which are the units of life, photosynthesis, cellular respiration, organisms and their relationships, flow of energy in an ecosystem, cycling of matter, communities, biomes, and ecosystems. Students will be given ample time to complete their worksheets or activities in class. Lesson presentations will accompany each class and will be available for the students. To attain the objectives of this course, students are encouraged to be creative and participative. Students are also expected to turn in their worksheets and activities and prepare for presentations.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: None
Reference books: Biology Concepts & Investigations 5th Ed/Glencoe Biology ISBN: 9781260575880/9780076774289
Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have analysis and problem-solving skills, creativity, and basic computer skills for this course.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Students will be able to explain what life is in his/her own understanding.
②	h, i	Students will be able to classify different cell types (plant and animal) and specify the function(s) of each.
③	h, i	Students will be able to describe the major features and chemical events in photosynthesis and cellular respiration.
④	h, i	Students will be able to illustrate the major features and sequence the chemical events of cellular respiration.
⑤	h, i	Students will be able to define the interactions between the levels of biological communities.
⑥	h, i	Students will be able to simplify how different biomes are distinguished based on climate and their features.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	40	60	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	10	10	0	0	20
	Ability to think, reason, and create	0	0	0	10	20	0	0	30
	Collaboration and leadership	0	0	0	10	10	0	0	20
	Announcement / Expression / Communication	0	0	0	10	0	0	0	10
	Attitude and motivation for learning	0	0	0	0	20	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		The process of photosynthesis and cellular respiration will be described, clarified, and illustrated by the students. Students will be given rubrics to use as a guide during their presentations. Since they have to create a poster about photosynthesis and cellular respiration, students will have plenty of time to get ready. Forty percent (40%) of the total grade is based on the presentation.
	②		
	③	✓	
	④	✓	
	⑤		
	⑥		
Works	①	✓	There will be activities, experiments, and worksheets to be completed in the lessons tackled in class. Students need to answer and complete all the required works within the given time allotted in class. In case time is not sufficient during class, they will be given extra time to complete the work. Sixty percent (60%) of the total grade is based on the works.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will foster a deeper sense of understanding about life and the different cell types. Students will appreciate the importance of photosynthesis and cellular respiration. Students will strengthen their critical thinking skills regarding how interactions affect the different levels of biological communities. Students will learn how to investigate and discuss the different biomes based on their climate and features.	Students will gain more knowledge regarding life and cells. Students will be more aware of the importance of photosynthesis and cellular respiration and the different principles of ecology.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course Syllabus discussion The Scientific Study of Life - What is Life?	Card Activity Lesson		
2 /	The Scientific Study of Life - The Tree of Life Includes Three Main Branches	Lesson The Classification of Organism Worksheet	Animal Classification Infographic Activity	30
3 /	The Scientific Study of Life - Scientists Study the Natural World	Lesson Experiment: Mystery Powder – Inquiry Lesson on Observation and Food Testing	Laboratory report	30
4 /	Cells - Cells are the Units of Life	Lesson Experiment: Observe Onion and Cheek Cells	Laboratory report	30
5 /	Cells - Different Cell Types Characterize Life's Three Domains	Lesson Activity: 3D Animal and Plant Cell Model		
6 /	Cells - Different Cell Types Characterize Life's Three Domains	Continuation Activity: 3D Animal and Plant Cell Model		
7 /	Photosynthesis	Lesson Experiment: Breathing Leaves	Laboratory report	30
8 /	Photosynthesis	Activity: Photosynthesis Oral Recitation with Poster	Presentation	30
9 /	Cellular Respiration	Lesson Experiment: Cereal and Yeast Bag (Sugar Content Test)	Laboratory report	30
10 /	Cellular Respiration	Activity: Cellular Respiration Oral Recitation with Poster	Presentation	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Principles of Ecology - Organisms and Their Relationships	Lesson Data Analysis Lab	Laboratory report	30
12 /	Principles of Ecology - Flow of Energy in an Ecosystem	Lesson Mini Lab	Laboratory report	30
13 /	Principles of Ecology - Cycling Matter	Lesson Experiment: Testing the Waters	Laboratory report	30
14 /	Communities, Biomes, and Ecosystems - Community Ecology - Terrestrial Biomes	Interactive Lesson	Worksheet	30
15 /	Communities, Biomes, and Ecosystems - Aquatic Ecosystems	Interactive Lesson	Worksheet	30

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Biology B	1	624600	Second	Experiment Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	ATILLO, Krishia	Hakusanroku C: 101.201		Monday-Friday 12:30-21:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Human Body Systems	In this course, students will understand the different human body systems, genetics, and biotechnology. Students will explore and analyze the lessons through various hands-on and engaging activities that spark their interest in biology.
2	Genetics	
3	Biotechnology	
4		
5		

Course Description and Expectations for Students (10.5pt)

The course will offer a variety of hands-on learning activities, inquiry-based lectures, and discussions.
This course will tackle the different human body systems, genetics, including molecular genetics, and biotechnology.
Students will be given ample time to complete their worksheets or activities in class. Lesson presentations will accompany each class and will be available for the students. To attain the objectives of this course, students are encouraged to be creative and participative. Students are also expected to turn in their worksheets and activities and prepare for presentations if needed.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None
Reference books: Biology Concepts & Investigations 5th Ed/Glencoe Biology ISBN: 9781260575880/9780076774289
Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have analysis and problem-solving skills, creativity, and basic computer skills for this course.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to show how humans maintain homeostasis within the human body.
②	h,i	Students will be able to illustrate the major divisions of the nervous system.
③	h,i	Students will be able to predict the genotype and phenotype of parents and offspring using the laws of inheritance.
④	h,i	Students will be able to make a pedigree analysis in the learner's family using a simple genetic trait.
⑤	h,i	Students will be able to create a model of the DNA.
⑥	h,i	Students will be able to describe the importance of biotechnology.

Evaluation Criteria

	Criteria and Ratio \ Evaluation Method	Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
	Total Evaluation Ratio	0	0	0	40	60	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	10	10	0	0	20
	Ability to think, reason and create	0	0	0	10	20	0	0	30
	Collaboration and leadership	0	0	0	10	10	0	0	20
	Announcement / Expression / Communication	0	0	0	10	0	0	0	10
	Attitude and motivation for learning	0	0	0	0	20	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①	✓	Creating models of lungs, the digestive system, and DNA will be described, clarified, and explained by the students. Students will be given rubrics to use as a guide during their presentations. Since they have to create a model for the lungs, digestive system, and DNA, students will have plenty of time to get ready. Forty percent (40%) of the total grade is based on the presentation.
	②		
	③		
	④		
	⑤	✓	
	⑥		
Works	①	✓	There will be activities, experiments, and worksheets to be completed in the lessons tackled in class. Students need to answer and complete all the required work within the given time allotted in class. In case time is not sufficient during class, they will be given extra time to complete the work. Sixty percent (60%) of the total grade is based on the work.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will foster a deeper sense of understanding about the different human body systems. Students will appreciate the importance of learning genetics and basic patterns of human inheritance. Students will learn how to describe and discuss the importance of learning biotechnology.	Students will gain more knowledge regarding human body systems. Students will be more aware of the importance of genetics and biotechnology in today's world.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course Syllabus discussion The Human Body Systems - The Integumentary System	Lesson Experiment: Examine Chicken Skin	Laboratory report	30
2 /	The Human Body Systems - The Skeletal and Muscular Systems	Experiment: Examine Chicken Bone Attachments	Laboratory report	30
3 /	The Human Body Systems - The Nervous System	Lesson Data Analysis Lab	Laboratory report	30
4 /	The Human Body Systems - The Nervous System: The Senses	Lesson Experiment: Investigate Adaptations to Darkness	Laboratory report	30
5 /	The Human Body Systems - The Circulatory System	Experiment: Pig/Chicken Heart Dissection	Laboratory report	30
6 /	The Human Body Systems - The Respiratory System	Lesson Activity: Make a Lung Model	Presentation	30
7 /	The Human Body Systems - The Digestive System	Lesson Activity: Digestive System Model Making using clay	Presentation	30
8 /	The Human Body Systems - The Respiratory System	Lesson Activity: Make a Lung Model	Presentation	30
9 /	The Human Body Systems - The Reproductive System	Lesson	Worksheet	30
10 /	Genetics - Mendelian Genetics	Lesson Activity: Predict Probability in Genetics		

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Genetics - Basic Patterns of Human Inheritance	Lesson Activity: Investigate Human Pedigree		
12 /	Genetics - Molecular Genetics	Lesson Activity: Make a DNA Model	Presentation	30
13 /	Genetics - Applied Genetics - Genetic Engineering	Lesson	Worksheet	30
14 /	Biotechnology - The Human Genome Project	Lesson	Worksheet	30
15 /	Biotechnology - Bioinformatics	Lesson	Worksheet	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Health and Physical Education IIA	1	612800	First	Exercises / Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	CADZOW, Philip	Hakusanroku C 101 Gym		Friday 16:30-17:30

Course Objectives

Keywords		Learning Objectives
1	Sportsmanship	The student will learn how to work in sport teams to effectively build bonds with others. The student will learn and practice how to develop aerobic fitness through interval training. The student will demonstrate understanding of Volleyball and Badminton tactics and strategy. The student will learn how to deal with the psychological pressure of sport and competition and appreciate the many roles sport offers.
2	Safety	
3	Sports	
4	Exercise	
5	Health	

Course Description and Expectations for Students

In this course students will make sports teams and compete in Volleyball and Badminton games, managing, refereeing, cheering, and taking on the many roles that are involved within running a sports contest. Improving technique and understanding tactics will be a key component of the class, non-active roles will be just as valued. Exercise will be focused on using MAS (maximal aerobic fitness) to improve aerobic fitness for life, when weather permits, along with other health based content.

The expectation is for students to be on time for class in the correct uniform and fully participate in the activities of class to the best of their abilities, while maintaining a respectful attitude and an inclusive atmosphere. This course will offer student led activities and practical learning in class as a type of active learning.

This course is a practical course and so inability to physically partake in activities – specifically learning of sport skills may result in a reduced score unless alternative work is given. Students who have disabilities preventing participation may be given alternate work, and injured students may request makeup classes outside of the class schedule, if they have taken care to manage their injuries throughout the healing process.

Required Materials (textbooks, reference books, reserved books)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

Required knowledge is the safe use of Hakusanroku facilities. Helpful but not needed skills are Prior fundamental skills in Badminton and Volleyball.

No.	Program Objectives	Target Abilities for Students
①	d	Students will learn how to train their body correctly for a healthy life.
②	f	Students will be able to learn from failure and develop fortitude.
③	i	Students will develop confidence in their abilities and work with a sincere heart.
④	i	Students will learn the value of enjoying sports and the lifelong benefits of exercise.
⑤	c	Students will be able to support each other in learning new skills.
⑥	b	Students will become accustomed to working for the good of others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	60	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	20	0	0	20
	Ability to think, reason and create	0	0	0	0	10	0	0	10
	Collaboration and leadership	0	0	0	0	10	0	10	20
	Announcement / Expression / Communication	0	0	0	0	10	0	10	20
	Attitude and motivation for learning	0	0	0	0	10	0	20	30

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Volleyball – 20% Badminton – 10% Exercise and Health– 30% Based on skills, knowledge and performance with rubrics provided in class, and may be evaluated through observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc. Standards may be referenced by normative, ipsative, or criterion-based data.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Sportsmanship 40% Based on effort, personal and social behavior which is assessed in reference to the rubric provided in class. Evaluations may take the form of observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Players do the following: Contribute a lot to their sport team through their individual ability. Demonstrates very good techniques and tactics of Badminton and Volleyball. Demonstrates very good sportsmanship and inclusive play, along with very good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps others. Manages winning and losing in a very good way. Endeavors to build up their team and create a very good team environment.	Players do the following: Contributes well to their sport team through their individual ability. Demonstrates good techniques and tactics of Badminton and Volleyball. Demonstrates good sportsmanship and inclusive play, along with good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps others. Manages winning and losing in a good way. Endeavors to build up their team and create a good team environment.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Introduction to the course Expectations for the class Exercise unit 2.1 Volleyball unit 2.1	Practical	Review class material and practice in own time.	100
2 /	Exercise unit 2.2 Volleyball unit 2.2	Practical	Review class material and practice in own time.	100
3 /	Exercise unit 2.3 Volleyball unit 2.3	Practical	Review class material and practice in own time.	100
4 /	Exercise unit 2.4 Volleyball unit 2.4	Practical	Review class material and practice in own time.	100
5 /	Exercise unit 2.5 Volleyball unit 2.5	Practical	Review class material and practice in own time.	100
6 /	Exercise unit 2.6 Volleyball unit 2.6	Practical	Review class material and practice in own time.	100
7 /	Exercise unit 2.7 Volleyball unit 2.7	Practical	Review class material and practice in own time.	100
8 /	Exercise unit 2.8 Volleyball unit 2.8	Practical	Review class material and practice in own time.	100
9 /	Exercise unit 2.9 Volleyball unit 2.9	Practical	Review class material and practice in own time.	100
10 /	Exercise unit 2.10 Volleyball unit 2.10	Practical	Review class material and practice in own time.	100

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Exercise unit 2.11 Badminton unit 2.1	Practical	Review class material and practice in own time.	100
12 /	Exercise unit 2.12 Badminton unit 2.2	Practical	Review class material and practice in own time.	100
13 /	Exercise unit 2.13 Badminton unit 2.3	Practical	Review class material and practice in own time.	100
14 /	Exercise unit 2.14 Badminton unit 2.4	Practical	Review class material and practice in own time.	100
15 /	Exercise unit 2.15 Badminton unit 2.5	Practical	Review class material and practice in own time.	100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Health and Physical Education IIB	1	612900	Second	Exercises / Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	CADZOW, Philip	Hakusanroku C 101 Gym		Friday 16:30-17:30

Course Objectives

	Keywords	Learning Objectives
1	Sportsmanship	The student will demonstrate an improvement in their bouldering ability. The student will learn and practice how to develop muscular endurance through weight training. The student will demonstrate understanding of Volleyball and Badminton tactics and strategy. The student will learn how to deal with the psychological pressure of sport and competition and appreciate the many roles sport offers.
2	Safety	
3	Sports	
4	Exercise	
5	Health	

Course Description and Expectations for Students

In this course students will make sports teams and compete in Basketball and Badminton games, managing, refereeing, cheering, and taking on the many roles that are involved within running a sports contest. While improving technique and understanding tactics will be a key component of the class, non-active roles will be just as valued. Exercise will be focused on using machine training to improve muscular endurance for life, in conjunction with bouldering.

The expectation is for students to be on time for class in the correct uniform and fully participate in the activities of class to the best of their abilities, while maintaining a respectful attitude and an inclusive atmosphere. This course will offer student led activities and practical learning in class as a type of active learning.

This course is a practical course and so inability to physically partake in activities – specifically learning of sport skills may result in a reduced score unless alternative work is given. Students who have disabilities preventing participation may be given alternate work, and injured students may request makeup classes outside of the class schedule, if they have taken care to manage their injuries throughout the healing process.

Required Materials (textbooks, reference books, reserved books)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

Required knowledge is the safe use of Hakusanroku facilities. Helpful but not needed skills are Prior fundamental skills in Badminton and Basketball.

No.	Program Objectives	Target Abilities for Students
①	d	Students will learn how to train their body correctly for a healthy life.
②	f	Students will be able to learn from failure and develop fortitude.
③	i	Students will develop confidence in their abilities and work with a sincere heart.
④	i	Students will learn the value of enjoying sports and the lifelong benefits of exercise.
⑤	c	Students will be able to support each other in learning new skills.
⑥	b	Students will become accustomed to working for the good of others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	60	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	20	0	0	20
	Ability to think, reason and create	0	0	0	0	10	0	0	10
	Collaboration and leadership	0	0	0	0	10	0	10	20
	Announcement / Expression / Communication	0	0	0	0	10	0	10	20
	Attitude and motivation for learning	0	0	0	0	10	0	20	30

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Volleyball – 20% Badminton – 10% Exercise and Health – 15% Bouldering – 15% Based on skills, knowledge and performance with rubrics provided in class, and may be evaluated through observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc. Standards may be referenced by normative, ipsative, or criterion-based data.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Sportsmanship 40% Based on effort, personal and social behavior which is assessed in reference to the rubric provided in class. Evaluations may take the form of observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Players are able to do the following: Contribute a lot to their sport team through their individual ability. Demonstrates very good techniques and tactics of Badminton and Basketball. Demonstrates very good sportsmanship and inclusive play, along with very good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps others. Manages winning and losing in a very good way. Seeks to build up their team and create a very good team environment.	Players are able to do the following: Contributes well to their sport team through their individual ability. Demonstrates good techniques and tactics of Badminton and Basketball. Demonstrates good sportsmanship and inclusive play, along with good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps others. Manages winning and losing in a good way. Seeks to build up their team and create a good team environment.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Introduction of the course Exercise unit 2.16 Badminton unit 2.6	Practical	Review class material and practice in own time.	100
2 /	Exercise unit 2.17 Badminton unit 2.7	Practical	Review class material and practice in own time.	100
3 /	Exercise unit 2.18 Badminton unit 2.8	Practical	Review class material and practice in own time.	100
4 /	Exercise unit 2.19 Badminton unit 2.9	Practical	Review class material and practice in own time.	100
5 /	Exercise unit 2.20 Basketball unit 2.1	Practical	Review class material and practice in own time.	100
6 /	Exercise unit 2.21 Basketball unit 2.2	Practical	Review class material and practice in own time.	100
7 /	Exercise unit 2.22 Basketball unit 2.3	Practical	Review class material and practice in own time.	100
8 /	Exercise unit 2.23 Basketball unit 2.4	Practical	Review class material and practice in own time.	100
9 /	Exercise unit 2.24 Basketball unit 2.5	Practical	Review class material and practice in own time.	100
10 /	Exercise unit 2.25 Basketball unit 2.6	Practical	Review class material and practice in own time.	100

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Exercise unit 2.26 Basketball unit 2.7	Practical	Review class material and practice in own time.	100
12 /	Exercise unit 2.27 Basketball unit 2.8	Practical	Review class material and practice in own time.	100
13 /	Exercise unit 2.28 Basketball unit 2.9	Practical	Review class material and practice in own time.	100
14 /	Exercise unit 2.29 Basketball unit 2.10	Practical	Review class material and practice in own time.	100
15 /	Team and Individual sportsmanship demonstration	Practical	Review class material and practice in own time.	100

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	ビジュアルアーツII	1	624700	前学期	実験・実習／履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
2年	小髙有普	白山麓C： 101.201		月～金16:30-17:30

授 業 科 目 の 学 習 教 育 目 標

	キーワード	学習教育目標
1	感じる力	作品に込められた作者の意図あるいは制作に至った経緯、制作行程などから芸術の創造に対する思慮を深め、観察力・洞察力を養う。学生は、自己が表現者となり、個々の表現物についての言語化を図りながら、論理的思考能力を養う。最終的には、ビジュアル表現による変換をもって、理論と感性の調和による高度な成果の創出ができることを目標とする。エンジニアとして幅広い視野をもち、創造性の発揮と自己解決に至るため、気づき能力と具現化能力の育成を行う。
2	着眼点	
3	発想	
4	デザインプロセス	
5		

授業の概要および学習上の助言

①アイデアの言語化
　創造力を高めるために広い視野をもつ重要性を理解する。
　創造力を高めるために多くの情報をもつ重要性を理解する。
　創造したものの有効性なものに導くための論理的思考展開をする。
②アイデアの視覚化による思考
　創造力を高めるためには視覚化することが重要であることを理解する。（スケッチやモデルによる思考展開）
③アイデアの伝達
　自分の作品における思いを表現することにより学生の伝達スキルを磨く。
④作品の鑑賞
　15週は全員の作品をスクリーンで発表し、講評を受ける。これは自分以外の全作品を見て、評価し合うことでお互いの創造力を刺激し高めることを目的としている。

この授業ではアクティブラーニングの一環として、新たな発見から創造に至るまでの自ら導く創造的な活動を行います。

【教科書および参考書・リザーブドブック】
教科書：
参考書：
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

丁寧に考え、丁寧に作ろうとする姿勢が必要です。
グラフィックソフトを使用するので作業時に使えるように復習しておくことが必要です。
すべての課題を提出期限に間に合うように必ず提出すること。
未提出課題が1つでもある場合、単位を認めない。
提出期限を守れなかった場合は減点となる。

No.	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	g	様々な角度からものごとを観察し、考えることができる
②	g	何が有効なアイデアなのかを見極めることができる
③	f	重要なポイントを整理し、簡潔に表現することができる
④	i	グラフィックソフトで何が出来るかを理解することができる
⑤	f,g,i	パネル化による視覚伝達を通して伝達スキルの重要性と有効性を理解できる
⑥	f	表現者の創造的活動への思いを理解することができる

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	0	40	25	25	10	0	100
総合力指標	知識を取り込む力	0	0	10	0	0	5	0	15
	思考・推論・創造する力	0	0	20	15	10	0	0	45
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	5	5	10	0	0	20
	学習に取組む姿勢・意欲	0	0	5	5	5	5	0	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①	レ	アイデアを確定するまでの内容とプロセスを評価 対象：１回～４回の課題
	②	レ	
	③	レ	
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		コンセプトを反映したモデルによる具現化を評価 対象：５回～９回の課題
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
作品	①		グラフィックによる視覚伝達スキルと内容を評価 対象：１０回～１５回の課題(最終日に学生の発表を通じてルーブリック評価を行う)
	②		
	③		
	④	レ	
	⑤	レ	
	⑥	レ	
ポートフォリオ	①		創造的活動に対する取り組み姿勢を評価 対象：15週の学習レポート
	②		
	③		
	④		
	⑤		
	⑥	レ	
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
①構成力：深い思考による有効なアイデアとストーリー設定ができる ②展開力：思い描いたアイデアを有効な形に具現化することができる（モデル化） ③具現化：グラフィックソフトを介し優れた商品イメージを作る事ができる（完成イメージ） ④伝達力：グラフィックソフトを多様な場面で有効に利用することができる ⑤総合力：自分の発想内容をとても理解しやすく表現し伝える事ができる	構成力：アイデアとストーリー設定ができる ②展開力：思い描いたアイデアを形に具現化することができる（モデル化） ③具現化：グラフィックソフトを介し商品イメージを作る事ができる（完成イメージ） ④伝達力：グラフィックソフトを利用することができる ⑤総合力：自分の発想内容を表現し伝える事ができる

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	ガイダンス 芸術分野の思想とものづくりの思想について 観察 視点を変えてモノを見ることを知る	講義 観察と写真撮影 写真のまとめ	予習： 復習：作業遅延分の実施、調査①	20
2 ／	調査② テーマについての情報収集とまとめ	講義 インフォグラフィックによる構造の視覚化 レポート	予習：イラストレータの使い方 復習：作業遅延分の実施	30
3 ／	芸術や文化と思想を理解し、自らの考えを表現① アイデアをストーリーとしてまとめる	講義 インフォグラフィックによる構造の視覚化	予習：キーワードの抽出 復習：ストーリーの完成	30
4 ／	芸術や文化と思想を理解し、自らの考えを表現① 言語化したアイデアを視覚表現する	講義 スケッチ、モデル作成	予習：テーマの決定 復習：アイデアスケッチ完成	30
5 ／	芸術や文化と思想を理解し、自らの考えを表現① 言語化したアイデアを視覚表現する	講義 モデル作成	講義 モデル作成	30
6 ／	芸術や文化と思想を理解し、自らの考えを表現① 言語化したアイデアを視覚表現する	講義 モデル作成	講義 モデル作成	30
7 ／	芸術や文化と思想を理解し、自らの考えを表現① 言語化したアイデアを視覚表現する	講義 モデル作成	講義 モデル作成	30
8 ／	芸術や文化と思想を理解し、自らの考えを表現① 言語化したアイデアを視覚表現する	講義 モデル作成	講義 モデル作成	30
9 ／	芸術や文化と思想を理解し、自らの考えを表現① 個々のモデルを評価 多様な意見を理解し俯瞰的に本質を見つめ、思考する モデルのブラシュアップ	講義 スケッチ、モデル作成	講義 スケッチ、モデル作成	30
10 ／	芸術や文化と思想を理解し、自らの考えを表現② 相手の納得や感動を引き出す表現力(思考の概念図化) 合成データ作成（完成イメージ）	講義 合成作業	講義 合成作業	40

授業明細表

ＣＬＩＰ学習プロセスについて

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※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	芸術や文化と思想を理解し、自らの考えを表現② 合成データ作成（完成イメージ）	講義 合成作業	予習：制作計画のチェック 復習：作業遅延分の実施	30
12 ／	芸術や文化と思想を理解し、自らの考えを表現② 伝達手段を学びまとめる グラフィックコミュニケーション （パネルデータ作成）	講義 パネルデータ作業	予習：制作計画のチェック 復習：作業遅延分の実施	30
13 ／	芸術や文化と思想を理解し、自らの考えを表現③ 伝達手段を学びまとめる グラフィックコミュニケーション （パネルデータ作成）	講義 パネルデータ作業	予習：制作計画のチェック 復習：作業遅延分の実施	30
14 ／	芸術や文化と思想を理解し、自らの考えを表現③ 伝達手段を学びまとめる グラフィックコミュニケーション （パネルデータ作成）	講義 パネルデータ作業	予習：制作計画のチェック 復習：作業遅延分の実施	30
15 ／	成果発表 自己点検・自己評価	プレゼンテーション 自己点検	予習：発表準備	20

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科 目 名	単位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	パフォーミングアーツ	1	624800	後学期	実験・実習 ／ 履修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
2年	魚住　知子	白山麓C 101.201		授業時予約

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	表現力	グローバルイノベーターとして国際社会で活躍するには、異文化の人々と協働の際のコミュニケーションが大切である。そのコミュニケーションを豊かで強力なものにするには、表現力が不可欠である。本授業では、歌唱、ナレーション、プレゼンテーションなどを学び体験し、各学生が独創的で強力な表現力を身につけることを目標とする。
2	独創性	
3	歌唱	
4	鑑賞	
5	パフォーマンス	

授業の概要および学習上の助言

一年生で受講したパフォーミングアーツＩの内容をさらに拡大し表現力を身につける。一年生で学習した正しい発声法を用いての歌唱を引き続き行うことにする。スタンダードナンバー、Ｊ－ＰＯＰ、ミュージカルナンバー、アニメソングなどを練習する。また、プレゼンテーション技術やアニメの吹き替えなども学び体験する。人前で発表することへの恥ずかしさを乗り越え挑戦を続けていく。クラスメイトのパフォーマンスに対して、常に敬意をもちまた前向きなアドバイスや感想が述べられるクラス環境と人間関係を構築する努力をお互い行うことが大切である。

この授業ではアクティブラーニングの一環として体験学習を行う。

【教科書および参考書・リザーブドブック】
教科書：
参考書：
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

プロのパフォーマンス、例えばミュージシャン、ダンサー、バラエティ番組の進行役などを、テレビで見ておくことが授業を受けることに大きく役立つ。人前で表現できる各自の得意分野について考えてみる。

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	f	正しい発声法を身につけ、歌唱できるようになる。
②	e	ナレーションや朗読ができるようになる。
③	i	歌唱やプレゼンテーションの際の表現技術を身につけることができるようになる。
④	d	クラスメイトのパフォーマンスをまじめに敬意をもって鑑賞できるようになる。
⑤		
⑥		

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	0	0	65	0	0	35	100
総合力指標	知識を取り込む力	0	0	0	0	0	0	0	0
	思考・推論・創造する力	0	0	0	0	0	0	0	0
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	0	45	0	0	20	65
	学習に取組む姿勢・意欲	0	0	0	20	0	0	15	35

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①	レ	45%: 授業最終日に行われる発表会で、各自が準備し練習してきた歌唱、プレゼンテーション、朗読、楽器演奏、ダンスなどの態度、表現力、技術そして伝達力を評価する。 20%: 授業最終日に行われる発表会に取り組む姿勢と意欲、努力およびそれぞれの工夫を評価する。
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①	レ	20%: 各授業で学習したパフォーマンスの発表時における態度、表現力、伝達力を評価する。 表現力そして伝達する力を評価する。 15%: 各授業で学習したパフォーマンスの発表時における取り組み、姿勢、意欲、工夫を評価する。 評価する。
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
各授業での課題のパフォーマンスで、恥ずかしがらすに堂々とクラスの見本となるパフォーマンスを行うことができる。 最後の授業での発表会に、クラス中の大きな驚きと称賛の声を得るパフォーマンスを披露することができる。	各授業での課題のパフォーマンスを、勇気をもって挑戦することができる。 最後の授業での発表会のための準備と練習を行い、自分なりの表現力をもってパフォーマンスをやり遂げることができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	発声練習（腹式呼吸） 歌唱に挑戦 「ライラック」 「わっしょい　お祭り」	講義、発声、歌唱		
2 ／	歌唱の練習 「Lover, Come Back To Me」 発表	練習、歌唱、鑑賞		15
3 ／	課題曲の理解 発声練習（腹式呼吸） 「Lover, Come Back To Me」 「Run」 プロピアニストの伴奏で歌う	練習、歌唱、鑑賞	発声練習を行う	15
4 ／	歌唱の練習「New York New York」 「Run」 プロピアニストの伴奏で歌う	練習、歌唱、鑑賞	次回の課題曲を聴く	30
5 ／	課題曲の理解 発声練習（腹式呼吸） 歌唱に挑戦 「栄光の架橋」「TSUNAMI」	練習、歌唱、鑑賞	発声練習を行う	15
6 ／	歌唱の練習 楽器を用いて練習 「栄光の架橋」「TSUNAMI」	練習、歌唱、鑑賞	次回の課題曲を聴く	30
7 ／	吹き替えの理解 吹き替えの練習 吹き替えに挑戦	練習	吹き替えについて調べる	15
8 ／	吹き替えの練習 吹き替えの収録	練習、収録	収録	30
9 ／	ヒューマンビートボックスの理解 ヒューマンビートボックスの練習	練習、鑑賞	発声練習を行う	15
10 ／	ヒューマンビートボックスの練習 ヒューマンビートボックスの発表	練習、鑑賞	次回の課題曲を聴く	30

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	課題曲の理解 発声練習（腹式呼吸） 歌唱に挑戦 「糸」「地上の星」	講義、発声、歌唱	発声練習を行う	15
12 ／	歌唱の練習 「ひこうき雲」「真夏の夜の夢」	練習、歌唱、鑑賞	課題曲を歌う	15
13 ／	課題曲への理解 発声練習（腹式呼吸） 歌唱に挑戦 「Fly Me To The Moon」	講義、発声、歌唱	発声練習を行う	15
14 ／	歌唱の練習 「Night and Day」	練習、歌唱、鑑賞	パフォーマンス練習	115
15 ／	パフォーマンス発表 パフォーマンス鑑賞	発表、鑑賞	クラスメイトと互いの発表について話す	15

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Engineering Design IIA	2	508000	First	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	MATSUSHITA, Omihito/OGAWA, Hayato/ KUSHIMA, Yoshihiro / KODAKA, Arihiro	Hakusanroku C: 101.201		Mon – Friday: 4:30 – 5:30 pm

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Problem-solving	In this course, students will practice with a problem-solving project, creating locally appropriate solutions and added values around Hakusanroku area. The students will learn the approaches to project planning, user research, and idea generation utilizing its local resources. The students will also cultivate abilities to find real problems with deeper insights and develop communication skills to propose solutions to communities appropriately.
2	Locally appropriate solutions	
3	Project planning	
4	User research	
5	Communication skills	

Course Description and Expectations for Students (10.5pt)

This course will offer project-based learning in class as a type of active learning.
The students will work on problem-solving projects themed under the societal, natural, or industrial environments of Hakusanroku area. The projects will mainly focus on agri-business utilizing local resources and technology development projects focusing on the animal damage prevention system and land resource utilization. Based on the group's project scopes, each group will work on their plans for business design and implementation, as well as technology development using AI, IoT, and other appropriate technologies. The work will be continued to the EDIIB course.

Advice on taking this class
- Act with appropriate manners and behaviors as important aspects of conducting research in local areas.
- Submit assignments on time. There will be penalty points if you are late to submit your assignments.
- Understand that this project is not a sequential process, rather it is a process of going back and forth by trials and errors
- Participate in class work autonomously. Don't afraid to challenge yourself and feel free to ask questions.

Required Materials (textbooks, reference books, reserved books)
Textbooks: None
Reference books: None
Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

EDIA & IB: Team, task, and time management skills.
Understanding of design and user research methodology and mindsets.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b, e, h	Students will be able to understand issues from different perspectives which the local communities face.
②	a, d, g	Students will be able to generate locally appropriate solutions or to develop technological functions to problems with teams.
③	a, d, g	Students will be able to make their idea concepts and goal plans to convey their important ideas.
④	f	Students will be able to deliver their findings and ideas effectively.
⑤	c, d	Students will be able to practice a problem-solving project efficiently using proper management methods.
⑥	i	Students will be able to show their attitudes to reflect on their own work objectively.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	30	20	30	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	5	5	10	4	0	24
	Ability to think, reason and create	0	0	5	5	10	4	0	24
	Collaboration and leadership	0	0	5	5	5	4	0	19
	Announcement / Expression / Communication	0	0	5	5	5	4	0	19
	Attitude and motivation for learning	0	0	10	0	0	4	0	14

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	レ	Report will include individual work report and personal reflection on own learning experience about project progress and outcomes. The format of the report will be announced by the instructors.
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
Presentations	①	レ	Students will give oral progress and final reports of their projects. The format of the presentation will be announced by instructors, such as slides, poster, and/or any other styles. Teachers will grade on presentation content and presentation etiquette. Rubric will be provided as a group.
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
Works	①	レ	The format of works can be physical prototypes of solutions, concept diagrams, sketches, and other styles of visual aids and writing forms. The format will be announced by the instructors.
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		
Portfolios	①		Portfolios will include personal reflection on own leadership practice and learning experience through the project. The format of the portfolio will be announced by the instructors.
	②		
	③		
	④		
	⑤	レ	
	⑥	レ	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
- Student can define an appropriate problem statement logically based on their research data. - Student can propose creative, locally appropriate solutions. - Students can effectively work together with the team for a project.	- Student can define a problem statement based on their research data. - Student can propose locally appropriate solutions. - Students can work together with the team for a project.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	- Class Guidance - Introduction to SDGs, local revitalization, and smart agriculture - Group organization - Project goals and plans - Engineering Process - Leadership and followership	Lecture and group work	Prepare as instructed	
2 /			Finish class assignments and reflection	20
3 /	Agricultural and system environment 1 - Field arrangement - Farming situation in the area	Lecture and group work	Prepare as instructed	15
4 /			Finish class assignments and reflection	30
5 /	Agricultural and system environment 2 - Field arrangement and planting - Animal damage measurement 1	Lecture and group work	Prepare as instructed	15
6 /			Finish class assignments and reflection	20
7 /	Agricultural and system environment 3 - Animal damage measurement 2 Discussing the local issues with the community	Lecture and group work	Prepare as instructed	15
8 /			Finish class assignments and reflection	30
9 /	Agri-business sales and local resource utilization planning 1 Technology utilization planning 1	Lecture and group work	Prepare as instructed	15
10 /			Finish class assignments and reflection	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Agri-business sales and local resource utilization planning 2 Technology utilization planning 2 Special Lecture about implementation of business and service development around Hakusanroku Region.	Lecture and group work	Prepare as instructed	15
12 /			Finish class assignments and reflection	20
13 /	Agri-business sales and local resource utilization planning 3 Understanding other local areas: Visit to Ono area	Lecture and group work	Prepare as instructed	15
14 /	Technology utilization planning 3		Finish class assignments and reflection	20
15 /	Agri-business sales and local resource utilization planning 4 Technology utilization planning 4	Lecture and group work	Prepare as instructed	15
16 /			Finish class assignments and reflection	20
17 /	Agri-business sales and local resource utilization planning 5 Technology System Design and Development 1	Lecture and group work	Prepare as instructed	15
18 /			Finish class assignments and reflection	20
19 /	Agri-business sales and local resource utilization planning 6 Technology System Design and Development 2	Lecture and group work	Prepare as instructed	15
20 /			Finish class assignments and reflection	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Agri-business sales and local resource utilization planning 7 Technology System Design and Development 3	Lecture and group work	Prepare as instructed	15
22 /			Finish class assignments and reflection	20
23 /	Agri-business sales and local resource utilization planning 8 Technology System Design and Development 4	Lecture and group work	Prepare as instructed	15
24 /			Finish class assignments and reflection	20
25 /	Agri-business sales and local resource utilization environment Check 1 Technology System Design and Development 5 Project review and presentation prep 1	Lecture and group work	Prepare as instructed	15
26 /			Finish class assignments and reflection	20
27 /	Agri-business sales and local resource utilization environment Check 2 Project review and presentation prep 2	Lecture and group work	Prepare for the presentation	15
28 /			Finish class assignments and reflection	20
29 /	Final Presentation Planning for the next semester Self-Reflection	Group work Self-reflection	Prepare for the presentation	60
30 /			Finish class assignments and reflection	

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Engineering Design IIB	2	710400	Second	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	MATSUSHITA, Omihito/OGAWA, Hayato/ KUSHIMA, Yoshihiro / KODAKA, Arihiro	Hakusanroku C: 101.201		Mon – Friday: 4:30 – 5:30 pm

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Problem-solving	The students will learn the approaches to implement the locally appropriate solutions, evaluate the effectiveness of solutions, their iteration, and sustainable implementation of their projects. The students will also cultivate a sense of ethics as a part of a local community and autonomy by reflecting on own involvement with the locals and on own actions to take.
2	Locally appropriate solutions	
3	Societal, natural, industrial environment	
4	Project planning	
5	Communication skills	

Course Description and Expectations for Students (10.5pt)

This course will offer project-based learning in class as a type of active learning.
The students will continue their regional problem-solving projects and technology development from Engineering Design IIA. Based on the group's project scopes, each group will work on their plans for business promotion and implementation and technology development using AI, IoT, and other appropriate technologies. Those outcome evaluation will be also required at the end of the semester.

Advice on taking this class
- Act with appropriate manners and behaviors as important aspects of implementation and evaluation in local areas.
- All the assignments must be submitted to pass the class. There will be penalty points if you are late to submit your assignments.
- Understand that this project is not a sequential process, rather it is a process of going back and forth by trials and errors.
- Participate in class work autonomously. Practice what they have planned to do in design research, ideation, prototyping, and evaluation stages.
- Please keep group work progress report to review later.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

EDIA & IB: Team, task, and time management skills.
Understanding of design and user research methodology and mindsets.
EDIIA: Understanding local issues

No.	Program Objectives	Target Abilities for Students (9pt)
①	d, e, g	Students will be able to co-create prototypes to better solve problems with stakeholders when necessary.
②	f	Students will be able to deliver the user experience stories using their solutions.
③	a, b, g	Students will be able to critically evaluate their solutions for better improvement.
④	g, h	Students will be able to create a possible roadmap to sustain their project.
⑤	c, d	Students will be able to implement a problem-solving project using proper management methods.
⑥	i	Students will be able to show their attitudes to reflect on their own work objectively.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	30	20	30	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	5	5	10	4	0	24
	Ability to think, reason and create	0	0	5	5	10	4	0	24
	Collaboration and leadership	0	0	5	5	5	4	0	19
	Announcement / Expression / Communication	0	0	5	5	5	4	0	19
	Attitude and motivation for learning	0	0	10	0	0	4	0	14

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Report will include individual work report and personal reflection on own learning experience about project progress and outcomes. The format of the report will be announced by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	Students will give oral progress and final reports of their projects. The format of the presentation will be announced by instructors, such as slides, poster, and/or any other styles. Teachers will grade on presentation content and presentation etiquette. Rubric will be provided as a group.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Works	①	✓	The format of works can be physical prototypes of solutions, concept diagrams, sketches, and other styles of visual aids and writing forms. The format will be announced by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		Portfolios will include personal reflection on own leadership practice and learning experience through the project. The format of the portfolio will be announced by the instructors.
	②		
	③		
	④		
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
- Student can co-create effective locally appropriate solutions with stakeholders. - Student can evaluate their solutions effectively and critically to propose better iteration and sustainability plans. - Students can effectively work together with the team for a project.	- Student can co-create locally appropriate solutions with stakeholders. - Student can evaluate their solutions to propose better iteration. - Students can work together with the team for a project.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Class Guidance - Project reflection and review the goals of the projects Technology System Development & Implementation 1	Lecture and group work	Prepare as instructed	
2 /	Agri-Business Market Research Planning 1	Lecture and group work	Finish class assignments and reflection	20
3 /	Technology System Development & Implementation 2 Agri-Business Market Research Planning 2	Lecture and group work	Prepare as instructed	15
4 /		Lecture and group work	Finish class assignments and reflection	20
5 /	Technology System Development & Implementation 3 Agri-Business Sales Development 1	Lecture and group work	Prepare as instructed	15
6 /		Lecture and group work	Finish class assignments and reflection	20
7 /	Technology System Development & Implementation 4 Agri-Business Sales Development 2	Lecture and group work	Prepare as instructed	15
8 /		Lecture and group work	Finish class assignments and reflection	20
9 /	Technology System Development & Implementation 5 Agri-Business Sales Development 3	Project progress presentation	Prepare for the progress presentation	60
10 /		Lecture and group work	Finish class assignments and reflection	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	System Operation Check Evaluation 1 Recording measurements and analysis Agri-Business Sales Development 4	Lecture and group work	Prepare as instructed	15
12 /		Lecture and group work	Finish class assignments and reflection	20
13 /	System Operation Check Evaluation 2 Recording measurements and analysis Agri-Business Sales Development 4	Lecture and group work	Prepare as instructed	15
14 /		Lecture and group work	Finish class assignments and reflection	20
15 /	System Operation Check Evaluation 3 Recording measurements and analysis Agri-Business Sales Development 5	Lecture and group work	Prepare as instructed	15
16 /		Lecture and group work	Finish class assignments and reflection	20
17 /	System Implementation & Operation Check Evaluation 4 Recording measurements and analysis Agri-Business and local resource utilization outcome summary	Lecture and group work	Prepare as instructed	15
18 /		Lecture and group work	Finish class assignments and reflection	20
19 /	System Sustainability and Further Consideration 1 Agri-business prediction and local resource utilization outcome evaluation 1	Lecture and group work	Prepare for the progress presentation	60
20 /		Lecture and group work	Finish class assignments and reflection	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	System Sustainability and Further Consideration 2 Agri-business prediction and local resource utilization outcome evaluation 2	Lecture and group work	Prepare as instructed	15
22 /		Lecture and group work	Finish class assignments and reflection	20
23 /	System sustainability and expansion 1 - Improve user interface and maintenance. - Hardware software upgradability analysis Agri-business prediction and local resource utilization outcome evaluation 3	Project progress report	Prepare as instructed	15
24 /		Lecture and group work	Finish class assignments and reflection	20
25 /	System sustainability and expansion 2 - Improve user interface and maintenance. - Hardware software upgradability analysis Progress Report - Make the implementation and evaluation progress reports and plans. - Expand view of solution effect and causes Preparation for the final presentation	Lecture and group work	Prepare as instructed	15
26 /		Lecture and group work	Finish class assignments and reflection	20
27 /	Preparation for the final presentation	Lecture and group work	Prepare as instructed	20
28 /		Lecture and group work	Finish class assignments and reflection	60
29 /	Final Presentation Self-reflection	Presentation	Prepare as instructed	20
30 /		Self-reflection	Finish reflection	20

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Computer Skills IIA	1	711100	First	Experiment／Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	OGAWA, Hayato HAN, Justin	Hakusanroku C 101.201		Fri. 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Machine Learning	All Students must have a fundamental understanding of programming and machine learning architecture going into the 2nd year projects. The students will need experience in programming code to do Machine learning and use the provided modules to understand how the program is used to collect data, create training files and how AI responds to input data.
2	Artificial Intelligence	
3	Robotics	
4	IoT	
5	Python	

Course Description and Expectations for Students (10.5pt)

This class will cover basic robotic concepts using a Jetbot chassis and jetbot.org programming examples. Concepts such as programmatic motor control, Wi-Fi connectivity, custom artificial intelligence, rule-based machine learning, neural network convolution applications, neural network data collection and training will be introduced to students. Python programming is used in this class with Jetson Nano. The python code is broken down into section illustrating each section of coding and can be compiled individually for easier understanding of the python code and ease of trouble shooting, with the aid of Jupyter notebook coding environment. Arduino is introduced to students for understanding serial and digital information and circuitry.

Advice on taking this course:

・Have laptops or notebooks ready before class starts
・Check E-syllabus and box app often and download all files needed for today's lesson
・Submit assignments on time.
・Feel free to ask questions during office hour.

This course will offer discovery learning, problem-solving learning, experiential learning, investigative learning in class as a type of active learning.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Courses: Engineering Design I A&B

No.	Program Objectives	Target Abilities for Students (9pt)
①	ahi	Students will be able to navigate and code python in Jupyter lab
②	ahi	Students will be able to implement Jetson nano for Machine learning exercises
③	ahi	Students will be able to implement Arduino with serial and digital signal circuits
④	ahi	Students will be able to control Arduino using personal mobile devices
⑤	ahi	Students will be able to receive Arduino data to own personal mobile devices
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	30	0	70	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	0	20	0	0	30
	Ability to think, reason and create	0	0	10	0	20	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	5	0	20	0	0	25
	Attitude and motivation for learning	0	0	5	0	10	0	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Evaluate performance of report regarding Jupyter notebook reading/lecture comprehension and retention of experimental setup.
	②	✓	
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		Evaluate each student's work in the programming of the robot and experimental setup.
	②		
	③	✓	
	④	✓	
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students understand the implementation of the experimental setup of image recognition and alert. With a general understanding of IoT and how AI is controlled and used. Program a AI system that can be custom to user and also can learn on its own to navigate through space. Students gain interest and motivation to design and conduct a project in ED2A/B.	Students understand the implementation of the experimental setup of image recognition and ability to control a robot chassis. With a general understanding of IoT and what AI is and how we can use it in our daily lives. Students gain interest and motivation to design and conduct a project in ED2A/B.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Syllabus guidance AI introduction Python introduction - Programming language Jupyter interface	- Intro into AI computing - Intro into python Jetbot chassis with Jetson setup	Store and note Jetbot number you use Connect Jetbot to charger	30
2 /	Jetson and Python introduction - Hardware introduction - Software introduction Connection information	- Jetbot chassis with Jetson setup cont	Make sure Jetbot is charged and ready to go Look for any loose parts and tighten Connect Jetbot to charger	30
3 /	Basic Motion 1 operation and understanding python code	Jupyter Lab interface use and wireless connection setup	Make sure Jetbot is charged and ready to go Look for any loose parts and tighten	30
4 /	Basic Motion 2 operation controlling the Jetbot wirelessly	- wireless network and computer setup	Jupyter Familiarization Answer questions on today's topics	30
5 /	Image recognition and using Machine learning data base Collision Avoidance operation 1	Understanding how to use Machine learning data	Answer questions on today's topics	30
6 /	Using images and convolution method to create model file Collision Avoidance operation 2 training for better avoidance in our world	Making own data for machine learning	Answer questions on today's topics Cont training	30
7 /	Collision Avoidance operation 3	Using student trained machine learning data	Answer questions on today's topics	30
8 /	Road Following operation 1 - Machine learning Course introduction and rules	New objective for machine learning	Answer questions on today's topics Cont training	30
9 /	Road Following operation 2 Road following Machine learning and collision avoidance model file creation	Extra rules and data entry for machine learning	Answer questions on today's topics Cont training	30
10 /	Road Following Operation wrap up - Course attack	Testing the model file created by student on road course	Answer questions on today's topics	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Object following 1 Image recognition and tacking Machine learning	Create model file to track one specific object	Answer questions on today's topics Cont training	30
12 /	Object Following 2 Test Model file	Testing the model file created by student to follow students or teacher	Answer questions on today's topics	30
13 /	IoT with Arduino - IOT Introduction presentation Learn Arduino 1	- Introduction to IOT and Arduino. - Software installation and preparation. Build a simple electronic circuit.	Arduino familiarization assignment	30
14 /	IoT with Arduino 2 - ESP8266 WIFI module introduction. IoT Project 1 (LED blinking)	- Learn how to use ESP8266 WIFI module. Plan and execute Project 1.	Project 1 execution and worksheet.	30
15 /	IoT with Arduino 3 - Project 2 (Smart Home)	Plan and execute Project 2	Project 2 execution and worksheet.	30

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Computer Skills IIB	1	711200	Second	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	EVANS, Davis	Hakusanroku C: 101.201		Day of Class: 16:30 – 17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Programming	Computer programming and computational thinking have been identified as essential skills in the 21st century. In this course, students will examine fundamental concepts of computer programming. They will also practice applying programming knowledge to other areas of STEM before choosing an area of interest to study in more depth on their own.
2	Self-Directed Learning	
3		
4		
5		

Course Description and Expectations for Students (10.5pt)

Computer programming has become essential in almost every field. Programs are used everywhere from performing routine tasks to solving complex problems. This course will introduce students to computer programming. Students will be able to apply their programming knowledge through creating interactive projects. After having been exposed to different types of computer applications and tools across their two years of Computer Skills courses, students will gain more in-depth experience in an application that interests them.

- Focus on class. Close unrelated programs on your laptop and listen when the teacher speaks.
- Check E-Syllabus for reading & assignments days before they are due.
- Submit each assignment on time, or talk to the teacher if you have trouble.
- Do not be afraid to ask questions.

This course implements active learning with a reverse classroom format, reading assignments are assigned as homework, which programming exercise work is done during class time.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: *Python Crash Course, 3rd Edition,* No Starch Press, ISBN 978-1-7185-0270-3
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students must be able to use a PC to manage files and software. In addition to this knowledge, students must also be able to discover and use various resources for learning some new Information Technology (IT) topic.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b	Recognize the importance of computational thinking in the modern world
②	h	Identify basic concepts of computer programming
③	e, i	Reflect on one's own interests to develop an idea for a self-directed project
④	a, h	Apply computer programming skills to other STEM fields
⑤		
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	30	20	50	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	10	0	0	30
	Ability to think, reason and create	0	0	10	10	20	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	10	10	0	0	20
	Attitude and motivation for learning	0	0	0	0	10	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		Reports are assignments from the teacher that are written either by hand or digitally as part of in-class activities. They represent the student's learning of material taught during the guided exercises of each class. In general, if a student submits one of these assignments late, **their score will lose 20% of the maximum possible points** on the assignment. **Caution: work found to be copied from another student or the web without proper attribution will result in the offending student(s) receiving a 0 for that assignment**
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Presentations	①		There is a presentation at the end of the STEM programming project. Giving students an opportunity share their final work.
	②		
	③		
	④		
	⑤	✓	
	⑥		
Works	①	✓	Works are digitally created files that are uploaded at the time of submission. They show practical skills in the material that has been covered during class and represent the student's cumulative ability to apply what they learned. This includes all files and material related to the final STEM programming project. **Caution: work found to be copied from another student or the web without proper attribution will result in the offending student(s) receiving a 0 for that assignment**
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
① Recognize the value of having skills in programming ② Explain functions, classes, and lists ③ Design a programming solution to a STEM problem ④ Create a study plan for developing skills of interest	① Identify areas where programming is used ② Identify variables, conditional statements, and loops ③ Frame a STEM problem in programming terms ④ Choose a topic of interest for further studying

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Orientation and Review Students will receive an introduction to the course, install the necessary software.	Lecture Discussion Exercises	Review HTML & CSS from Computer Skills IB Read Chapter 1: The Basics in textbook	20 20
2 /	Variables and Data Types Students will learn about variables and simple data types	Lecture Exercises	Preview: Textbook Chapter 2 Review: The teacher will announce assignments in class.	30
3 /	Working with Lists Students will learn about lists in Python and how to use them to store data.	Lecture Exercises	Preview: Textbook Chapters 3 Review: The teacher will announce assignments in class.	30
4 /	Lists and Loops Students will learn about using loops and combining them with lists to process data repeatedly.	Lecture Exercises	Preview: Textbook Chapters 4 Review: The teacher will announce assignments in class.	30
5 /	If Statements Students will learn about if statements and other conditionals to allow for logic conditions in their programs.	Lecture Exercises	Preview: Textbook Chapters 5 Review: The teacher will announce assignments in class.	30
6 /	Dictionaries Students will learn about Python dictionaries and how they can be used to store various pieces of data which can be quickly retrieved.	Lecture Exercises	Preview: Textbook Chapters 6 Review: The teacher will announce assignments in class.	30
7 /	User Input and While Loops Students will learn how to incorporate user input into their program, and how to run a program indefinitely using while loops.	Lecture Exercises	Preview: Textbook Chapters 7 Review: The teacher will announce assignments in class.	30
8 /	Functions Students will learn about how to make functions to do repeated tasks.	Lecture Exercises	Preview: Textbook Chapters 8 Review: The teacher will announce assignments in class.	30
9 /	Classes Students will learn about grouping functions into classes to model real world objects.	Lecture Exercises	Preview: Textbook Chapter 9 Review: The teacher will announce assignments in class.	30
10 /	Classes Continued & Code Testing Students will learn how to use classes across different files, and how to create automated tests for their code.	Guidance Self-Study	Preview: Textbook Chapter 10 Review: The teacher will announce assignments in class.	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Programming STEM Project (1) Students will choose a project topic to implement with programming and devise a plan to create a solution.	Guidance Self-Study	Work on project Review: Textbook Chapter 11-20 (as needed)	30
12 /	Programming STEM Project (2) Students will develop their programming project	Guidance Self-Study	Work on project Review: Textbook Chapter 11-20 (as needed)	30
13 /	Programming STEM Project (3) Students will develop their programming project	Guidance Self-Study	Work on project Review: Textbook Chapter 11-20 (as needed)	30
14 /	Programming STEM Project (4) Students will finalize their programming project and prepare to present during the next class session.	Guidance Self-Study	T Work on project Review: Textbook Chapter 11-20 (as needed)	30
15 /	Programming STEM Project Presentation Students will present and demonstrate their finished project in front of the class.	Guidance Presentations	Submit all project files as directed by the teacher.	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Fundamentals of AI	1	711900	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	SANG-NGENCHAI, Apirak MATSUSHITA, Omihito	Hakusanroku C 101.201		

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Artificial Intelligence History	Artificial Intelligence (AI) is a key discipline shaping the future of science, technology, and society. Students will study AI's history, evolution, and milestones, learn the principles of Machine Learning, including supervised and unsupervised learning, and understand Neural Networks and Deep Learning architectures. They will examine real-world AI uses across domains and critically assess ethical issues in AI development and deployment.
2	Ethical considerations	
3	Machine learning	
4	Neural networks	
5	Deep Learning	
6	Generative AI	

Course Description and Expectations for Students (10.5pt)

This course will offer experimental learning in class as a type of active learning.
This comprehensive 15-lesson course offers a deep dive into Artificial Intelligence (AI), providing students with a thorough understanding of its fundamental principles, applications, and ethical considerations. Beginning with an introduction to AI, the course covers a wide range of topics, including machine learning, neural networks, deep learning, natural language processing, and computer vision. Each lesson includes engaging activities, ranging from hands-on exercises and group projects to discussions and debates, fostering not only theoretical understanding but also practical skills and critical thinking.

Advice on taking this course:
- **B**e Prepared: Review lecture slides beforehand.
- **O**rganize Your Work: Keep clear notes, structure code, and document projects.
- **S**tay Hands-On: Participate actively in labs and practice sessions.
- **S**eek Solutions: When facing challenges, investigate, troubleshoot, and ask questions.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students should have basic math and computer skills, be able to use web search effectively, and be willing to learn Python programming to understand AI fundamentals, apply machine learning concepts, and evaluate ethical implications.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Students will be able to understand the fundamentals of Artificial Intelligence.
②	a	Students will be able to explain basic concepts of Machine Learning.
③	a, i	Students will be able to apply Python programming.
④	h, g	Students will be able to organize and manage data structures.
⑤	b, c, e	Students will be able to evaluate AI applications and consider ethical implications.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	15	25	20	40	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	10	10	5	15	0	0	40
	Ability to think, reason and create	0	5	10	5	15	0	0	35
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	5	0	0	0	5
	Attitude and motivation for learning	0	0	5	5	10	0	0	20

* The numerical breakdown shown by the Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Students will take short in-class quizzes to check their understanding of the content. There will be a quiz in weeks 5, 11, and 15.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Students must complete weekly assignments covering class lectures. If a student is absent, they must obtain the exercise from the teacher and submit it on time. The reports for the Mini Project and the Final Project outline the progress and results of the projects. Instructors will specify the report format during class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①	✓	Students will present oral progress reports on their projects. The instructors will announce the presentation format, such as slides, posters, or another style.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Works	①	✓	For the mini project due in Week 7 and the final project due in Week 15, each student will create an application showcasing the knowledge acquired in this course. Both projects must be submitted by their deadlines.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
1. Gain foundational knowledge of AI, its history, and future directions. 2. Understand the basics and advanced concepts of machine learning. 3. Introduce deep learning concepts and their practical applications. 4. Participate in ethical debates and discussions, developing a responsible perspective towards AI development and usage.	1. Gain a basic understanding of AI, its history, and major areas of development. 2. Understand the fundamental concepts of machine learning. 3. Recognize introductory deep learning concepts and common use cases. 4. Show awareness of ethical issues in AI and participate in guided discussions.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Class Guidance Introduction to AI and History Mini Project Initialization	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
2 /	AI Ethics and Responsible AI. - Core Principles of Ethics AI - Global Ethics Framework - AI Ethics & Responsibility in Japan	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
3 /	Machine Learning 1 - Supervised Learning	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
4 /	Machine Learning 2 - Unsupervised Learning	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
5 /	Neural Networks 1 - NN Introduction - Types of NN - NN calculation	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises. Quiz from lessons 1-4	60
6 /	Neural Networks 2 - Building NN from scratch using TensorFlow	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
7 /	Mini Project Presentation Final Project Initialization	Activity Presentation	Mini Project Submission	60
8 /	Deep Learning 1 - Convolutional Neural Network (CNN)	Lecture Exercise Presentation	Read the lecture slides given and proceed with the exercises.	60
9 /	Deep Learning 2 - Recurrent Neural Network (RNN)	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
10 /	Deep Learning 3 - Long Short-Term Memory Network (LSTM)	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
11 /	Computer Vision - History of Computer Vision - Basic Computer Vision and Applications - Tools and Libraries	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises. Quiz from lessons 5 - 10	60

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
12 /	Natural Language Processing (NLP) - NLP Workflow - NLP Algorithms - Tools and Libraries	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
13 /	AI and Creative Fields 1 - AI in Creative Fields - Generative AI Applications	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
14 /	AI and Creative Fields 2 - Text Generation - Image Generation - Music Generation	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	60
15 /	Course Review and AI Project Showcase - Final Project Presentation	Activity Presentation	Final Project Submission Quiz from lessons 11 - 14	60

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Fundamentals of Computer Science	1	712000	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	EVANS, Davis	Kanazawa C 31.118-1		Day of Class: 16:50-17:30

Course Objectives

	Keywords	Learning Objectives
1	Computer Hardware	**The aim of this course is to teach students the basics of how computers and networked devices operate, and how to properly use such devices and networks. The curriculum provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level information and communication technology (ICT) professionals. The curriculum covers the fundamentals of PC technology, networking, and security.**
2	Computer Software	
3	Network Communication	
4	Binary Numbers	
5	Information Security	

Course Description and Expectations for Students

At the successful completion of this course, students will be able to:

1. Identify and explain the function of key components of modern computer hardware.
2. Perform basic conversion of decimal numbers to binary and hexadecimal.
3. Explain the fundamentals of computer algorithms, their theoretical operating time, and implement simple examples such as sort and search.
4. Explain the purpose of a programming language, and give examples of simple algorithms implemented in one.
5. Explain the purpose of an operating system and how one is structured.
6. Explain the fundamental structure of computer networks, as well as how data is transmitted on them, including over the internet.
7. Explain and implement the fundamentals of information security including cryptography and security protocols.

This course implements active learning with in-class interactive activities and demonstrations replacing some lectures.

Required Materials (textbooks, reference books, reserved books)
Textbooks: D is for Digital (English Edition), Brian W. Kernighan, ASIN: B0075XZL2M
Reference books: None
Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites)

No.	Program Objectives	Target Abilities for Students
①	e	Students will be able to identify the key components of a modern computer, and explain the function of each
②	e	Students will be able to install and maintain operating systems.
③	e	Students will be able to connect and configure devices.
④	e	Students will be able to write basic algorithms and scripts.
⑤	e	Students will be able to perform basic network configuration.
⑥	e	Students will be able to explain and implement the fundamentals of computer and network security

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	0	0	0	30	0	30	100
Comprehensive Strength Criteria	Ability to capture knowledge	25	0	0	0	0	0	20	45
	Ability to think, reason and create	10	0	0	0	20	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	5	0	0	0	0	0	5	10
	Attitude and motivation for learning	0	0	0	0	10	0	5	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①	✓	There will be a final cumulative exam to test student's knowledge of the material.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Exercises will be provided in class to provide practice and promote understanding of the content provided in the textbook and lecture portions.
	②		
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	Skills-based Assessment Assessments are conducted at the end of each part to measure student understanding. The specifics of the assessment will be made clear during the class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Understand how computer hardware and software work, the fundamentals of algorithms, and how to implement basic information security on a single computer and over a network.	Be able to explain how computer hardware works and write simple programs, as well as explain the difference between an encrypted connection and an unencrypted connection.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Part 1: Hardware What's in a computer	Lecture/Activity	Read textbook and assignment	20
2 /	Part 1:Hardware Bits,Bytes,and Representation of Information	Lecture/ Activity	Read textbook and assignment	20
3 /	Part 1:Hardware Inside the CPU Assessment	Lecture/ Activity	Read textbook and assignment	20
4 /	Part 2:Software Algorithms	Lecture/ Activity	Read textbook and assignment	20
5 /	Part 2:Software Programming and Programming Languages	Lecture/ Activity	Read textbook and assignment	20
6 /	Part 2:Software Software System	Lecture/ Activity	Read textbook and assignment Download and install VS Code	20
7 /	Part 2:Software Introduction to Programming VS Code Installation and Example Code	Lecture/ Activity	Read textbook and assignment	20
8 /	Part 2:Software Introduction to Programming Implementing Loops and Conditionals Assessment	Lecture/ Activity	Read textbook and assignment	20
9 /	Part 3:Communications Networking	Lecture/ Activity	Read textbook and assignment	20
10 /	Part 3:Communications The Internet Structure of the Internet	Lecture/ Activity	Read textbook and assignment	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11	Part 3:Communications The Internet Protocols, Bandwidth, & Compression	Lecture/ Activity	Read textbook and assignment	20
12 /	Part 3:Communications The World Wide Web HTML, Webpages, & Their Contents	Lecture/ Activity	Read textbook and assignment	20
13 /	Part 3:Communications The World Wide Web Web security, Viruses, & Cryptography	Lecture/ Activity	Read textbook and assignment	20
14 /	Part 3:Communications Data, Information, and Privacy Assessment	Lecture/ Activity	Read textbook and assignment	20
15 /	Cumulative Review	Self-Study	Prepare for Exam	20

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Fundamentals of Data Science	1	712100	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	ITO, Meguru	Hakusanorku C 101.201		

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Data aggregation	Utilization of data is indispensable for realizing the smart society, Society 5.0, and it will be indispensable in the future to acquire a background in data science. In this lecture, you will learn the most basic methods of data analysis, which occupy a very large part of data science, 1) various methods of data aggregation, 2) normal distribution, 3) linear regression analysis through lectures and exercises.
2	Normal distribution	
3	Correlation	
4	Linear regression	
5	MS Excel	

Course Description and Expectations for Students (10.5pt)

In this course, you will learn the introductory contents of data analysis, which is important aspect of data science, through lectures and exercises. In addition to class lectures, the course also includes hands-on analysis exercises.
The explanations of the mathematical background are kept to a minimum in order to understand the methods and practical exercises are carried out to analyze specific operation and tools.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books: 完全独習統計学入門（ダイヤモンド社）ISBN 978-4478820094
Excel による優しい統計解析（オーム社）ISBN 978-4-274-22612-0
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic operation and data literacy of Microsoft Excel

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to understand cross aggregation.
②	h,i	Students will be able to understand normal distribution.
③	h,i	Students will be able to understand correlaiton.
④	h,i	Students will be able to understand linear regression analysis.
⑤	h,i	Students will be able to analyze the real data and summarize in a report
⑥	i	Students will be able to review what you achieved using Portfolio system.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	90	10	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	45	0	0	45
	Ability to think, reason and create	0	0	0	0	45	0	0	45
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	5	0	5
	Attitude and motivation for learning	0	0	0	0	0	5	0	5

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	∠	To check the learned skills in class, students must submit assignment for each topic. The work will comprise 90% of the overall evaluation. Copying the report of others is not permitted. **Students must submit all assignments. If they do not submit even one of them, the grading of works will be 0.** Late submission of assignments reduces its grading.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥		
Portfolios	①	∠	Portfolio evaluation is based on documentation of evidence of e-syllabus entry that reflects students understanding of their gained learning skills.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Be able to give specific explanations about the use and utilization of data and its significance from the perspective of one's specialty. It is possible to explain the characteristics of the data set after performing appropriate aggregation and drawing a graph for the given numerical data and category data. Furthermore, regarding the given multivariate data. The number of relationships can be obtained, regression analysis can be performed, an optimal regression model can be created, and it can be used for prediction.	Explain the use and utilization of data and its significance. Appropriate aggregation can be performed on given numerical data and category data, and graphs can be drawn. Furthermore, regarding the given multivariate data. The correlation coefficient can be obtained, regression analysis can be performed, and it can be used for prediction.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Review of fundamental statistics Review of fundamental operation of Excel	Lecture and exercise	Finishing assignments of this class	30
2 /	Aggregation	Lecture and exercise	Finishing assignments of this class	30
3 /	Exercise of aggregation	Exercise	Finishing assignments of this class	30
4 /	Normal distribution	Lecture and exercise	Finishing assignments of this class	30
5 /	Population vs Sample	Lecture and exercise	Finishing assignments of this class	30
6 /	t-distribution	Lecture and exercise	Finishing assignments of this class	30
7 /	Exercise of normal distribution	Exercise	Finishing assignments of this class	30
8 /	Correlation	Lecture and exercise	Finishing assignments of this class	30
9 /	Correlation	Lecture and exercise	Finishing assignments of this class	30
10 /	Simple linear regression	Lecture and exercise	Finishing assignments of this class	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Multiple linear regression	Lecture and exercise	Finishing assignments of this class	30
12 /	Exercise of regression analysis	Exercise	Finishing assignments of this class	30
13 /	k-nearest neighbors	Lecture and exercise	Finishing assignments of this class	30
14 /	Open data project	Project	Finishing assignments of this class	30
15 /	Open data project and Summary	Project	Finishing assignments of this class	30

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Electric Foundations I	1	712400	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	HUSSIEN, Alaa	Hakusanroku C 101. 201		Tuesday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	DC circuits analysis.	Students will be able to analyze DC circuits using Ohm and Kirchhoff's laws, know the bridge circuits and their applications, learn about electromagnetic induction and the principles of DC motors and generators, study about condensers and inductors and their applications, understand the fundamentals of semiconductors devices such as diodes, transistors and the logic gates, learn about experiments for building simple electric circuits.
2	Ohm and Kirchhoff's laws	
3	Wheatstone bridge- Electromagnetism	
4	Condensers-Inductors-AC electricity	
5	Diodes-Transistors-Logic gates	

Course Description and Expectations for Students (10.5pt)

In this course, students will understand the meaning of some basic electrical terms and then learn about some basic laws and formulas such as Ohm and Kirchhoff's laws. They also learn how to use such formulas to gain the skill of analyzing different kinds of DC circuits including bridge circuits and their applications. One of the topics which students will know about is the electromagnetic induction and the principle operation of both electrical generators and motors. Condensers and inductors are useful electrical components and are used in most of the electrical appliances, so students will study their structure, properties, characteristics and their applications. Most of the students are a bit familiar of DC electricity but don't know about AC electricity so students will study an introduction to AC electricity. In the last part of this course, student learn about semiconductor devices such as diodes and transistors and then about logic gates. In some classes, students will watch demonstrations of doing some experiments to prove some formulas. It is advised that students pay full attention during the lecture, ask questions, and submit the assignments on time. The lecture style of this course is conducted through a discussion and Q&A between the teacher and students in order to get them involved in to the class. In addition, students help each other through peer learning during the work sheet solving time. These are two types of the active learning applied in the class.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books:"Introduction to Electric Circuits" 9th edition by Richard C. Dorf, James A. Svoboda, ISBN:9781118321829

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students should aware of the fundamental math calculations and know how to solve simultaneous equations. They should feel free to ask questions in and outside the class to understand the topics and solve the worksheet problems. In addition to that, students should realize that making mistakes is necessary for learning.

No.	Program Objectives	Target Abilities for Students (9pt)
①	g,h,i	Define and explain the electrical terms and basic principles of DC circuits connections including series parallel connections.
②	d,h,i	Understand Ohm and Kirchhoff's laws and use their formulas to analyze different types of electric circuits.
③	b,g,i	Learn about the electromagnetic induction and the principle operation of electric generators and motors.
④	a,b,h	Discover more electrical components such as condensers and inductors and their applications in daily life.
⑤	d,h,i	Know about semiconductors devices such as diodes and transistors and logic gates.
⑥	a,d,h,	Learn how to make electric circuits using different components to do some experiments for measuring some quantities.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	50	20	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	20	5	0	0	0	0	35
	Ability to think, reason and create	10	20	5	0	0	0	0	35
	Collaboration and leadership	0	0	5	0	0	0	0	5
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	10	10	5	0	0	0	0	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	There will be one exam, the final exam which will cover material for latter half of this semester. It is worth 30% of your final grade. It is important to study all your notes, worksheets and quizzes before the test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be one quiz each class which will cover materials from the previous lesson. The average of all your quizzes will be your final score which is worth 20% of your final grade. And there will be one mid-term test which will cover material for the former half of this semester. It is worth 30% of your grade, so 50% of your final grade will be obtained through these quizzes and mid-term test.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Every class the students are given a worksheet contains questions and problems to be solved at the class and complete it by the end learning session of the same day. The grading criteria will be based on whether or not you checked your answer and completed it. The homework equates 20% of the total score.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to do the following: 1-Use Ohm and Kirchhoff's laws to analyze DC electric circuits including bridge circuits. 2-understand the electromagnetic induction and how it is used for the operation of generators and motors. 3-Discover the structure and properties condensers and inductors and their applications in daily life 4-Understand the AC electricity compared to DC electricity. 5-learn about the semiconductor devices such as diodes, transistors and logic gates.	Students are able to do the following: 1-Use Ohm and Kirchhoff's law to solve simple circuits. 2-Understand the electromagnetic induction and the difference between the generators and motors. 3-Know about the functions of condensers and inductors. 4-Define the AC electricity compared to DC electricity. 5-Learn about the use of diodes, transistors, and logic gates.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course guidance Electrical quantities and Ohm's law	Lecture Worksheet#1 Activity#1	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#2	30
2 /	DC circuit analysis I	Quiz#1 Worksheet#2 Activity#2	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#3	30
3 /	DC circuit analysis II	Quiz#2 Worksheet#3 Activity#3	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#4	30
4 /	Kirchhoff's laws	Quiz#3 Worksheet#4 Activity#4	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#5	30
5 /	Bridge circuits and applications	Quiz#4 Worksheet#5 Activity#5	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#6	30
6 /	Electromagnetic induction and applications	Quiz#5 Worksheet#6 Activity#6	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#7	30
7 /	Condensers and applications	Quiz#6 Worksheet#7 Activity#7	Review: Finish worksheet/HW. Preparation: Review all worksheets and quizzes	90
8 /	Mid-term exam	Quick review Have the exam	Preparation: read the notes of lecture#9	15
9 /	Inductors and applications	Return the mid-term exam results Worksheet#9	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#10	30
10 /	Introduction to AC electricity	Quiz#7 Worksheet#10 Activity#8	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#11	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Semiconductor diodes I	Quiz#8 Worksheet#11	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#12	30
12 /	Semiconductor diodes II	Quiz#9 Worksheet#12 Activity#8	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#13	30
13 /	Transistors	Quiz#10 Worksheet#13	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#14	30
14 /	Logic gates I	Quiz#11 Worksheet#14	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: read the notes of lecture#15	30
15 /	Logic gates II	Quiz#12 Worksheet#15	Review: Finish worksheet/HW. Prepare for the quiz. Preparation: Review all lecture notes of last 7 classes	60
16 /	Final Exam	Exam on the contents of class #8 to class #15	Study all materials of the second half of the semester	120
17 /	Final Exam Return. Self-check.	Return the exams results.		

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Fundamentals of Robotics	1	712500	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	HAYASHI Michihiro, HAN Justin	Kanazawa C 31-126-1		Class day: 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Mechanism	Students will: (1) learn the basics of robotics. (2) learn how to design mechanical parts. (3) learn how to control a 2-wheel mobile robotic to accomplish line tracing.
2	Sensor	
3	Actuator	
4	Control	
5	Programming	

Course Description and Expectations for Students (10.5pt)

This course will offer problem-solving learning and experimental learning in class as a type of active learning.
This course deals with the fundamentals of robotics. It aims to teach the operations of sensors, actuators, and computer programs through exercises in controlling line tracing robots.

(1) Outline of robotics and mechatronics
(2) Sensors (IR sensor, Ultrasonic sensor, Image sensor)
(3) Actuators (DC motor, Stepper motor, Servo motor)
(4) Computer program (Python, C, C++)

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

	Program Objectives	Target Abilities for Students (9pt)
①	d,g,h	Be able to design parts according to required specification.
②	g,h	Be able to make 3D models by using 3D CAD software.
③	g,h	Be able to manufacture parts by using a 3D printer or laser cutting machine.
④	g,h	Be able to understand algorithms for line tracing robots.
⑤	d,h	Be able to make computer programs by using the Python programming language.
⑥	d,h,i	Be able to check the operation of line tracing robots.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	30	20	50	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	20	0	0	40
	Ability to think, reason and create	0	0	10	10	20	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	10	0	0	0	10
	Attitude and motivation for learning	0	0	0	0	10	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	∠	Students will be evaluated based on their reports such as required specification sheets, mechanical drawings, procedure manuals for manufacturing parts and algorithms for their line tracing robots.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①		Students will be evaluated on their final presentation which deals with their line tracing robots.
	②		
	③		
	④	∠	
	⑤	∠	
	⑥	∠	
Works	①	∠	Students will be evaluated by their works such as 3D models made in CAD, manufactured parts, and computer programs.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Able to design parts and make 3D models based on required specifications. (2) Able to fully understand the functions and operations of various sensors. (3) Able to fully understand the functions of various actuators. (4) Able to make a computer program for line tracing robots correctly. (5) Able to check and explain the operation of line tracing robots.	(1) Able to make 3D models based on actual parts. (2) Able to understand the functions and operations of various sensors. (3) Able to understand the basic functions of various actuators. (4) Able to make a computer program for line tracing robots by referring to various sample programs. (5) Able to check the operation of line tracing robots.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Basics of mechatronics and robotics Composition of robot: Mechanism, frame, actuators, electronic circuit, computer program	Lecture and Q&A Self-check	Understand the course objectives Confirm the course schedule	20
2 /	Representation of mechanical parts 3D model and 2D drawings Conversion between 3D model and 2D drawings Projection methods	Lecture and Q&A Self-check	CAD practice	20
3 /	Making 3D models	Lecture and Q&A Self-check	CAD practice	20
4 /	Design mechanical parts (part 1) Requirement of parts Consideration of dimensions of parts DFMA	Lecture and Q&A Self-check	Specification sheets	20
5 /	Design mechanical parts (part 2) 3D Parts modeling with CAD	Lecture and Q&A Self-check	Parts modeling	20
6 /	Manufacturing and evaluation Manufacturing parts with a 3D printer and laser cutter Measurement, inspection, and evaluation of parts	Lecture and Q&A Self-check Work #1	Check parts	20
7 /	Basics of robot programming Roles of programs Reading the status of sensors Driving the actuators Installation of programming environment	Lecture and Q&A Self-check	Check programming environment	20
8 /	Programming (part 1) Introduction of computer languages Role of algorithms	Lecture and Q&A Self-check	Check programming environment	20
9 /	Programming (part 2) Loops Conditional branches	Lecture and Q&A Self-check	Programming practice	20
10 /	Programming (part 3) Transferring the program to robot Checking the program	Lecture and Q&A Self-check	Programming practice	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Project (part 1)	Lecture and Q&A Self-check	Proceed with project	20
12 /	Project (part 2)	Lecture and Q&A Self-check	Proceed with project	20
13 /	Project (part 3)	Lecture and practice Self-check	Proceed with project	20
14 /	Project (part 4)	Lecture and practice Self-check Work #2 Report #1	Prepare for final presentation	20
15 /	Final presentation Checking robot operation	Lecture and practice Self-check Presentation #1	Check robot operation	20

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required *Practical	Fundamentals of Business Management	1	712700	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
2	* MEBUSAYA, Tossa MEBUSAYA, Rattiya	Hakusanroku C 101.201		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Entrepreneurship	In this course, students will try to find a framework when we think about entrepreneurship and explain the innovation and entrepreneurship as a focused and systematic discipline. The goal of this course is to capture the ideas that existing businesses and new ventures need to know and do to succeed in today's economy.
2	Innovation	
3	Value Creation	
4	Startups	
5	Business Strategy	

Course Description and Expectations for Students (10.5pt)

This course introduces fundamental entrepreneurial concepts through investigative, experiential, project-based, and discussion-centered active learning. Students learn to identify core problems, design effective solutions, and implement them successfully. The course emphasizes.

- Self-awareness and strength recognition for problem-solving
- Logical thinking and structured argumentation
- Effective communication in discussions and presentations
- Experiential and project-based learning through real-world, team-based projects

Drawing on the instructor's startup and management experience, students analyze real case studies and tackle real or simulated business challenges, gaining practical skills essential for innovation and entrepreneurial success globally.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: None
Reference books: None
Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students need to have an interest in business development,
and have a certain basic knowledge of marketing and business system.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a,i,g	Students are able to explain the role of an entrepreneur and the role of the innovation in entrepreneurs and business world
②	a,i,g	Students understand the reasons behind the successful business/entrepreneur stories
③	c,g	Students understand the challenges and risks involved in starting a new business
④	c,g	Students know and understand about the Startups and various type of entrepreneurship
⑤	d, e, f	Students will be able to provide effective feedback as well as accept criticism from others
⑥	f, g	Students will apply their knowledge of innovation-driven entrepreneurship to pitch their business ideas at the idea stage.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	60	40	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	25	20	0	0	0	45
	Ability to think, reason and create	0	0	25	10	0	0	0	35
	Collaboration and leadership	0	0	10	5	0	0	0	15
	Announcement / Expression / Communication	0	0	0	5	0	0	0	5
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Individual research and create reports of topics you learned in class and/or your impressions on the lectures by real entrepreneurs from various industries. Reports will also include individual activity worksheet. The format of the report will be announced by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥	✓	
Presentations	①	✓	Share the results of your own research, both individual and group project, and/or evaluation on entrepreneurship and startup stories. Students will also give oral presentation about their projects. The format of the presentations will be announced by instructors, Teachers will grade on presentation contents and presentation Etiquette, Rubric will be provided as a group and individual.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
- Students are able to play the role of an entrepreneur. - Students understand the success stories and the reasons behind for their success. - Students understand the challenges and risks of starting a new business and know how to deal with them. - Students are able to understand the role of innovation and its impact in the entrepreneur and business world.	- Students are able to explain the role of an entrepreneur. - Students are able to explained and learned lessons and the reason behind success stories. - Students are aware and understand the challenges and risks involved in starting a new business. - Students understand and be able to implement the innovation role into their idea project.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Class Guidance Introduction to Innovation Nature of change and impact	Lecture Q&A Discussion	Review the handouts. Research & Report #1	50
2 /	Innovation, Invention, and Entrepreneur Innovation type and cycle, Innovation Driven Entrepreneur Success stories	Lecture Q&A Discussion	Review the handouts.	50
3 /	Business Model Canvas vs Lean Model Canvas Problem and validation	Lecture Q&A Discussion	Review the handouts. Research & Report #2	50
4 /	Data analytic – methods and tools Stakeholders, Users, Customers Stakeholders – Problem validation	Lecture Q&A Discussion	Review the handouts. Research & Report #3	50
5 /	Value proposition, canvas Problem-solution fit	Lecture Q&A Discussion	Review the handouts.	50
6 /	Solution design – Problem solving model. Problem-solution fit, Customer-solution fit User/Customer centric design	Lecture Q&A Discussion	Review the handouts. Research & Group Report #1	50
7 /	MVP and Prototyping UX/UI Stakeholders – solution validation	Lecture Q&A Discussion	Review the handouts. Research & Group Report #2	50
8 /	Feedback analysis - Validation Market, Competitors, Unfair-Advantages SWOT and Brand positioning	Lecture Q&A Discussion	Review the handouts. Research & Group Report #3	50
9 /	Expense and Income Revenue model Timeline	Lecture Q&A Discussion	Review the handouts. Research & Group Report #4	50
10 /	IP - Copyright, Trademark, Logo, and Patent	Lecture Q&A Discussion	Review the handouts.	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Investor and Funding options Equity and Stage	Lecture Q&A Discussion	Review the handouts. Research & Group Report #5	50
12 /	Doing Business in AI era Finalizing project	Lecture Q&A Discussion	Review the handouts.	50
13 /	Pitching – Pitching script and Pitch deck Finalizing project	Lecture Q&A Discussion	Review the handouts. Research & Pitching script	50
14 /	Pitching – Pitching script and Pitch deck Finalizing project Optional: Guest speakers	Lecture Q&A Discussion	Research & Report Research & Pitching script and Pitch deck	50
15 /	Final Pitching Presentation	Presentation		

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Global Studies	2	610600	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
3	Tracie Stevenson-Wright			

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Study and life skills	The students will learn necessary study and life skills for a study-abroad program in this class: 1) essential academic policies and expectations as international students, including the effective use of the learning support system at Otago Polytechnic 2) the manners and policies for a smooth homestay experience. 3) local geography, culture, and activities on and off campus.
2	Academic and culture orientation	
3	Learning support system	
4	Homestay experience	
5	Living experience	

Course Description and Expectations for Students (10.5pt)

In this class, students will understand the policies and expectations to study and live at Otago Polytechnic in Dunedin.

Study-skills and Campus system
1) The academic policies and the learning system of Otago Polytechnic.
2) Expected manners and efforts in class
3) The use of IT devices and the Internet

Life-skills
1) Homestay policies and manners
2) Campus and City navigation system
3) Sports and cultural activities in Dunedin

All the assignments need to be submitted on time.

Required Materials (textbooks, reference books, reserved books)
Refer to Otago Polytechnic Moodle Website

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Speaking and Listening skills, Reading and Writing Skills, Bridge English

No.	Program Objectives	Target Abilities for Students (9pt)
①	b,d,i	The students are able to understand and act on the essential academic policy and manners.
②	b,d,e, i	The students are able to understand and act on the homestay policies and manners.
③	b,d,i	The students are able to navigate themselves on how to ask for a help with academic and life issues properly when needed.
④	e,i	The students are able to understand geographical features and how they affect lifestyles
⑤	b, e, f, i	The students are able to express the cultural differences between New Zealand, Japan or native country.
⑥	b, e, f, i	The students are able to discuss and reflect on family lifestyles in different ethnic environments

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	10	40	40	0	10	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	10	0	2	0	27
	Ability to think, reason and create	0	5	10	10	0	2	0	27
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	10	0	3	0	13
	Attitude and motivation for learning	0	0	20	10	0	3	0	33

＊ The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	In class you will participate in a quiz from a New Zealand News website (Stuff.co.nz). You will be given opportunities to lead the quiz. When you are leading the quiz it is your job to help run a class discussion about the answers, move the group towards consensus, or facilitate a vote to determine which answer to select.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	You will submit four short pieces of writing (reports). Each report should be between 300 and 400 words long. You will submit your reports electronically to your lecturer. The topic of each piece of writing will be given by the lecturer.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①	✓	You will give four short presentations in class. Each presentation should last between 5 and 7 minutes. Your presentation will be given in English and should use some sort of visual aid (for example a power point presentation or a diagram). The topic of each presentation will be given by the lecturer.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	You will compile a portfolio of things you have done and experienced while in New Zealand so far. Your portfolio should include a range of experiences both on and off campus. You will also do a piece of reflective writing that is between 200 and 300 words and highlights what you have learnt so far and how you will apply this to the rest of your time in New Zealand. You should include SMART Goals for the rest of your stay in your portfolio.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
The students complete all the assignments on time/ahead of submission dates. Having frequent interaction with instructors, other students, host families, and communities. Detailed and well thought out reflections and contribution to discussions.	The students complete and handed in on time. Having consistent communication with instructors, other students, host families, and communities Detailed reflections and contribution to discussions.

Course Schedule

* Most assignments will be allocated class time. However, if an assignment takes longer than the class time allocated, students will be expected to complete the assignment after the class and submit it before the deadline.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	EngTech Orientation (Physical Tour, H&S, Online environment including Teams, Moodle, Student expectations)	Lecture	Review as instructed	15
2 /		Lecture		15
3 /	Develop and Deliver Self Introduction Presentations	Lecture	Presentation preparation	15
4 /		Presentation	Review as instructed	15
5 /	Introductions to places and locations: Map of New Zealand, describing places and things	Lecture	Review as instructed	15
6 /		Lecture	Review as instructed	15
7 /	Introduction to NZ Homestay life: NZ Lifestyle and living	Lecture	Review as instructed	15
8 /		Lecture	Report writing	15
9 /	Prepare Japan and NZ Comparison Presentation 1	Lecture	Presentation Preparation	15
10 /	Prepare Japan and NZ Comparison Presentation 2	Research	Presentation Preparation	15
11 /	Dunedin and Otago Introduction – Trip to Toitu	Lecture	Review as instructed	15

12		Lecture	Review as instructed	15
13 /	Research and Develop Dunedin History Presentation 1	Lecture	Research	15
14 /	Research and Develop Dunedin History Presentation 2	Lecture	Research	15
15 /	Deliver Dunedin History Presentation	Presentation	Presentation Preparation	15
16 /	Education in Japan and New Zealand - different education styles	Lecture	Review as instructed	15
17 /	Planning and Goals: SMART Goal setting	Lecture	Report writing	15
18 /		Lecture	Report writing	15
19 /	Presenting a view: Facts, Views and Opinions	Lecture	Review as instructed	15
20 /	Presenting a view: Agreeing and Disagreeing	Lecture	Report writing	15
21 /	Entertainment: Japan vs New Zealand	Lecture	Review as instructed	15
22		Lecture	Review as instructed	15
23	History of Engineering: Japan & New Zealand 1	Lecture	Report writing	15

Course Schedule

* Most assignments will be allocated class time. However, if an assignment takes longer than the class time allocated, students will be expected to complete the assignment after the class and submit it before the deadline.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
24	History of Engineering: Japan & New Zealand 2	Lecture	Report writing	15
25	History of Engineering: Comparison Presentation Prep	Lecture	Presentation Preparation	15
26	History of Engineering: Comparison Presentation	Presentation	Review as instructed	15
27	Health and Nutrition: Food in New Zealand	Lecture	Review as instructed	15
28		Lecture	Review as instructed	15
29	Following Instructions to cook	Lecture	Review as instructed	15
30		Lecture	Reflection	15

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Global Life and Culture I	2	610700	First	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
3	BAIRD, Pauline / UTSUNOMIYA, Takako	Hakusanroku C: 31.104		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Culture	Students will be able to deepen their interest in various aspects of different cultures, including lifestyle, housing, food, fashion, manners, customs, pastimes, working styles, nature, and history. Through contact with people with different cultural backgrounds, students will explore a variety of values and beliefs, experiencing the joys and challenges of intercultural exchange. Students will learn to see their own culture from a comparative perspective, improving their ability to express their own standpoint while respecting their own and different cultures.
2	Diversity	
3	Values and beliefs	
4	Intercultural exchange	
5	Comparative perspective	

Course Description and Expectations for Students (10.5pt)

This course will offer a "Self-directed" study instead of face-to-face online lectures as a type of active learning.

In this course, while living in New Zealand, the following topics will be covered in four modules (Modules 1 – 4):
1) Moving to a new country, 2) Culture Shock, 3) Leisure and Environment, 4) Meeting New People.

Choose one of the provided prompts of interest. Listen and observe yourself, others, and the environment, then respond to the prompt. Make sure to check the due dates set by teachers.

【Advice】
(1) Positively communicate with people with diverse backgrounds during the course.
(2) Try to see things from various aspects so that you can more deeply understand the given topic.
(3) Try to improve your English Language level.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to express one's own ideas, feelings, and observations in English and/or Japanese.
Ability to write and reflect on life at home and overseas.
Ability to organize ideas into a journal.
Ability to use feedback to improve thought and expression.

No.	Program Objectives	Target Abilities for Students (9pt)
①	e	Students will be able to communicate with people in the world using English.
②	e	Students will be able to understand the ways of life in various cultures and enjoy them.
③	e	Students will be able to express their findings and ideas/thoughts through engaging the assignments.
④	f	Students will be able to explore a variety values and beliefs
⑤	f	Students will be able to listen to and observe various people to deepen their interests about different cultures.
⑥	f	Students will be able to improve their ability to express their own standpoint.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	0	0	50	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	0	20	0	40
	Ability to think, reason and create	0	0	20	0	0	20	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	0	10	0	20
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Reports (journals based on given prompts) are 50% of the overall course grade. 1) Choose <u>one</u> prompt from the list provided. Listen and observe your environment and yourself, then respond to the prompt. 2) Write at least 250 words in English ONLY on a chosen prompt. 3) Upload the journals to BOX by the due date. 4) Each journal entry is 50 points. (Avoid late submissions. Notify the teachers by email if your work is going to be late. 10 points will be deducted for unexcused late submissions.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	Portfolios (journals based on free topics) account for 50% of the overall course grade. 1) Write freely on any topic or concern or share a picture/s and write about it/them. 2) Write about 350 words in English or Japanese (500 Japanese characters) on a chosen topic. 3) Upload the journals to BOX by the due date. 4) Each journal entry is 50 points. The subtotal of the points (50 points max. each unit) for 7 units is converted to 50%.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will complete assignments in English or Japanese on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will complete assignments to a reasonable standard in English or Japanese. Students will respond to most feedback and will occasionally seek help.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
April 13 - 18	Read the syllabus and prepare to write	Read the syllabus	Preparing Internet connection. Preview the modules. Get started.	90 10
20 - 24	**Module 1: Moving to a New Country** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
/	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
May 4- 9	Journal 2	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
11 - 17 /	Journal 3 -free topics-	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
18 - 23	**Module2: Culture Shock!** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
26 - 31	Journal 2	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
June 2- 6	Journal 3 -free topics-	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
8 – 13	**Module 3: Leisure and Environment** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
15- 19 /	Journal 2	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
22 - 26	Journal 3 -free topics-	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
July 6-10	**Module 4: Meeting New People** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
20 - 25	Journal 2	Prompts for self-directed learning	Complete Journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
27 - 31	Journal 3 -free topics-	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Global Life and Culture II	2	610800	Second	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
3	BAIRD, Pauline / UTSUNOMIYA, Takako	Hakusanroku C: 31.104		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Culture	Students will be able to deepen their interest in various aspects of different cultures, including lifestyle, housing, food, fashion, manners, customs, pastimes, working styles, nature, and history. Through contact with people with different cultural backgrounds, students will explore a variety of values and beliefs, experiencing the joys and challenges of intercultural exchange. Students will learn to see their own culture from a comparative perspective, improving their ability to express their own standpoint while respecting their own and different cultures.
2	Diversity	
3	Values and beliefs	
4	Intercultural exchange	
5	Comparative perspective	

Course Description and Expectations for Students (10.5pt)

This course will offer a "Self-directed" study instead of face-to-face online lectures as a type of active learning.

In this course, while living in New Zealand, the following topics will be covered in five modules (Modules 5 – 9):
5) Discovering Japanese culture, 6) School Life, 7) Making connections (Language and Interests), 8) Personal Skills and Career Growth, 9) Moving Home

Choose one of the provided prompts of interest. Listen and observe yourself, others, and the environment, then respond to the prompt. Make sure to check the due dates set by teachers.

【Advice】
(1) Positively communicate with people with diverse backgrounds during the course.
(2) Try to see things from various aspects so that you can more deeply understand the given topic.
(3) Try to improve your English Language level.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Ability to express one's own ideas, feelings, and observations in English and/or Japanese.
Ability to write and reflect on life at home and overseas.
Ability to organize ideas into a journal.
Ability to use feedback to improve thought and expression.

No.	Program Objectives	Target Abilities for Students (9pt)
①	e	Students will be able to communicate with people in the world using English.
②	e	Students will be able to understand the ways of life in various cultures and enjoy them.
③	e	Students will be able to express their findings and ideas/thoughts through engaging the assignments.
④	f	Students will be able to explore a variety values and beliefs
⑤	f	Students will be able to listen to and observe various people to deepen their interests about different cultures.
⑥	f	Students will be able to improve their ability to express their own standpoint.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	0	0	50	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	0	20	0	40
	Ability to think, reason and create	0	0	20	0	0	20	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	0	10	0	20
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

＊ The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Reports (journals based on given prompts) are 50% of the overall course grade. 1) Choose <u>one</u> prompt from the list provided. Listen and observe your environment and yourself, then respond to the prompt. 2) Write at least 250 words in English ONLY on a chosen prompt. 3) Upload the journals to BOX by the due date. 4) Each journal entry is 50 points. (Avoid late submissions. Notify the teachers by email if your work is going to be late. 10 points will be deducted for unexcused late submissions.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	Portfolios (journals based on free topics) are 50 % of the overall course grade. 1) Write freely on any topics or concerns or share a picture/s and write about it/them. 2) Write about 350 words in English or Japanese (500 Japanese characters) on a chosen topic. 3) Upload the journals to BOX by the due date. 4) Each journal entry is 50 points. The subtotal of the points (50 points max. each unit) for 7 units is converted to 50%.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will complete assignments in English or Japanese on time and to a high standard. Students will respond appropriately to feedback and seek help when necessary to further improve.	Students will complete assignments to a reasonable standard in English or Japanese. Students will respond to most feedback and will occasionally seek help.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
August 3 - 4 /	Read the syllabus and prepare to write	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
10 – 15	**Module 5: Discovering Japanese Culture** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
17 - 22	Journal 2	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
24 - 29	Journal 3 -free topics-	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
31- Sept 5	**Module 6: School Life** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to Moodle. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
September 7 - 12	Journal 2	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
8 - 13	Journal 3 -free topics-	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
14 - 19	**Module 7: Making Connections (Language and Interests)** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
October 5 - 10	Journal 2	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
12 - 17	Journal 3 -free topics-	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
19 - 24	**Module 8: Personal Skills and Career Growth** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
November 2 – 7	Journal 2	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
November 23 - 28 /	Catch up	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	Catch up	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
January 25 - 30	**Module 9: Moving Home** Journal 1	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
	(Same as above)	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
Feb 2 - 6	Catch up	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
8 - 13 /	Catch up	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10
22 - 27 /	Catch up	Prompts for self-directed learning	Complete the journal and submit it to BOX by the due date. Check the feedback comment.	90 10

Functional English

SMS Code	EE501001	*Teacher-directed learning hours*	150
Level	4	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme No			

Aim

To enable students to communicate independently and effectively with fluency and flexibility in everyday social, community, and academic English language contexts

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Use oral and written English fluently to communicate in formal and informal settings
2. Identify and outline main ideas and key supporting evidence in formal and informal communication
3. Apply the principles of intercultural communication in context

Indicative Content

- Reading moderately complex English texts and commenting on them
- Listening to moderately complex English texts and commenting on them
- Participating in conversations about culture and society
- Analysing situations from a cultural perspective
- Writing a variety of texts in English in appropriate genre about social and cultural issues

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Test	10%	1-3	Percentage	Must pass with minimum 50 % overall
Oral Discussion	20%	1-3		
Portfolio	40%	1-3		
Presentation	30%	1-3		

Engineering English Communication (Engineering Communication)

SMS Code	EE502001	*Teacher-directed learning hours*	150
Level	5	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme No			

Aim

To enable students to communicate effectively in English in a global engineering environment

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Interpret ideas and concepts in complex English language texts in an engineering context
2. Communicate technical information in an engineering English context
3. Use English language to communicate instructions, information and decisions effectively
4. Demonstrate cultural awareness in a global engineering environment

Indicative Content

- Writing a technical report in English
- Writing engineering laboratory reports in English
- Giving a technical presentation based on a project
- Giving and receiving instructions in an engineering context
- Analysing engineering case studies from a technical and cultural viewpoint
- Reading and interpreting technical information related to engineering and IT contexts
- Participating in group project planning and implementation in an English language environment
- Analysing cultural norms and values relating to teamwork and project case studies

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Presentation	20%	1-4	Percentage	Must pass with minimum 50% overall
Report	20%	1-4		
Test	15%	1,2		
Portfolio	20%	2-4		
Practical	25%	1-4		

Introduction to Engineering Practice (Engineering Practice)

SMS Code	EE503001	*Teacher-directed learning hours*	150
Level	4	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme: No			

Aim

To enable students to develop engineering principles and applications in an integrated, multidisciplinary project-based learning environment

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Operate safely in an engineering environment
2. Produce concept models and assemblies and apply these to create a project outcome
3. Demonstrate effective communication and cultural awareness in a project-based team environment

Indicative Content

- Team roles and effective team operation
- Integration of maths and physical science concepts into physical engineering projects
- 3D Cad for detail drawings and automated subtractive and additive engineering processes
- Safe use of a range of engineering and electrical hand and power operated tools for the manufacture of prototype parts
- Effective communication with engineering technicians and others providing client services
- Reflective practice for self-analysis of project work
- Effective presentation types, technologies, skills and techniques

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Project Team Contribution	30%	1-3	CRA	Must pass with minimum 50% overall
Project outcomes	30%	1-3		
Presentation	40%	2,3		

Engineering Project (Engineering Design III)

SMS Code	EE504001	*Teacher-directed learning hours*	300
Level	5	*Authentic work experience learning hours*	
Credits	30	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	300
NQF Unit standards assessed in this course: No			
This course approved in another Programme No			

Aim

To enable students to apply engineering knowledge and problem-solving skills to conceive, design, implement and operate an engineering project to accepted standards

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Present a proposal for an engineering-based project
2. Formulate a work plan and procedures with consideration to environment and resource management, safety, ethical and cultural factors
3. Implement, operate, analyse and report on an engineering project outcome

Indicative Content

- Apply theoretical knowledge and practical skills to develop a desired engineering solution
- Create of an effective product prototype, computer model or proof of concept as the required outcome
- Design process that integrates mathematical and physical science concepts as appropriate to the outcomes
- Integration of maths and physical science concepts into physical engineering projects
- Demonstration of reflective practice throughout the project process
- Correct selection of effective presentation types, technologies, skills and techniques
- Recording of processes in appropriate media
- Teamwork and group negotiation skills

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Project outcomes	50%	1-3	Percentage	Must pass with minimum 50% overall
Presentation	15%	1-3		
Documentation	35%	1-3		

Engineering Mathematics

SMS Code	EE505001	*Teacher-directed learning hours*	150
Level	5	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme No			

Aim

To enable students to apply general mathematical principles and equip them with appropriate engineering mathematical skills to solve engineering problems

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Apply techniques of algebra to solve engineering-related problems
2. Apply complex numbers and matrices to solve engineering-related problems
3. Apply techniques of calculus including integration and differential equations to solve engineering-related problems

Indicative Content

- Graphs and trigonometric waves
- Algebraic expressions and equations
- Complex number forms, expressions, and equations
- Logarithms & exponentials
- Trigonometry
- Matrices and simultaneous equations
- Differentiation and integration techniques in an engineering context
- Differential equation techniques in an engineering context

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Collaborative Tutorials	15%	1-3	Percentage	Must pass with minimum 50% overall
Tests	35%	1-3		
Exam	50%	1-3		

Programming for Engineers (Programming 1)

SMS Code	EE506001	*Teacher-directed learning hours*	150
Level	5	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme *Name of other Programme:*			

Aim

To introduce students to the concepts of program design and programming fundamentals for engineering

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Decompose a simple problem into a series of computer operations
2. Use one logic depiction method and apply it to appropriate simple tasks
3. Create programs using basic programming constructs and simple data structures
4. Implement routines as functions and as procedures and apply common methods to access files within an application

Indicative Content

- Program Design
- Algorithms
- Structured diagrams UML
- If statements, Nested Ifs, Switch statements
- Loops
- Arrays
- Data Types and Records
- Reading Files of Records
- Text files
- Version control

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Assignment	20%	1-4	Percentage	Must pass with minimum 50% overall
Tests	70%	1-4		
Lab tasks	10%	1-4		

Engineering Mechanics

SMS Code	EE507001	*Teacher-directed learning hours*	150
Level	5	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme No *Name of other Programme:*			

Aim

To enable students to analyse the fundamental principles and laws of mechanics

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Analyse static forces in mechanics and their relationship to engineering applications
2. Analyse dynamic force systems and their relationship to engineering applications
3. Analyse the principles of fluids for solving engineering-related problems

Indicative Content

- Basic mechanical theory as applied to 2-dimensional systems
- Systems of static loads and simple frameworks
- Shear force and bending moment diagrams
- Friction on level and inclined surfaces
- Centroid and Centre of Gravity
- Linear and angular motion
- Forces and motion
- Work and energy
- Relative motion
- Principles of fluids

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Tests	30%	1,2	Percentage	Must pass with minimum 50% overall
Laboratories	20%	1,2		
Exam	50%	1-3		

Platforms and Devices for Engineering (Engineering Computing)

SMS Code	EE508001	*Teacher-directed learning hours*	150
Level	5	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme: *Name of other Programme:*			

Aim

To enable students to use a range of devices, platforms and concepts utilised within the IT and engineering industry

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Use and recall systems tools, command line and scripting to configure, maintain, and secure operating systems in local and virtual settings.
2. Identify, explain, install and troubleshoot typical faults (both hardware and OS) for the main components of a computer.
3. Connect and configure a range of devices to enable network functionality

Indicative Content

- Installing, configuring and selecting PC hardware components
- Operating systems installation and maintenance (systems tools)
- Bootloaders
- Overview of operating systems (mobile, desktop, service, etc.)
- Use a VM & develop basic understanding of virtualisation
- Formats (media formats; open vs. binary)
- Basic use of transmission protocols (e.g. FTP, SSH)
- File systems
- Backup and RAID systems
- Troubleshooting hardware and software
- Connecting and configuring devices (Bluetooth, Wi-Fi, printers, etc.)/Mounting drives
- Command line proficiency
- Basic network configuration
- 'Embedded' (Raspberry Pi, Arduino, Development platforms)
- Environmental impact of IT
- Identify sustainability issues involved in purchasing, using and disposing of devices.

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Exam	40%	1,2	Percentage	

Skills-based Assessment	40%	2,3		Must pass with minimum 50% overall
Assignment	20%	1,2,3		

Electronic Principles

SMS Code	EE509001	*Teacher-directed learning hours*	150
Level	5	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme No *Name of other Programme:*			

Aim

To enable learners to apply general electronic skills to basic circuits

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Explain fundamental principles of digital and analogue electronics.
2. Apply electronic principles to basic electronic circuits.
3. Demonstrate the use of electronic measuring equipment.

Indicative Content

- Thevenin's theorem, superposition theorem and maximum power transfer theorem.
- Combinational logic circuits, sequential logic, registers, counters and encoders.
- Diodes, rectification and smoothing. Simple Zener and three-terminal regulated power supplies. Switching power supplies.
- Linear and switching operation of BJT and MOSFET devices.
- Operational Amplifier theory and applications.
- Electronic meters, oscilloscope, function generators and component testers.

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Assignments	30%	1-3	Percentage	Must pass with minimum 50% overall
Laboratories	20%	1-3		
Test	50%	1-3		

Material Science

SMS Code	EE510001	*Teacher-directed learning hours*	150
Level	5	*Authentic work experience learning hours*	
Credits	15	*Student-managed learning hours*	
Prerequisites	No	*Total Learning Hours*	150
NQF Unit standards assessed in this course: No			
This course approved in another Programme No			

Aim

To enable students to recognise the characteristics and properties of common engineering materials and elements of biology and chemistry relevant to mechanical and process engineering.

Learning Outcomes

At the successful completion of this course, students will be able to:

1. Explain basic materials science chemistry and specify methods to change material properties
2. Test and analyse properties of materials used in engineering
3. Apply selection criteria for engineering materials and identify likely causes of material failure

Indicative Content

- Characteristics and properties of ferrous and non-ferrous metals, iron-carbon diagram, steels, cast iron, ferrous alloys, cold & hot working.
- Other materials such as ceramics, plastics, composites, timber and concrete
- Material testing, physical properties, tensile, compressive, fatigue, and NDT testing to relevant standards.
- Heat treatment processes and effects.
- Surface hardening processes.
- Surface coatings.
- Fibre reinforced composites, types of materials, types of reinforcements.
- Selection of materials for engineering applications.
- Case study approach to chemistry and biology covering processes relevant to industries such as HVAC, food production, fuel production, waste treatment, natural raw material processing (eg timber, meat, animal fibre, minerals etc)

Assessment

Assessment Activity	Weighting	Learning Outcomes	Assessment Grading Scheme	Completion Requirements
Assignment	20%	1,3	Percentage	Must pass with minimum 50% overall
Project / Lab	30%	1-3		
Test	50%	1,2		

2026 Syllabus

Instructor with "＊"means an instructor with company experience.

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Academic English IA	1	610300	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	REYNOLDS, Stephanie / UTSUNOMIYA, Takako	Kanazawa C: 31.104		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Critical Thinking	In this course, students will be able to improve English communication skills while sharing opinions in discussions, writing, and presentations. Students will learn critical thinking skills and gain knowledge about various topics related to engineering, science, and technology. Additionally, students will learn and apply effective and appropriate communication strategies in discussions, presentations, and writing.
2	Communication	
3	Engineering	
4	Writing	
5	Presentation	

Course Description and Expectations for Students (10.5pt)

This course will offer discussion, group work, and reflection as types of active learning.
Students will prepare and participate in English discussions using the new language skills and those that are already known.
Students will practice and apply new strategies for effective communication in discussions, presentations, and writing.
Students will write some academic essays/written reports and prepare some academic presentations.

It will be important for students to share their own opinions in relation to information from a variety of sources. Appropriate use of AI tools will be discussed, and students will learn how to appropriately reference and cite sources.
Students should be prepared with a binder or folder to keep handouts, writing tools for in-class work, and laptop computers for preparing presentations, researching related information, downloading class materials, and submitting online assignments.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: Pathways: Reading, Writing, and Critical Thinking, 3rd Edition Levels 2, 3, and 4
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate English ability
Basic computer skills

No.	Program Objectives	Target Abilities for Students (9pt)
①	d	Students will be able to share opinions and ideas through discussions in English.
②	h	Students will be able to think critically about various topics related to engineering, science, technology, and society.
③	g	Students will be able to write an academic essay/report.
④	c	Students will be able to make academic presentations in English.
⑤	c	Students will be able to apply effective communication strategies in presentations and writing.
⑥	b	Students will be able to reference and cite sources appropriately.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	20	30	30	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	5	0	5	0	25
	Ability to think, reason and create	0	5	10	5	0	5	0	25
	Collaboration and leadership	0	0	0	10	0	5	0	15
	Announcement / Expression / Communication	0	5	10	10	0	0	0	25
	Attitude and motivation for learning	0	5	0	0	0	5	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		Vocabulary, skill review, written response, and/or reading/listening comprehension quizzes based on the content of class activities and assignments (20%): Feedback will be given during the following class sessions.
	②	レ	
	③		
	④		
	⑤	レ	
	⑥		
Reports	①		Some academic essays/written reports (30%) Each assignment will include an outline, first draft, writing conferences, and final draft. Feedback will be given during the following class sessions.
	②	レ	
	③	レ	
	④		
	⑤	レ	
	⑥	レ	
Presentations	①		Some academic presentations (30%) Each presentation will include an outline, preparation of supplementary materials, delivery/participation in discussion, and self-evaluation/reflection. Feedback will be given during the following class session.
	②	レ	
	③		
	④	レ	
	⑤	レ	
	⑥	レ	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	レ	In-class or assigned handouts for preparation, review, and/or reflection of discussion topics (20%) Feedback will be given during the following class session.
	②	レ	
	③		
	④		
	⑤	レ	
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Professional-level, academic writing and presentations. Discuss 100% in fluent English.	Comprehensible writing and presentations. Discussions mostly in English.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction/Topic 1 (1) Quiz – Reading and writing level assessment. Students will participate in brainstorming and background building communication activities.	Brainstorming as a pre-reading technique, individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
2 /	Topic 1 (2) Students will review and discuss topics related to the reading or videos.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
3 /	Quiz Topic 1 (3) Students will review and discuss topics related to the reading or videos.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
4 /	Topic 1 (4) Students will review and discuss topics related to the reading or videos.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
5 /	Quiz Topic 1 (5) Students will review and discuss topics related to the reading or videos, brainstorm ideas and opinions, and research information for a written academic assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
6 /	Academic Writing Topic 1 (6) Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Review: Complete final draft due class 8 Reading	50
7 /	Presentation/Discussion Topic 1 (7) Students will brainstorm, outline, prepare materials, deliver, and reflect on an in-class presentation.	Individual, pair, and group work; discussion	Review: Complete presentation reflection due class 8 Reading	50
8 /	Topic 2 (1) Students will participate in brainstorming and background building communication activities..	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
9 /	Quiz Topic 2 (2) Students will review and discuss topics related to the reading or videos.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
10 /	Topic 2 (3) Students will review and discuss topics related to the reading or videos.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Quiz Topic 2 (4) Students will review and discuss topics related to the reading or videos.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
12 /	Topic 2 (5) Students will review and discuss topics related to the reading or videos, brainstorm ideas and opinions, and research information for a written academic assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
13 /	Academic Writing Topic 2 (6) Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Review: Complete final draft due class 15 Reading	50
14 /	Presentation/Discussion Topic 2 (7) Students will brainstorm, outline, prepare materials, deliver, and reflect on an in-class presentation.	Individual, pair, and group work; discussion	Review: Complete presentation reflection due class 15 Reading	50
15 /	Self-Evaluation Students will be given oral and written feedback both overall and individually on their work. Students will also be encouraged to share their feedback about the course. *Presentation evaluation returned*	Individual, pair, and group work; discussion		

2026 Syllabus

Instructor with "＊"means an instructor with company experience.

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Academic English IB (a)	1	610400	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	REYNOLDS, Stephanie / UTSUNOMIYA, Takako	Kanazawa C: 31.104		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Critical Thinking	In this course, students will be able to improve English communication skills while sharing opinions in group discussions, presentations, and in writing. Students will learn critical thinking skills and gain knowledge about content related to various topics in engineering, science, technology, and society. Additionally, students will learn and apply effective and appropriate communication strategies in discussions, presentations, and writing.
2	Communication	
3	Knowledge	
4	Writing	
5	Presentation	

Course Description and Expectations for Students (10.5pt)

This course will offer discussion, group work, and reflection as types of active learning.
Students will prepare and participate in English discussions using the language skills that are already known.
Students will practice and apply new strategies for effective communication in discussions, presentations, and writing.
Students will write some academic essays/written reports and prepare some presentations.

It will be important for students to share their own opinions in relation to information from a variety of sources. Appropriate use of AI tools will be discussed, and students will learn how to appropriately reference and cite sources.
Students should be prepared with a binder or folder to keep handouts, writing tools for in-class work, and laptop computers for preparing presentations, researching related information, downloading class materials, and submitting online assignments.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: Pathways: Reading, Writing, and Critical Thinking, 3rd Edition, Levels 2, 3, and 4
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate English ability
Basic computer skills

No.	Program Objectives	Target Abilities for Students (9pt)
①	d	Students will be able to share opinions and ideas through discussions in English.
②	h	Students will be able to think critically about various topics related to engineering, science, technology, and society.
③	g	Students will be able to write an academic essay/report.
④	c	Students will be able to make academic presentations in English.
⑤	c	Students will be able to apply effective communication strategies in presentations and writing.
⑥	b	Students will be able to reference and cite sources appropriately.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	20	30	30	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	5	0	5	0	25
	Ability to think, reason and create	0	5	10	5	0	5	0	25
	Collaboration and leadership	0	0	0	10	0	5	0	15
	Announcement / Expression / Communication	0	5	10	10	0	0	0	25
	Attitude and motivation for learning	0	5	0	0	0	5	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		Vocabulary, skill review, written response, and/or reading/listening comprehension quizzes based on the content of in-class activities and assignments (20%): Feedback will be given in the following class session.
	②	レ	
	③		
	④		
	⑤	レ	
	⑥		
Reports	①		Some academic essays/written reports (30%) Each assignment will include an outline, first draft, writing conferences, and final draft. Feedback will be given in the following class sessions.
	②	レ	
	③	レ	
	④		
	⑤	レ	
	⑥	レ	
Presentations	①		Some academic presentations (30%) Each presentation will include an outline, preparation of supplementary materials, delivery/participation in discussion, and self-evaluation/reflection. Feedback will be given in the following class session.
	②	レ	
	③		
	④	レ	
	⑤	レ	
	⑥	レ	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	レ	In-class or assignment handouts for preparation, review, and/or reflection of discussion activities (20%) Feedback will be given in the following class session.
	②	レ	
	③		
	④		
	⑤	レ	
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Professional-level, academic writing and presentations. Discuss 100% in fluent English.	Comprehensible writing and presentations. Discussions mostly in English.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction/ Topic 1 (1) Students will be introduced to the syllabus and contents of the course. Students will participate in brainstorming and background building communication activities.	Brainstorming as a pre-reading technique, individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
2 /	Topic 1 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
3 /	Topic 1 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 4) Reading	50
4 /	Topic 2 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
5 /	Topic 2 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
6 /	Topic 2 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 7) Reading	50
7 /	Topic 3 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
8 /	Topic 3 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
9 /	Topic 3 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 10) Reading	50
10 /	Topic 4 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Topic 4 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
12 /	Topic 4 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 13) Reading	50
13 /	Review of Readings and Topics 1-4 Presentation preparation Students will review and discuss topics related to the reading or videos, brainstorm ideas and opinions, and research information for an academic presentation	Individual, pair, and group work; discussion	Preview: Brainstorm Review: Complete outline and supplemental materials Reading	50
14 /	Review of Readings and Topics 1-4 Students will deliver presentations with appropriately cited sources and supplemental materials connected to their topic of research. Students will share peer feedback and reflect on their learning in the course.	Individual, pair, and group work; discussion	Preview: Practice presentation Review: Complete written reflection Reading	50
15 /	Self-Evaluation Students will be given oral and written feedback both overall and individually on their work. Students will also be encouraged to share their feedback about the course. *Presentation Project Returned*	Individual, pair, and group work; discussion		

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Elective	Technical Communication	2	623100	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	REYNOLDS, Stephanie	Kanazawa C. 31-104		TBA

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Communication	Students will learn to write and present appropriately chosen and thoughtfully designed, audience-focused technical and professional information. They will use critical thinking, collaboration, and constructive feedback to explore the language, conventions, technologies, and strategies to effectively, efficiently, and ethically communicate technical information based on the needs of their audience.
2	Critical Thinking	
3	Technical English	
4	Business English	
5	Professional English	

Course Description and Expectations for Students (10.5pt)

Technical Communication is a course for students to learn, practice, and prepare for future research and business in technical and professional fields. This course focuses on language, critical thinking skills, communication strategies, and conventions for writing and speaking about technical subjects with the needs of the audience at the core. Students will have the opportunity to analyze, evaluate, describe, design, collaboratively design, and reflect on several technical communication speaking and writing tasks based on real-world scenarios. Tasks will include writing technical descriptions, instructions, procedures, proposals, and business correspondence, as well as participating in virtual and face-to-face presentations, discussions, and pitches. Students will learn how to give appropriate and constructive feedback and will have numerous opportunities for reflection.

This course will offer group work, discussion, and reflection in class as a type of active learning.
This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute study times for 15 50-minute classes. You should spend about 200 minutes to review and prepare for each lesson.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

None

No.	Program Objectives	Target Abilities for Students (9pt)
①	b ,h	Students will be able to understand and explain the need and purpose of technical communication.
②	g, f	Students will be able to define, describe, and summarize technical terms, instructions, and procedures.
③	e, h	Students will be able to identify, analyze, and evaluate how to appropriately communicate based on their audience
④	a ,g	Students will be able to write and organize technical documents, business correspondence, proposals, and reports.
⑤	a, g	Students will be able to design, produce, and present virtual and face-to-face presentations.
⑥	c ,d ,i	Students will be able to think critically for self-reflection and to provide constructive feedback to their peers.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	15	15	20	10	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	5	0	5	0	10	20
	Ability to think, reason and create	0	0	0	5	5	0	10	20
	Collaboration and leadership	0	0	5	5	5	5	0	20
	Announcement / Expression / Communication	0	0	5	5	5	0	10	25
	Attitude and motivation for learning	0	0	0	0	0	5	10	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		Project/Research Proposal (5%) Students will write a project proposal and abstract. Analytical report (10%) Students will write an analytical report
	②	∠	
	③	∠	
	④	∠	
	⑤		
	⑥	∠	
Presentations	①		Proposal presentation with Q&A (5%) Pitch presentation with Q&A (10%)
	②	∠	
	③	∠	
	④		
	⑤	∠	
	⑥	∠	
Works	①		Technical description (10%) Guide/Tutorial/Infographic (10%)
	②	∠	
	③	∠	
	④	∠	
	⑤		
	⑥	∠	
Portfolios	①	∠	In-class group discussions and project documentation (10%) Students will complete and keep a record of in-class discussions, project notes, and written reflections. Feedback will be returned in class the following class.
	②	∠	
	③	∠	
	④		
	⑤		
	⑥	∠	
Others	①	∠	Five e-learning modules for out-of-class learning. (40%) Students will complete and submit assignments for each module in an e-learning format. Feedback will be shared online, and grades will be confirmed in class.
	②	∠	
	③	∠	
	④	∠	
	⑤		
	⑥	∠	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
You will be able to produce exceptional quality technical documents and presentations, showing a deep understanding of the need and purpose of technical communication language and critical thinking.	You will be able to produce appropriate and acceptable technical documents and presentations, showing a basic understanding of the need and purpose of technical communication language and critical thinking.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course Introduction Task-based Project 1 Students will establish teams and choose roles for the first project, discuss, and document project management.	Lecture, discussion, group work, reflection	Preview: E-learning module 1 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
2 /	Task-based Project 1 Students will collaborate to research, create, and outline a project proposal and abstract. They will discuss and document project management.	Lecture, discussion, group work, reflection	Preview: E-learning module 1 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
3 /	Task-based Project 1: Students will produce a first draft. They will discuss and document project management. **Project Proposal – First Draft**	Lecture, discussion, group work, reflection	Preview: E-learning module 2 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
4 /	Task-based Project 1 Students will present and submit project proposals and give and receive feedback. **Project Proposal – Final Draft** **Proposal Presentation**	Lecture, discussion, group work, reflection	Preview: E-learning module 2 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
5 /	Task-based Project 2 Students will choose new roles for the next project, discuss, and document project management.	Lecture, discussion, group work, reflection	Preview: E-learning module 2 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
6 /	Task-based Project 2 Students will produce a first draft. They will discuss and document project management. **Technical Description – First Draft**	Lecture, discussion, group work, reflection	Preview: E-learning module 3 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
7 /	Task-based Project 2 Students will share and submit technical descriptions and give and receive feedback. **Technical Description – Final Draft**	Lecture, discussion, group work, reflection	Preview: E-learning module 3 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
8 /	Task-based Project 3 Students will choose new roles for the next project, discuss, and document project management.	Lecture, discussion, group work, reflection	Preview: E-learning module 3 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
9 /	Task-based Project 3 Students will produce a first draft. They will discuss and document project management. **Guide/Tutorial/Infographic – First Draft**	Lecture, discussion, group work, reflection	Preview: E-learning module 4 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
10 /	Task-based Project 3 Students will share and submit instructional materials and give and receive feedback **Guide/Tutorial/Infographic – Final Draft**	Lecture, discussion, group work, reflection	Preview: E-learning module 4 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Task-based Project 4 Students will choose new roles for the next project, discuss, and document project management.	Lecture, discussion, group work, reflection	Preview: E-learning module 4 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
12 /	Task-based Project 4 Students will produce a first draft. They will discuss and document project management. **Analytical Report – First Draft**	Lecture, discussion, group work, reflection	Preview: E-learning module 5 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
13 /	Task-based Project 4 Students will share and submit analytical reports and give and receive feedback **Analytical Report – Final Draft**	Lecture, discussion, group work, reflection	Preview: E-learning module 5 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
14 /	Task-based Project 5 Students will choose new roles for the next project, discuss, and document project management. **Pitch Deck – First draft**	Lecture, discussion, group work, reflection	Preview: E-learning module 5 Review: Complete any unfinished project documents or preparation for group discussion in the next class	200
15 /	Task-based Project 5 **Pitch Presentations** Self-Evaluation Students will be given oral and written feedback both overall and individually on their work. Students will also be encouraged to share their feedback about the course.	Lecture, discussion, group work, reflection Evaluation & Feedback		200

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 一般 選択	課題学修（語学）	2	623200	－	－ ／認定

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4	－	－		

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	高度な英語スキルの習得	学生が英語の資格取得を通じて、将来のキャリアに直結する実践的な知識・技術を主体的に習得することを目的とする。
2	自主的・継続的学習	
3	キャリア設計	
4	自己評価	
5		

授業の概要および学習上の助言

課題学修（語学）として認定の対象となる資格については学生便覧2026 p.94 別表１に記載されたものに限定する。
申請時には申請書に合格通知書・免状などの原本とコピーを提出し、クラス担任の確認印を受けること。
英語担当教員や指導教員に事前相談し、適切な資格を選定することを推奨する。
第3学年3月末までに課題学修の条件を満たし、第4学年4月に単位の認定を申請すること。

【教科書および参考書・リザーブドブック】
教科書：なし
参考書：各資格試験の公式テキスト・問題集
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

各資格試験の受験要件および英語の知識・技能

No.	教育目標(DP)（記号表記）	学生が達成すべき行動目標
①	i	英語に関連する知識・技能を体系的に理解できる。
②	i	卒業を見据えた長期的な学修計画を自ら立て、実行できる
③	i	資格取得の経験を進路選択や将来設計に結びつけることができる
④	i	学修の成果と課題を整理し、次のステップに向けた目標を設定できる
⑤		
⑥		

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	0	0	0	0	0	100	100
総合力指標	知識を取り込む力	0	0	0	0	0	0	100	100
	思考・推論・創造する力	0	0	0	0	0	0	0	0
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	0	0	0	0	0	0
	学習に取組む姿勢・意欲	0	0	0	0	0	0	0	0

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①	✓	別表に定める資格の取得（合格）をもって評価する
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
資格取得を通じて得た知識・技能を実社会で応用できる。	目標の資格試験に合格する。

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	人文科学	2	623900	後学期	講義／学修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4年	平泉　紀房 / 清水　節	21・604 21・605		授業時に予約

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	日本の歴史	日本における歴史上の人物の生涯を学ぶことで、その生き方・考え方を知り、それらを通して日本人の特質・行動規範などについて理解し、今後の自身の問題と照らし合わせて考える。さらに、各種神話や建国伝承を学ぶことで、多様な価値観の存在を知るとともに、日本人の特質を考える。一方、諸外国のもつ多様な文化・価値観にも眼を向け、日本と異なる歴史や文化・伝統を公平に評価できる真摯な姿勢の大切さを学ぶ。これらのことを通じて、「読む・聞く・考える・書く」といった基礎的能力の向上を図る。
2	日本の神話	
3	日本人の特質、国民性	
4	比較文化	
5	多様な価値観	

授業の概要および学習上の助言

本講義は学修単位であるため、１単位を50分45回分の学習とし、100分授業15回に対して100分30回分の自学自習を行って下さい。
この授業ではアクティブラーニングの一環として調査学習、グループワークを行います。
☆本科目の授業概要は以下の通りである。
第1回～第7回目　テーマ：国際比較から日本の特質を考える。（清水担当）
１．日本、および日本人の特色や特質について、歴史や比較文化の観点から学ぶ。
２．グループ活動で「日本と外国」「過去と現在」の比較調査を行い、討議した成果を発表する。
３．相互評価を行って、自身の学習成果について振り返りを行う。
第8回目授業　テーマ：地域の歴史・文化を学ぶ。（清水担当）
４．白山と白山信仰について学習する。
第9回～第15回　テーマ：日本人の生き方・考え方に学ぶ。（平泉担当）
５．日本の歴史上の人物に関する講義を聴き、その人物の生き方・考え方（行動規範）に学ぶ。
６．日本の神話と世界の神話を比較して、日本人の特質を考える。
７．日本の建国伝承から、国の成り立ちと建国の理想について学ぶ。

【教科書および参考書・リザーブドブック】
教科書：指定なし
参考書：指定なし
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：世界主要国価値観データブック〔同友館〕

履修に必要な予備知識や技能

１．予習内容と聴講内容とを総合して理解し、提示されたテーマについて考察する能力
２．適切な日本語で文章にまとめる能力
３．グループ討議に積極的に参加する姿勢、および調査・考察・発表を行うための基礎能力

No.	教育目標(DP) （記号表記）	学生が達成すべき行動目標
①	e	歴史上の人物から学んだ、生き方・考え方について、適切な日本語の文章で説明できる。
②	e	日本・日本人の特質について、学習内容や調査内容をもとに適切な日本語の文章で説明できる。
③	e	日本の建国伝承から学んだ国の成り立ちと建国の理想について、適切な日本語の文章で説明できる。
④	e	海外の人々が多様な価値観をもっていることについて理解を深めることができる。
⑤	e	グループ討議・発表を通じて、自己の見解を口頭および文章で表現することができる。
⑥	i	本科目における学生の達成すべき行動目標を自己評価できる。

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作　品	ポートフォリオ	その他	合　計
総合評価割合		0	0	62	20	0	10	8	100
総合力指標	知識を取り込む力	0	0	25	0	0	0	0	25
	思考・推論・創造する力	0	0	25	0	0	0	0	25
	コラボレーションとリーダーシップ	0	0	0	10	0	0	0	10
	発表・表現・伝達する力	0	0	12	10	0	0	0	22
	学習に取組む姿勢・意欲	0	0	0	0	0	10	8	18

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①	✓	「授業レポート」用紙を配布する。 それに記述された内容で、授業時間外における予習・調査考察の成果や行動目標の達成度を確認・評価して返却する。 第1回～第7回（5点×4回、計20点） 第9回～第15回（6点×7回、計42点） 第9回以降は、配布される『日本学資料集』の指定ページ部分を授業時間外に予習する。 →授業毎にレポートを課し、そのなかで事前学習の成果を評価する。 「授業レポート」用紙の注意事項（評価基準）をよく読んで作成する。 不明な点は教員に質問をする。
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
成果発表 （口頭・実技）	①		グループ内で分担調査し、討議する。（5点） その成果をプレゼンテーションする。（10点） →授業時間外における調査活動やグループ討議・発表準備などの成果（調査レポート、討議記録、発表資料）を踏まえて評価する 発表について相互評価を行う。（5点）
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		本科目における学生の達成すべき行動目標を自己評価する。 自己評価レポート（10点）
	②		
	③		
	④		
	⑤		
	⑥	✓	
その他	①	✓	「授業レポート」の期日外提出（やむを得ない事情がある場合を除く）や、グループ活動時の取り組みで問題が見られる場合は、減点方式で評価をする。
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
行動目標 ①②③④「授業レポート」において、課題の主旨と条件を満たし、評価基準に合致した適切な日本語の文章で、講義内容の要点および考察を具体的に記述できる。 ②④⑤グループ活動を通じて、日本と外国の比較調査を行い、その成果を明快に口頭発表することができる。 ⑥自己の達成度を適切な日本語表現で、明快に論述できる。	行動目標 ①②③④「授業レポート」において、課題の主旨と条件を満たし、評価基準に合致したある程度適切な日本語の文章で、講義内容の要点および考察を記述できる。 ②④⑤グループ活動を通じて、日本と外国の比較調査を行い、その成果を口頭発表することができる。 ⑥自己の達成度を適切な日本語表現で論述できる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	☆科目説明（ガイダンス） 本科目の目的・意義・運営方法について解説する。 ☆国際比較から日本の特質を考える 担当教員による講義を聴講する。取りあげるテーマや人物は、クラスや学科の特性に合わせる。	講義と質疑 演習（レポート作成）	Eシラバス配信資料の予習 レポート作成準備	100 100
2 ／	☆国際比較から日本の特質を考える グループ討議① 討議テーマに関する解説、および調査・考察・発表の方法について説明する。 また、インターネットやライブラリーセンターの蔵書などを活用し、官庁や研究所が公表している各種調査データを分析検討する。なお、各自で調査・考察した成果をグループ討議レポートにまとめる。	質疑、演習 ノートパソコン、LANケーブルを持参する。	収集資料の整理と分析 プレゼンテーション準備 グループ討議レポートの作成	120 120 120
3 ／	☆国際比較から日本の特質を考える 担当教員による講義を聴講する。取りあげるテーマや人物は、クラスや学科の特性に合わせる。 ☆講義レポートの返却、学習成果の振り返り	講義と質疑 演習（レポート作成）	Eシラバス配信資料の予習 レポート作成準備	100 100
4 ／	☆国際比較から日本の特質を考える グループ討議② 前回に続いて、グループ活動（調査・討議・発表準備）を行う。各自で調査・考察した成果をグループ討議レポートにまとめる。また、グループとして発表内容をまとめ、パワーポイントを作成する。	講義と質疑、演習 ノートパソコン、LANケーブルを持参する。 グループ討議レポートの提出	収集資料の整理と分析 プレゼンテーション準備	120 120
5 ／	☆国際比較から日本の特質を考える 担当教員による講義を聴講する。取りあげるテーマや人物は、クラスや学科の特性に合わせる。 ☆講義レポートの返却、学習成果の振り返り	講義と質疑 演習（レポート作成）	Eシラバス配信資料の予習 レポート作成準備	100 100
6 ／	☆国際比較から日本の特質を考える グループ発表① 各グループの成果を発表し、質疑応答と相互評価を実施する。	演習（発表と質疑応答） ノートパソコン、LANケーブルを持参する。	発表評価シートの作成 発表の反省 自己評価レポートの作成	100 30 100
7 ／	☆国際比較から日本の特質を考える グループ発表② 各グループの成果を発表し、質疑応答と相互評価を実施する。	演習（発表と質疑応答） ノートパソコン、LANケーブルを持参する。	発表評価シートの作成 発表の反省	100 30
8 ／	☆地域の歴史・文化を学ぶ オンラインで講義動画を視聴する 白山・白山信仰について学習する。	オンライン講義 教室での授業は行わない。 各自で講義動画を視聴し、聴講メモを作成する。	聴講メモの作成	200
9 ／	☆第9回目以降の授業について（ガイダンス） 第9回目以降の授業目的・意義・運営方法について解説する。 ☆日本人の生き方・考え方に学ぶ 担当教員の講義を聴講して、日本人の生き方、日本国および日本人の特質について学び、提示されたテーマについて考察した内容を授業レポートにまとめ、提出する。	講義と質疑 授業レポート作成	予習：『日本学資料集』の指定ページ部分を読んで理解してくる。 復習：学習支援計画書や各種配布資料により、科目の教育目的と行動目標を確認する。	100 60
10 ／	☆日本人の生き方・考え方に学ぶ 担当教員の講義を聴講して、日本人の生き方、日本国および日本人の特質について学び、提示されたテーマについて考察した内容を授業レポートにまとめ提出する。	前回の自己点検 講義と質疑 授業レポート作成	予習：『日本学資料集』の指定ページ部分を読んで理解してくる。 復習：返却された「授業レポート」を見直し、内容を確認する。	120 60

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	☆日本人の生き方・考え方に学ぶ 担当教員の講義を聴講して、日本人の生き方、日本国および日本人の特質について学び、提示されたテーマについて考察した内容を授業レポートにまとめ、提出する。	前回の自己点検 講義と質疑 授業レポート作成	予習：『日本学資料集』の指定ページ部分を読んで理解してくる。 復習：返却された「授業レポート」を見直し、内容を確認する。	120 60
12 ／	☆日本人の生き方・考え方に学ぶ 担当教員の講義を聴講して、日本人の生き方、日本国および日本人の特質について学び、提示されたテーマについて考察した内容を授業レポートにまとめ、提出する。	前回の自己点検 講義と質疑 授業レポート作成	予習：『日本学資料集』の指定ページ部分を読んで理解してくる。 復習：返却された「授業レポート」を見直し、内容を確認する。	120 60
13 ／	☆日本人の生き方・考え方に学ぶ 担当教員の講義を聴講して、日本人の生き方、日本国および日本人の特質について学び、提示されたテーマについて考察した内容を授業レポートにまとめ、提出する。	前回の自己点検 講義と質疑 授業レポート作成	予習：『日本学資料集』の指定ページ部分を読んで理解してくる。 復習：返却された「授業レポート」を見直し、内容を確認する。	120 60
14 ／	☆日本人の生き方・考え方に学ぶ 担当教員の講義を聴講して、日本人の生き方、日本国および日本人の特質について学び、提示されたテーマについて考察した内容を授業レポートにまとめ、提出する。	前回の自己点検 講義と質疑 授業レポート作成	予習：『日本学資料集』の指定ページ部分を読んで理解してくる。 復習：返却された「授業レポート」を見直し、内容を確認する。	120 60
15 ／	☆日本人の生き方・考え方に学ぶ 担当教員の講義を聴講して、日本人の生き方、日本国および日本人の特質について学び、提示されたテーマについて考察した内容を授業レポートにまとめ、提出する。 ☆自己点検 これまでの学習成果について、教員・学生相互で確認を行う。	前回の自己点検 講義と質疑 授業レポート作成 自己評価レポートの提出	ポートフォリオを提出する。	200

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	技術者倫理	2	624200	前学期	講義/学修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4年	増渕隆史	金沢C： 1.316		火曜 10:35-12:15 水曜 15:10-16:50

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1 2 3 4 5	科学技術者が共有する価値 専門職倫理と倫理綱領 グローバル社会の中の技術者 倫理的意思決定の方法 社会の中の科学技術	本科目の目的は、科学技術がグローバル化の進む今日の社会および環境に与える影響について考察し、科学技術の目的・役割と社会との相互作用についての理解を深めることである。 また、科学技術者が専門職として担う倫理的・社会的責任を検討する。さらに、実務を行う上で直面する倫理的な問題を検討し、それらを解決する問題解決能力の向上を図る。 以上の学習を通して、「科学技術者倫理」が単に規範の遵守ではなく、価値のバランスを取りながら「自らがなすべき行動を設計する」という創造的な知的営みであることを学ぶ。

授業の概要および学習上の助言

本講義は学修単位であるため、１単位を50 分45 回分の学習とし、50 分授業15 回に対して50 分30 回分の自学自習を行って下さい。
この授業ではアクティブラーニングの一環としてグループディスカッションを行います。
1. 概要説明および本科目と既習科目およびICTの教育目的との関係に関する解説
2. なぜ、今、科学技術者の倫理が問われているのか
3. 科学技術者の倫理とは何か／科学技術者が特別の責任を負う理由
4. 科学技術者が意思決定を迫られる状況
5. 科学技術者が重視すべき価値とは何か：専門職集団と倫理綱領
6. 科学技術者としていかに行動すべきか：倫理的問題解決の方法
7. 組織のなかの科学技術者：企業倫理と科学技術者倫理
8. 事例の検討（ケーススタディ）：現実の事例を題材
9. 事例の検討（ケースメソッド）：仮想事例などを通して討議
10. グローバル社会における科学技術者の役割
11. 科学技術者の新しい役割と科学技術者倫理
12. 各専門領域における倫理的問題や事例の検討

・新聞などで報道される科学技術に関わる事件などを科学技術者の倫理の観点から分析する姿勢を持つこと。
・第三者的・評論家的に講義に参加するのではなく、科学技術を担う「当事者」として、「道徳的行為者」としての自覚を持ちながら、講義で提示される問題を自分ならどうするかという観点で考えること。

【教科書および参考書・リザーブドブック】
教科書：本質から考え行動する科学技術者倫理[白桃書房]
参考書：　　ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

・「日本学」をはじめとする他の科目の講義内容と深く関連しているので、復習しておくこと。
・グループディスカッションを行うので、これまでの経験を踏まえて、建設的な議論を進めることができるようにしておくこと。
・この科目では、将来の科学技術を担う者として現代社会と科学技術の関係を考察するため、新聞をしっかり読んで政治、経済、文化、科学技術などの動向に常に関心を払い、自分の問題として考える態度を身に付けておくこと。

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	b, h	科学技術と人間社会の在り方（経済活動を含む）との相互作用について、具体的な例を挙げながら説明できる
②	b, c, g	科学技術者が専門職として実務を行う上で担う責任や共有すべき価値（安全など）について理解し、これを他者に説明できる
③	b, d, f	倫理綱領についての知識を持つとともに、企業などが組織として行う倫理対策について説明できる
④	b, e, h	倫理的ジレンマを疑似体験し、その問題点を分析するとともに自分の経験や事実関係の調査と関連づけながら考察できる
⑤	a, b, h	セブン・ステップ・ガイドなどの倫理的問題解決の方法について理解し、これらの方法を具体的な事例において適用できる
⑥	b, c, i	本科目の学習教育目標とICTの教育目的・目標、さらに科学技術者が持つべき資質・能力との関係を理解し、自己点検できる

達 成 度 評 価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		25	15	30	15	0	5	10	100
総合力指標	知識を取り込む力	10	7	10	0	0	0	0	27
	思考・推論・創造する力	10	8	10	5	0	0	0	33
	コラボレーションとリーダーシップ	0	0	0	5	0	0	0	5
	発表・表現・伝達する力	5	0	5	5	0	0	0	15
	学習に取組む姿勢・意欲	0	0	5	0	0	5	10	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①	レ	・達成度を確認する試験を第14回の時間中に実施する。総合評価に占める割合は25%。受験しない場合は単位を認めない。なお、この試験は「定期試験」ではない。
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		
クイズ 小テスト	①		・科目での達成度の指標とするため、授業で検討するケースの倫理的問題構造などを分析する課題、倫理綱領に関する課題、企業倫理プログラムに関する課題を、それぞれ実施（提出）する。
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		
レポート	①	レ	・本科目の受講を経て倫理的分析能力がどのように変化したかを確認する課題を授業外学習において、実施（提出）する。 ・グループ討議で検討するケースに関して、倫理的な問題の認識、分析能力、倫理的問題解決方法、具体的事例への適応能力等を総合的に問う課題を実施する。 ・科学技術の専門家として求められる価値観について考察する課題を実施（提出）する。
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
成果発表 （口頭・実技）	①		・数名のグループを作り、討議を行い、倫理的なジレンマを擬似体験することを通じて、倫理的な問題の存在と種類を分析し、道徳的行為者として、エシックステストなどを適切に用いた問題解決方法を確認し、結果を報告する。
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		・本科目と、ICTの教育・学習目標との関連について自己点検する記述式の課題を授業外学習において適時に実施（提出）する。
	②		
	③		
	④		
	⑤		
	⑥	レ	
その他	①		・グループ討議には積極的に参加すること。グループ討議への貢献度を相互に評価する。 ・本科目の授業内容を鑑みて、不正行為には十分に注意すること（自ら不正を、不正とみなされることを含めて行わない事は無論、不正をそそのかしたり、看過したりもしないこと）。これらに該当すると判断された場合は、厳重に対処する。
	②		
	③		
	④		
	⑤		
	⑥	レ	

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・科学技術者として直面する可能性のある倫理的な問題の存在と種類について、具体例を挙げながら十分説明できる。 ・倫理的な想像力、倫理的問題を認識し分析する能力、責任感を向上させる必要性などを、説得力をもって他者に説明できる。 ・倫理綱領とそこに含まれる価値観について、および企業などが組織として行う倫理対策について具体的に説明できる。 ・倫理的ジレンマの疑似体験から得たことを、自分の経験や考え方と関連づけながら、建設的に考察することができる。 ・エシックステストなどの倫理的問題解決の方法について理解し、これらの方法を具体的な事例において十分適用できる。	・科学技術に関する倫理的な問題の存在と種類について説明できる。 ・倫理的な想像力、倫理的問題を認識し分析する能力、責任感を向上させる必要性などを説明できる。 ・倫理綱領についての知識を持つとともに、企業などが組織そして行う倫理対策について説明できる。 ・倫理綱領とそこに含まれる価値観について、および企業などが組織として行う倫理対策について説明できる。 ・倫理的ジレンマを疑似体験し、そこから得たことを自分の経験や考え方と関連づけながら考察することができる。 ・エシックステストなどの倫理的問題解決の方法について理解し、これらの方法を具体的な事例において適用できる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	※第1～2回では、本科目への導入として、第2回までの「学習内容」の事項について、講義やグループ討議などを通して検討・考察する。 ・科目の目的・目標、内容、課題、評価方法などに関する解説 ・本学の教育目的・目標との関連に関する解説 ・既習科目との関連についての解説	・PCを用いた講義 ・グループ討議 ・討議結果の発表 など	・復習：初回配布資料や本科目「学習支援計画書」などの熟読 ・次回に向けた予習：事例分析など	50 150
2 ／	（続き） ・直面する可能性のある倫理的問題に関する具体例 ・セブン・ステップ・ガイドの概説　他	・PCを用いた講義 ・グループ討議 ・討議結果の発表 など	・復習：第1～2回で学んだことについての考察の深化 ・次回に向けた予習：教科書の精読	100 100
3 ／	※現実に起きた事例をベースに倫理的考察や意思決定に必要な概念や用語などの解説を行う	・PCを用いた講義 ・関連する視聴覚教材の視聴 ・演習 など	・復習：授業で検討した事例の考察の深化 ・次回に向けた予習：教科書の精読	100 100
4 ／	※技術者としていかに行動すべきか ・倫理的問題解決の方法 ・エシックステストおよびセブン・ステップ・ガイドに関する詳細解説 ・セブン・ステップ・ガイドを用いた演習	・PCを用いた講義 ・関連する視聴覚教材の視聴やグループ討議を行うこともある ・演習	・復習：セブン・ステップ・ガイドを使った事例分析の練習 ・次回に向けた予習：次回の授業で検討する事例の概要の把握	100 100
5 ／	※第5～6回では、ケースメソッド事例に関するグループ討議を経て、第7回の「学習内容」に挙げてある事項についての考察を行う ・グループ討議	・PCを用いた講義 ・与えられた事例に関するグループ討議	・復習・次回に向けた予習：討議内容についてのさらなる検討	150
6 ／	・グループ討議（続き） ・討議結果の発表	・PCを用いた講義 ・与えられた事例に関するグループ討議 ・討議結果の発表 など	・復習：授業内で行った事例に関する考察の深化 ・次回に向けた予習：教科書の精読	150 100
7 ／	※技術者としていかに行動すべきか ※優れた意思決定がもたらすもの	・PCを用いた講義 ・関連する視聴覚教材を視聴することもある	・復習：倫理綱領についての考察の深化 ・次回に向けた予習：教科書の精読	120 80
8 ／	※なぜ、科学技術者倫理が求められているのか	・PCを用いた講義 ・関連する視聴覚教材を視聴することもある	・復習：企業の倫理的取組みについての考察の深化 ・次回に向けた予習：教科書の精読	120 80
9 ／	※第9～10回では、ケースメソッド事例に関するグループ討議を経て、第11～12回の「学習内容」に挙げてある事項についての考察を行う ・グループ討議	・PCを用いた講義 ・与えられた事例に関するグループ討議	・復習・次回に向けた予習 ・討議内容についてのさらなる検討	150
10 ／	・グループ討議（続き） ・討議結果の発表	・PCを用いた講義 ・与えられた事例に関するグループ討議 ・討議結果の発表 など	・復習：授業内で行った事例に関する考察の深化 ・次回に向けた予習：教科書の精読	150 100

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	※各教員による自由講義（1）	・PCを用いた講義 ・関連する視聴覚教材を聴講など	・復習：授業内で行った事例に関する考察の深化 ・次回に向けた予習：教科書の精読	100 100
12 ／	※各教員による自由講義（2）	・PCを用いた講義 ・関連する視聴覚教材を聴講など	・復習：教科書の精読 ・次回に向けた予習：科学技術の専門家として求められる価値観に関する考察	100 100
13 ／	※本質から考え行動する科学技術者倫理	・PCを用いた講義	・復習：これまでの授業内容の振り返り	200
14 ／	※これまでの授業の要点解説と達成度確認	・これまでの授業の要点解説 ・達成度確認テストの実施	・予習：テストの準備 ・復習：これまでの授業内容の振り返り ・次回に向けた予習：ポートフォリオを用いた振り返り	100 100 60
15 ／	※まとめと自己点検	・PCを用いた講義（成績概要の説明など） ・授業アンケートへの回答	・教科書での授業全体の復習	140

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Science, Technology, and Human Society	2	610500	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	BANDA Kiyomi / KOBAYAKAWA Yuko	Program of Interdisciplinary Liberal Arts, Engineering Science and Technology		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Prehistory life (the founding of a country)	- As a marketing strategy, students will develop a problem-solving mindset by learning statistical analysis using statistical software packages such as Python and HAD. - Through an examination of the formation of nation-states and the evolution of human society alongside scientific and technological development, students will develop the ability to envision improved forms of human life in the future.
2	Science, technology, and human society	
3	Globalization	
4	The VUCA world	
5	Fulfilled life	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
In the first half of the semester, students perform data analysis using Python and HAD. At the same time, students consider what types of data to collect to aid in problem-solving and design overall framework of the marketing research.
In the latter half of the semester, students examine the formation of nation-states, evolution of human society alongside scientific and technological development, and the impact of globalization on global values. Building on these perspectives, they explore potential solutions to issues discussed in class through a case study set on an island in the Philippines. The BEVI (Beliefs, Events, and Values Inventory) will be administered in the first class.
Professor Kiyomi Banda will handle classes 1 – 7, while Professor Yuko Kobayakawa will be responsible for the rest of classes, namely class 8– 15.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Reading materials will be distributed either in class or via the KIT system
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

English proficiency to discuss and produce presentations is required. Research skills to come up with concrete information are essential.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b, h	Explain the relationship between science and technology using examples.
②	b, h	Explain the relationship between science, technology, and human society using examples.
③	b, h	Analyze and explain based on social aspects the interactions between science, technology, and human society
④	b, e, h	Critically and logically argue and explain one's thoughts based on knowledge acquired from research.
⑤		
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	40	40	0	0	20	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	40	0	0	0	0	40
	Ability to think, reason and create	0	0	0	40	0	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	10	10
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	10	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Completed in-class assignment worksheets will be evaluated.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Presentations	①	✓	Individual and/or presentations will be evaluated.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	Active engagement and students' original opinions in individual assignments and group work will be evaluated.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
- After learning about statistical analysis methods using Python and HAD in class, students will be able to design data collection strategies that lead to problem-solving. - Critically assess their contributions to human well-being and articulate perspectives on the future relationship between science, technology, and society.	- After learning about statistical analysis methods using Python and HAD in class, the students explored the various types of analysis methods available. - Students will be able to critically examine the causes and underlying mechanisms shaping the impact of science and technology on social life.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	- Introducing the lecturer and the course from Class No.1 to 7 - Cognitive activity	- Lecture - Group work	- Class Work: Report on today's takeaway from the class	200
2 /	- Marketing ➢ 7P: Service marketing ➢ Pest analysis - Accessing Google Collaboratory to use Python	- Lecture - Handling - Discussion	- Class Work: Report on today's takeaway from the class	200
3 /	- Marketing - Python ➢ Scatter plot ➢ Simple Regression Analysis ➢ Multiple Regression Analysis	- Lecture - Handling - Discussion	- Class Work: Report on today's takeaway from the class	200
4 /	- Marketing - Python ➢ Logistic Regression Analysis	- Lecture - Handling - Discussion	- Class Work: Report on today's takeaway from the class	200
5 /	- Marketing - Installing HAD (developed by Dr Hiroshi Shimizu) ➢ Cluster Analysis	- Lecture - Handling - Discussion	- Class Work: Report on today's takeaway from the class - Presentation	200
6 /	- Presentation for marketing design	- Lecture - Presentation	- Class Work: Report on today's takeaway from the class	200
7 /	- Summary	- Lecture - Presentation - Discussion	- Class Work: Report on today's takeaway from the class - Self-evaluation	200
8 11/16 ①	- Introducing the lecturer and the course - Foundation of Nation-State ➢ Formation of Nation-State in Europe and Japan ➢ Colonization ➢ Stateless people - In-class BEVI test, a deep inner assessment tool to learn about values and beliefs that shape you who you are.	- Lecture - Group Discussion: colonization and stateless people - BEVI test	- Class Work: Report on today's takeaway from the class - Homework: "Stateless People"	200
9 11/23 ②	- Presentation on: "Stateless People" (homework) - Nation's tasks - BEVI feedback: getting to know the characteristics of the class	- Lecture - Group Discussion: roles and responsibility of nation-state - Presentation: stateless people	- Class Work: Report on today's takeaway from the class - Homework: how science and technology have changed our lives (your option of an era and a country)	200
10 11/30 ③	- Have science and technology helped us improve our lives? ➢ Yes/No: based on what elements?	- Lecture - Group Discussion - Presentation	- Class Work: Today's takeaway from the class - Presentation: Have science and technology improved our lives?	200

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 12/7 ④	- Caohagan Island: an island with nothing, yet rich ➢ The income on the island is lower than the lowest income in the world ➢ Bartering life ➢ Wisdom to live on the island	- Lecture - Group Discussion - Presentation	- Class Work: today's takeaway from the class - Homework	200
12 / ⑤	- Caohagan Island: invasion of globalism – what overtourism brought to the island? ➢ Easy money, easy life: Is anything wrong? ▪ Income gap ▪ Value changes ▪ Environment (toilet, water, waste, electricity) ▪ Lifestyles	- Lecture - Group Discussion - Presentation	- Class Work: today's takeaway from the class - Homework	200
13 / ⑥	- Message from Caohagan Island ➢ Reality of the island ➢ Current and future issues	- Lecture - Group Discussion - Presentation	- Class Work: today's takeaway from the class - Homework: Solutions of the issues on Caohagan Island	200
14 / ⑦	- Presentation Day ➢ Solutions of issues on Caohagan overviewed	- Presentation - Discussion	- Class Work: today's takeaway from the class	200
15 / ⑧	Wrap-up of the course.			200

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 一般科目 選択	社会調査法	2	613300	後学期	講義／学修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4年	石原　正彦	金沢C： 未定		授業時に予約

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	社会調査	本科目は環境デザイン創生学科の学習・教育目標の「コミュニケーションを介して協業する基礎能力」に対応する科目である。世に飛び交う多くの情報から、共に生きる人びとのことを正しく、よりよく知るために手段の一つ”社会調査”について理解を深める。そのために、社会調査方法の意義、種類、具体的なデザイン、調査結果の集計について学ぶ。 。
2	量的調査・質的調査	
3	母集団と標本	
4	社会調査のデザイン	
5	データ集計と分析	

授業の概要および学習上の助言

本講義は学修単位であるため、１単位を50 分45 回分の学習とし、50分授業15 回に対して50 分30 回分の自学自習を行って下さい。また、この授業ではアクティブラーニングの一環としてグループワークを行います。
共に生きる人びとや私たちが暮らす環境について理解を深めるための授業である。教科書の指定された章については事前に読んで、疑問に思うことについて積極的に発言し、授業内で議論することを勧める。

【教科書および参考書・リザーブドブック】
教科書：入門・社会調査法[法律文化社]
参考書：指定なし
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：指定なし

履修に必要な予備知識や技能

特になし

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	d, f	図表を用いて調査結果を相手に適切に説明できる
②	i	社会調査のデザイン、実施及び分析能力を身に付ける。
③	a, l, h	社会調査の結果を踏まえて、現場の問題の実態を発見できる。
④		
⑤		
⑥		

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	0	40	40	0	0	20	100
総合力指標	知識を取り込む力	0	0	20	20	0	0	0	40
	思考・推論・創造する力	0	0	10	10	0	0	0	20
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	10	10	0	0	0	20
	学習に取組む姿勢・意欲	0	0	0	0	0	0	20	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①	レ	授業外で課題についてレポートを作成し、適切に取り組んでいるかどうかで評価する。
	②	レ	
	③	レ	
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①	レ	課題及び最終課題の内容を順序立ててわかりやすく説明し、質疑に対して適切に応答できるかを評価する。
	②	レ	
	③	レ	
	④		
	⑤		
	⑥		
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①	レ	授業内で行う議論において、発言の回数及び内容を点数化して評価する。
	②	レ	
	③	レ	
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
社会調査の意義、デザイン、実施及び分析手法について説明できると共に、社会調査の結果をわかりやすく説明でき、さらにその結果から現場の問題の実態を発見できる。 。	社会調査の意義、デザイン、実施及び分析手法について説明でき、調査結果をわかりやすく説明できる 。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	オリエンテーション 第１章「社会調査とは何か」	講義と議論を通して、「社会調査」について理解を深める。	予習：第1章を読んで授業に臨む 復習：授業における議論を踏まえて第1章の復習をする。	300
2 ／	第２章「社会調査の種類」	講義と議論を通して、「社会調査の種類」について理解を深める。	予習：第2章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第2章の復習をする。	300
3 ／	第３章「社会調査のプロセス」	講義と演習を通して、「社会調査のプロセス」について理解を深める。	予習：第3章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第3章の復習をする。	300
4 ／	第4章「社会調査のプロセス」	講義と議論を通して、「社会調査のプロセス」について理解を 深める。	予習：第4章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第4章の復習をする。	300
5 ／	第５章「実査の方法」	講義と演習を通して、「実査の方法」について理解を深める。	予習：第5章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第5章の復習をする。	300
6 ／	第６章「調査票の作成」	講義と演習を通して、「実査の方法」について理 解を深める。	予習：第6章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第6章の復習をする。	300
7 ／	第７章「サンプリング」	講義と演習を通して、「サンプリング」について理解を深める。	予習：第7章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第7章の復習をする。。	300
8 ／	第8章「調査の実施」	講義と演習を通して、「調査の実施」について理 解を深める。	予習：第8章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第8章の復習をする。	300
9 ／	第９章「データの電子ファイル化」	講義と演習を通して、「データの電子ファイル化」について理解を深める。	予習：第9章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第9章の復習をする。	300
10 ／	第10章「データの基礎的集計」	講義と演習を通して、「データの基礎的集計」について理解を深め る。	予習：第10章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第10章の復習をする。	300

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	第11章「統計的推測」	講義と演習を通して、「統計的推測」について理解を深める。	予習：第11章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第11章の復習をする。	300
12 ／	第12章「変数間の関連」	講義と演習を通して、「数間の関連」について理解を深める。	予習：第12章を読んだ上で課題に取り組む 復習：授業における議論を踏まえて第12章の復習をする。	300
13 ／	特別講演「実社会での社会調査」	講義と演習を通して、「実社会での社会調査」について理解を深 める。	特別講師の事業について事前調査する。 特別講師の講義内容のまとめ	300
14 ／	最終課題「社会調査から地域課題の設定」	社会調査の結果及び考察内容をプレゼンする。	社会調査の結果をまとめ、プレゼンの準備をする。 最終課題の議論内容をまとめる。	300
15 ／	最終課題「社会調査」発表 総括＆自己点検	社会調査の結果及び考察内容をプレゼンする 授業の振り返り及び総括 自己点検	社会調査の結果をまとめ、プレゼンの準備をする。 最終課題の議論内容をまとめる。 振り返り	300

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Health and Physical Education IIIA	1	613000	First	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	CADZOW Philip	Hakusanroku 101 Gym		Friday 16:30-17:30

Course Objectives

	Keywords	Learning Objectives
1	Sportsmanship	Students will develop sport skills and knowledge in Softball and Tennis. Students will learn and practice training specific components of fitness for lifelong health through self-chosen exercise. Students will demonstrate and understand the importance of sportsmanship and effort as a young adult. Students will understand the health concepts related to being a young adult.
2	Safety	
3	Sports	
4	Exercise	
5	Health	

Course Description and Expectations for Students

The course will initially instruct students with the use and care of the Kanazawa campus facilities which include the gymnasium, training machines, and running course. After the introduction, class will focus on developing Softball skills and then Tennis skills. Students will choose components of fitness to train and be expected to manage their own time and effort to achieve an improvement in their chosen area.

Small-sided games will be used to increase skill practice time per student and transition skills from closed to open while imparting basic tactics. The expectation is for students to be on time for class in clothes that are relevant and fully participate in the activities of class to the best of their abilities, while maintaining a respectful attitude and an inclusive atmosphere. This course will offer student led activities and practical learning in class as a type of active learning.

This course is a practical course and so inability to physically partake in activities – specifically learning of sport skills may result in a reduced score unless alternative work is given. Students who have disabilities preventing participation may be given alternate work, and injured students may request makeup classes outside of the class schedule, if they have taken care to manage their injuries throughout the healing process.

Required Materials (textbooks, reference books, reserved books)

Textbooks:

Reference books:

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

No required skills are required to take this course.

No.	Program Objectives	Target Abilities for Students
①	d	Students will learn how to train their body correctly for a healthy life.
②	f	Students will be able to learn from failure and develop fortitude.
③	i	Students will develop confidence in their abilities and work with a sincere heart.
④	i	Students will learn the value of enjoying sports and the lifelong benefits of exercise.
⑤	c	Students will be able to support each other in learning new skills.
⑥	b	Students will become accustomed to working for the good of others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	60	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	20	0	0	20
	Ability to think, reason and create	0	0	0	0	10	0	0	10
	Collaboration and leadership	0	0	0	0	10	0	10	20
	Announcement / Expression / Communication	0	0	0	0	10	0	10	20
	Attitude and motivation for learning	0	0	0	0	10	0	20	30

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Softball – 20% Tennis – 10% Exercise and Health – 30% Based on skills, knowledge and performance with rubrics provided in class, and may be evaluated through observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc. Standards may be referenced by normative, ipsative, or criterion-based data.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Sportsmanship 40% Based on effort, personal and social behavior which is assessed in reference to the rubric provided in class. Evaluations may take the form of observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Players do the following: Perform and select appropriate techniques and for given situations, for example very accurately hitting the ball. Demonstrate very good understanding of rules, tactics and techniques of Softball and Tennis. Demonstrate very good sportsmanship and inclusive play, along with very good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps out others.	Players do the following: Perform and select appropriate techniques and for given situations, for example accurately hitting the ball. Demonstrate good understanding of rules, tactics and techniques of Softball and Tennis. Demonstrate good sportsmanship and inclusive play, along with good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps out others.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Syllabus Explanation Introduction to Kanazawa Gym facilities Exercise unit 3.1 Softball unit 3.1	Practical	Review class material and practice in own time.	100
2 /	Exercise unit 3.2 Softball unit 3.2	Practical	Review class material and practice in own time.	100
3 /	Exercise unit 3.3 Softball unit 3.3	Practical	Review class material and practice in own time.	100
4 /	Exercise unit 3.4 Softball unit 3.4	Practical	Review class material and practice in own time.	100
5 /	Exercise unit 3.5 Softball unit 3.5	Practical	Review class material and practice in own time.	100
6 /	Exercise unit 3.6 Softball unit 3.6	Practical	Review class material and practice in own time.	100
7 /	Exercise unit 3.7 Softball unit 3.7	Practical	Review class material and practice in own time.	100
8 /	Exercise unit 3.8 Softball unit 3.8	Practical	Review class material and practice in own time.	100
9 /	Exercise unit 3.9 Softball unit 3.9	Practical	Review class material and practice in own time.	100
10 /	Exercise unit 3.10 Softball unit 3.10	Practical	Review class material and practice in own time.	100

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Exercise unit 3.11 Tennis unit 3.1	Practical	Review class material and practice in own time.	100
12 /	Exercise unit 3.12 Tennis unit 3.2	Practical	Review class material and practice in own time.	100
13 /	Exercise unit 3.13 Tennis unit 3.3	Practical	Review class material and practice in own time.	100
14 /	Exercise unit 3.14 Tennis unit 3.4	Practical	Review class material and practice in own time.	100
15 /	Exercise unit 3.15 Tennis unit 3.5	Practical	Review class material and practice in own time.	100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Health and Physical Education IIIB	1	613100	Second	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	CADZOW Philip	Hakusanroku 101 Gym		Friday 16:30-17:30

Course Objectives

	Keywords	Learning Objectives
1	Sportsmanship	The student will continue learning the fundamental skills of Tennis. Students will develop sport skills in Handball and Futsal through competitive games and further their philosophical understandings of how sports shape society. Students will learn and practice fitness for lifelong health through exercise and learn relevant health concepts for young adults. Students will demonstrate and understand the importance of sportsmanship and effort.
2	Safety	
3	Sports	
4	Exercise	
5	Health	

Course Description and Expectations for Students

The course will continue instruction in the sport of tennis, playing outside when weather allows, students are expected to fulfil the duty of class helper when it is their turn. During most classes students will continue Self-led training for their chosen component of fitness. Students will occasionally be instructed on health for life concepts which may include various types of exercise or health theory needed for young adults.
Small-sided games will be used to increase skill practice time per student and transition skills from closed to open while imparting basic tactics. The expectation is for students to be on time for class in clothes that are easy to exercise in and fully participate in the activities of class to the best of their abilities. If clothes are worn that the teacher judges is not fit for class, then the student may not be able to take part in the days class. Students should maintain a respectful attitude and an inclusive atmosphere. This course will offer student led activities and practical learning in class as a type of active learning.

This course is a practical course and so inability to physically partake in activities – specifically learning of sport skills may result in a reduced score unless alternative work is given. Students who have disabilities preventing participation may be given alternate work, and injured students may request makeup classes outside of the class schedule, if they have taken care to manage their injuries throughout the healing process.

Required Materials (textbooks, reference books, reserved books)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

No.	Program Objectives	Target Abilities for Students
①	d	Students will learn how to train their body correctly for a healthy life.
②	f	Students will be able to learn from failure and develop fortitude.
③	i	Students will develop confidence in their abilities and work with a sincere heart.
④	i	Students will learn the value of enjoying sports and the lifelong benefits of exercise.
⑤	c	Students will be able to support each other in learning new skills.
⑥	b	Students will become accustomed to working for the good of others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	0	0	60	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	0	0	20	0	0	20
	Ability to think, reason and create	0	0	0	0	10	0	0	10
	Collaboration and leadership	0	0	0	0	10	0	10	20
	Announcement / Expression / Communication	0	0	0	0	10	0	10	20
	Attitude and motivation for learning	0	0	0	0	10	0	20	30

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Handball – 10% Futsal – 10% Tennis – 10% Exercise and Health– 30% Based on skills, knowledge and performance with rubrics provided in class, and may be evaluated through observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc. Standards may be referenced by normative, ipsative, or criterion-based data.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Sportsmanship 40% Based on effort, personal and social behavior which is assessed in reference to the rubric provided in class. Evaluations may take the form of observation, logbook, worksheet, self-reflection, formative, or summative demonstration, questioning etc.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Players do the following: Perform and select appropriate techniques and for given situations, for example very accurately hitting the ball. Demonstrate very good understanding of rules, tactics and techniques of tennis, Handball and Futsal. Demonstrate very good sportsmanship and inclusive play, along with very good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps out others.	Players do the following: Perform and select appropriate techniques and for given situations, for example accurately passing the ball. Demonstrate good understanding of rules, tactics and techniques of Tennis, Handball and Futsal. Demonstrate good sportsmanship and inclusive play, along with good effort in personal exercise. Carries out duties and tasks with a willing attitude and helps out others.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Tennis unit	Practical	Review class material and practice in own time.	100
2 /	Tennis unit	Practical	Review class material and practice in own time.	100
3 /	Tennis unit	Practical	Review class material and practice in own time.	100
4 /	Tennis unit	Practical	Review class material and practice in own time.	100
5 /	Tennis unit	Practical	Review class material and practice in own time.	100
6 /	Games for life unit 1	Practical	Review class material and practice in own time.	100
7 /	Games for life unit 2	Practical	Review class material and practice in own time.	100
8 /	Games for life unit 3	Practical	Review class material and practice in own time.	100
9 /	Games for life unit 4	Practical	Review class material and practice in own time.	100
10 /	Games for life unit 5	Practical	Review class material and practice in own time.	100

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Games for life unit 6	Practical	Review class material and practice in own time.	100
12 /	Games for life unit 7	Practical	Review class material and practice in own time.	100
13 /	Games for life unit 8	Practical	Review class material and practice in own time.	100
14 /	Games for life unit 9	Practical	Review class material and practice in own time.	100
15 /	Games for life unit 10	Practical	Review class material and practice in own time.	100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required * Practical	Engineering Design IVA	2	710600	First	Experiment / Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	MEBUSAYA, Rattiya P / * HAYASHI, Michihiro / SANG-NGENCHAI, Apirak / WOHLFARTH, Brandon			Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Human Center Design	In class, students will work in interdisciplinary teams to tackle problems found within the surrounding community using human centered design. They will incorporate key skills in themes, regarding idea development and implementation, into a solution that generates new value. Students will need to utilize the hard skills learned within their other courses, in conjunction with outside learning, to complete the course project.
2	Problem – Solution Fit	
3	Idea Validation and Impact	
4	Users and Markets	
5	Project Management	

Course Description and Expectations for Students (10.5pt)

This course will offer project-based learning in class as a type of active learning.
This course, primarily relating to the Conceive and Design steps within the CDIO design framework, focuses on problem identification, understanding their markets, generating value, and simple prototyping to develop a solution that incorporates robotics, AI/IoT, and entrepreneurship. Students will be accessed as they step through the design process at various stages.
Students will need to:
-Engage with stakeholders in a professional manner as good representatives of ICT
-Be productive team members that participate in meetings, contribute new ideas, and complete the tasks assigned to them
-Be willing to learn new skills and new ways to incorporate content from other courses into their projects
-Submit assignments and required documents on time and completed. Any late or missing submissions may result in a loss in points
-Attend classes during the scheduled periods

Relationship between this course and business experience

A faculty member who has practical experience in development of automated material handling equipment, for instance, belt-conveyor, vertical lift, sorting system and POS etc., which is utilized for prototype designing, planning and implementation.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

All previous classes knowledge that they have learned through 1st 2nd and 3rd year.

No.	Program Objectives	Target Abilities for Students (9pt)
①	c,d,f	Students are able to work in interdisciplinary teams.
②	a,g,h	Students are able to find problems worth solving to tackle problems within the surrounding community using human centered design.
③	a,g,h	Students are able to find solutions to tackle problems found within the surrounding community using human centered design
④	a,g,h	Students are able to incorporate key skills in themes, regarding idea development and implementation, into a solution that generates new value.
⑤	g,i	Students are able to utilize the hard skills learned within their other courses, in conjunction with outside learning, to complete the course project.
⑥	c,d,f	Students are able to effectively communicate and convey their ideas to others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	25	30	0	30	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	5	5	0	10	0	20
	Ability to think, reason and create	0	0	5	8	0	10	5	28
	Collaboration and leadership	0	0	5	6	0	0	5	16
	Announcement / Expression / Communication	0	0	5	6	0	5	3	19
	Attitude and motivation for learning	0	0	5	5	0	5	2	17

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	∠	Students are evaluated through three structured team-based progress reports submitted at the beginning, middle, and end of the semester. The purpose of this evaluation is to assess learning progress, design decision-making, reflection, and problem-solving, rather than only final outcomes.
	②	∠	
	③	∠	
	④	∠	
	⑤		
	⑥	∠	
Presentations	①	∠	Students are evaluated through two team-based presentations conducted at key stages of the design studio process: (1) Design Review Presentation and (2) Final Presentation. These presentations assess students' ability to communicate design thinking, justify decisions, and reflect on learning outcomes.
	②	∠	
	③	∠	
	④	∠	
	⑤		
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		The portfolio is an individual evaluation component designed to assess each student's skill development, learning process, and personal growth throughout both semesters of the Engineering Design course. While most course activities are conducted in teams, the portfolio ensures that individual learning outcomes and contributions are clearly documented and evaluated.
	②		
	③		
	④	∠	
	⑤	∠	
	⑥		
Others	①	∠	Each team conducts weekly team discussions throughout the semester. During these meetings, students rotate roles (facilitator, notetaker, timekeeper) to ensure balanced participation and skill development. After each meeting, the team completes and submits a meeting memo.
	②		
	③		
	④		
	⑤	∠	
	⑥	∠	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
- Actively leads and collaborates in interdisciplinary teams, takes multiple roles, and supports team decision-making independently. - Independently identifies meaningful community problems using empathy, user research, and data analysis. - Develops validated solutions aligned with user needs through iterative testing and feedback. - Integrates design, engineering, and business skills to create and justify new value. - Purposefully integrates hard skills from coursework and self-directed learning to enhance project quality. - Communicates ideas clearly and professionally to diverse stakeholders using appropriate formats.	- Participates responsibly in teams, completes assigned roles, and collaborates with guidance. - Identifies community problems using basic human-centered design tools with guidance. - Proposes solutions that address user needs with limited validation. - Applies basic idea development skills to create identifiable value. - Applies relevant hard skills from coursework with instructor support. - Communicates ideas clearly to team members and instructors.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
	Phase 1: **CONCEIVE – Problem Discovery & Empathy**			
1	Introduction, Guidance, Evaluation, Competition, Team Up	Design Studio Orientation & Guided Facilitation	Team grouping	30
2	Problem Worth Solving Theme & Local Industry Context	Facilitated Brainstorming Studio	Problem ideas	30
3	Importance of the Problem Background, Data, Current Situation, Alternatives (Empathy)	Research Studio with Coaching Check-in	Research notes	30
4	Problem Exploration (Empathy)	Self-Directed Research Studio + Mentor Support	Insight summary	30
5	Data Analysis Stakeholders Identification & Prioritization Persona Draft	Design Analysis Workshop	Stakeholder map & persona	30
6	Persona Refinement	Team Coaching & Design Critique	Persona revision	30
7 /	Persona & Journey Map Validation Points	Design Studio + Validation Planning	Journey map draft	30
8	Iteration & Refinement	Studio Work + Facilitator Review	Updated journey	30
9 /	Journey Map, Interview, Empathy Map	Field Research & Coaching Session	Interview & empathy map	30
10 /	Validation Synthesis	Reflection & Design Coaching	Validation insights	30
11	Users & Market Size (TAM, SAM, SOM)	Guided Market Analysis Studio	Market estimation	30
12	Concept Integration	CDIO Conceive Phase Review	Concept brief	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time cre\\dit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
	Phase 2: DESIGN – Solution & Prototype Design			
13 /	Solution Concept & Prototype Value Proposition, UX/UI, MVP	Design Ideation Studio	Solution concept	30
14 /	Solution Refinement	Mentored Design Studio	MVP refinement	30
15 /	Rapid Prototyping	Hands-on Prototyping Studio	Prototype v1	30
16 /	Iteration	Studio Work + Coach Feedback	Prototype improvement	30
17 /	Rapid Prototyping (Iteration)	Design–Build Studio	Prototype v2	30
18 /	Design Freeze	Design Review & Readiness Check	Prototype documentation	30
19 /	Design Review & Validation Plan	Stakeholder Validation Workshop	Feedback plan	10
20 /	Validation with Real Users	Field Testing & Coaching	User feedback	30
21	Design Review & Feedback Analysis	Data-Driven Reflection Studio	Feedback analysis	30
22	Iteration Planning	Facilitated Iteration Planning	Revision plan	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
23	Planning for Real Prototype	Implementation Planning Studio	Implementation plan	30
24 /	Refinement	Studio Work + Mentor Review	Final prototype	30
25	Final Presentation Preparation	Presentation Coaching & Design Polish	Final deck	30
26	Final Presentation Preparation	Rehearsal & Coaching Studio	Final rehearsal	30
27 /	Final Presentation	Public Design Review & Evaluation	Final presentation	30
28 /	Reflection	Guided Reflection Session	Reflection notes	30
29 /	Wrap-Up Week	Portfolio & Learning Reflection Studio	Report & portfolio	30
30 /	Course Closure	CDIO Reflection & Feedback	Final submission	10

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required * Practical	Engineering Design IVB	2	710700	Second	Experiment / Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	MEBUSAYA, Rattiya P / * HAYASHI, Michihiro / SANG-NGENCHAI, Apirak / WOHLFARTH, Brandon			Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Human Center Design	In class, students will work in interdisciplinary teams to tackle problems found within the surrounding community using human centered design. They will incorporate key skills in themes, regarding idea development and implementation, into a solution that generates new value. Students will need to utilize the hard skills learned within their other courses, in conjunction with outside learning, to complete the course project.
2	Idea Validation and Impact	
3	Prototyping	
4	Implementation	
5	Project Management	

Course Description and Expectations for Students (10.5pt)

This course will offer project-based learning in class as a type of active learning.
This course, primarily relates to the Implement and Operate steps within the CDIO design framework, focuses on problem identification, understanding their markets, generating value, and simple prototyping to develop a solution that incorporates robotics, AI/IoT, and entrepreneurship. Students will be accessed as they step through the design process at various stages.
Students will need to:
-Engage with stakeholders in a professional manner as good representatives of ICT
-Be productive team members that participate in meetings, contribute new ideas, and complete the tasks assigned to them
-Be willing to learn new skills and new ways to incorporate content from other courses into their projects
-Submit assignments and required documents on time and completed. Any late or missing submissions may result in a loss in points
-Attend classes during the scheduled periods

Relationship between this course and business experience

A faculty member who has practical experience in development of automated material handling equipment, for instance, belt-conveyor, vertical lift, sorting system and POS etc.,which is utilized for prototype designing, planning and implementation.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

All previous classes knowledge that they have learned through 1st 2nd and 3rd year.

No.	Program Objectives	Target Abilities for Students (9pt)
①	c,d,f	Students are able to work in interdisciplinary teams.
②	a,g,h	Students are able to find problems worth solving to tackle problems within the surrounding community using human centered design.
③	a,g,h	Students are able to find solutions to tackle problems found within the surrounding community using human centered design
④	a,g,h	Students are able to incorporate key skills in themes, regarding idea development and implementation, into a solution that generates new value.
⑤	g,i	Students are able to utilize the hard skills learned within their other courses, in conjunction with outside learning, to complete the course project.
⑥	c,d,f	Students are able to effectively communicate and convey their ideas to others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	25	30	0	30	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	5	5	0	10	0	20
	Ability to think, reason and create	0	0	5	8	0	10	5	28
	Collaboration and leadership	0	0	5	6	0	0	5	16
	Announcement / Expression / Communication	0	0	5	6	0	5	3	19
	Attitude and motivation for learning	0	0	5	5	0	5	2	17

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	∠	Students are evaluated through three structured team-based progress reports submitted at the beginning, middle, and end of the semester. The purpose of this evaluation is to assess learning progress, design decision-making, reflection, and problem-solving, rather than only final outcomes.
	②	∠	
	③	∠	
	④	∠	
	⑤		
	⑥	∠	
Presentations	①	∠	Students are evaluated through two team-based presentations conducted at key stages of the design studio process: (1) Design Review Presentation and (2) Final Presentation. These presentations assess students' ability to communicate design thinking, justify decisions, and reflect on learning outcomes.
	②	∠	
	③	∠	
	④	∠	
	⑤		
	⑥	∠	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		The portfolio is an individual evaluation component designed to assess each student's skill development, learning process, and personal growth throughout both semesters of the Engineering Design course. While most course activities are conducted in teams, the portfolio ensures that individual learning outcomes and contributions are clearly documented and evaluated.
	②		
	③		
	④	∠	
	⑤	∠	
	⑥		
Others	①	∠	Each team conducts weekly team discussions throughout the semester. During these meetings, students rotate roles (facilitator, notetaker, timekeeper) to ensure balanced participation and skill development. After each meeting, the team completes and submits a meeting memo.
	②		
	③		
	④		
	⑤	∠	
	⑥	∠	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
- Actively leads and collaborates in interdisciplinary teams, takes multiple roles, and supports team decision-making independently. - Independently identifies meaningful community problems using empathy, user research, and data analysis. - Develops validated solutions aligned with user needs through iterative testing and feedback. - Integrates design, engineering, and business skills to create and justify new value. - Purposefully integrates hard skills from coursework and self-directed learning to enhance project quality. - Communicates ideas clearly and professionally to diverse stakeholders using appropriate formats.	- Participates responsibly in teams, completes assigned roles, and collaborates with guidance. - Identifies community problems using basic human-centered design tools with guidance. - Proposes solutions that address user needs with limited validation. - Applies basic idea development skills to create identifiable value. - Applies relevant hard skills from coursework with instructor support. - Communicates ideas clearly to team members and instructors.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
	Phase 3: (I) IMPLEMENT – Build, Test & Iterate			
1	Semester Kickoff Review Final Prototype Plan (from Sem 1)	Studio Orientation & Project Re-alignment	Project roadmap	30
2	Technical Feasibility & Constraints	Engineering Design Review Studio	Feasibility checklist	30
3	Build Technique I (Hardware / Software / Service Process)	Hands-on Build Studio	Build log	30
4	Build Technique II	Mentored Build Studio	Component completion	30
5	System Integration	Design–Build–Test Studio	Integrated prototype	30
6	Prototype Testing Methods	Testing Strategy Workshop	Test plan	30
7 /	Functional Testing	Hands-on Testing Studio	Test results	30
8	Iteration Cycle I	Coach-Guided Iteration Studio	Improved prototype	30
9 /	UX / Service Flow Test (refer Journey Map)	Experience Testing Studio	UX findings	30
10 /	Iteration Cycle II	Studio Work + Design Critique	Prototype v2	30
11	Reliability & Usability Testing	Validation Lab	Usability report	30
12	Iteration Cycle III	Rapid Improvement Studio	Prototype v3	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
13 /	Product / Service Readiness Review	Design Review Panel	Readiness checklist	30
14 /	Cost Structure & Unit Economics	Business Design Studio	Cost model	30
15 /	MVP Definition & Scope Lock	Facilitated Decision Studio	MVP definition	30
16 /	Implement Phase Review (CDIO)	Milestone Review & Reflection	Implementation report	30
	Phase 4: OPERATE – Market Test & Business Validation **Market, Value, and Revenue Validation**			
17 /	Value Proposition Review (Persona & Empathy Map)	Value Validation Studio	Value statement	30
18 /	Market Test Design (User, Channel, Offer)	Experiment Design Workshop	Market test plan	30
19 /	Channel Exploration (Online / Offline / Partners)	Channel Strategy Studio	Channel map	30
20 /	Market Testing with Real Users	Field Testing & Coaching	User feedback	30
21	Product / Service Test Results Analysis	Data Analysis Studio	Insight report	30
22	Revenue Model Design	Revenue Model Workshop	Revenue model	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
23	Pricing & Willingness-to-Pay Test	Market Experiment Studio	Pricing results	30
24 /	Traction Metrics & Success Matrix (AARRR / KPI)	Metrics Design Studio	Traction matrix	30
25	Business Milestones & Roadmap	Startup Planning Studio	Milestone plan	30
26	Launch Strategy & Go-to-Market Plan	Launch Planning Workshop	Launch plan	30
27 /	Scale-Up Strategy (Market, Tech, Team)	Growth Strategy Studio	Scale plan	30
28 /	Risk, Ethics & Sustainability Review	Responsible Innovation Studio	Risk assessment	30
29 /	Final Pitch Preparation (Product + Business)	Pitch Coaching Studio	Final deck	30
30 /	Final Demo Day & Reflection	Public Demo & Portfolio Review	Portfolio & report	10

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Internship IA	1	720100	First	Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	ITO, Meguru	Hakusanroku C 101,201		

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1 2 3 4 5	Career design Engineering skills and knowledge Skills for research Human skills	Students will gain experience related to their chosen field of study and possible future career. The students will not only improve their skills and knowledge, but also make connections between learning and practice, which the students may not experience in their regular classes. Also, the students will develop the autonomy, responsibility, and attitude needed in order for them to become an individual who can make a positive contribution to society.

Course Description and Expectations for Students (10.5pt)

Students will work on a project under the direction of their advisors, based on their chosen field of study.

Advice on taking this class
- Be aware that this is an opportunity given to students by the hosting institutions.
- Follow the directions of advisors and submit all assignments on time.
- Work independently and in groups.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic background information of an accepting lab.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, h	Students will be able to complete tasks by applying what they have practiced.
②	e, i	Students will be able to understand their strengths and weaknesses better.
③	b, i	Students will be able to have a deeper understanding of their chosen field of studies.
④	b, i	Students will be able to develop a better idea of what they would like to pursue in the future.
⑤	b, i	Students will be able to reflect on what they did and set goals for the future.
⑥	c, d	Students will be able to develop attitudes and abilities needed to work productively with others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	40	0	10	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	15	0	0	0	0	15
	Ability to think, reason and create	0	0	10	10	0	0	0	20
	Collaboration and leadership	0	0	15	0	0	0	0	15
	Announcement / Expression / Communication	0	0	0	30	0	0	0	30
	Attitude and motivation for learning	0	0	10	0	0	10	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	This evaluation will be made on the evaluation report written by the person in charge of the hosting lab.
	②		
	③	✓	
	④		
	⑤		
	⑥		
Presentations	①	✓	This evaluation will be made by the students' presentation at internship presentation session.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		This evaluation will be made by the report students write.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Lab work	Research		
2 /	Lab work	Research		
3 /	Lab work	Research		
4 /	Lab work	Research		
5 /	Lab work	Research		
6 /	Lab work	Research		
7 /	Lab work	Research		
8 /	Lab work	Research		
9 /	Lab work	Research		
10 /	Lab work	Research		

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Lab work	Research		
12 /	Lab work	Research		
13 /	Preparation for presentation	Making PowerPoint slides		
14 /	Preparation for presentation	Making PowerPoint slides		
15 /	Presentation			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Internship IB	1	720200	Second	Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	ITO, Meguru	Hakusanroku C 101,201		

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1 2 3 4 5	Career design Engineering skills and knowledge Skills for research Human skills	Students will gain experience related to their chosen field of study and possible future career. The students will not only improve their skills and knowledge, but also make connections between learning and practice, which the students may not experience in their regular classes. Also, the students will develop the autonomy, responsibility, and attitude needed in order for them to become an individual who can make a positive contribution to society.

Course Description and Expectations for Students (10.5pt)

Students will work on a project under the direction of their advisors, based on their chosen field of study.

Advice on taking this class
- Be aware that this is an opportunity given to students by the hosting institutions.
- Follow the directions of advisors and submit all assignments on time.
- Work independently and in groups.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic background information of an accepting lab.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a, h	Students will be able to complete tasks by applying what they have practiced.
②	e, i	Students will be able to understand their strengths and weaknesses better.
③	b, i	Students will be able to have a deeper understanding of their chosen field of studies.
④	b, i	Students will be able to develop a better idea of what they would like to pursue in the future.
⑤	b, i	Students will be able to reflect on what they did and set goals for the future.
⑥	c, d	Students will be able to develop attitudes and abilities needed to work productively with others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	40	0	10	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	15	0	0	0	0	15
	Ability to think, reason and create	0	0	10	10	0	0	0	20
	Collaboration and leadership	0	0	15	0	0	0	0	15
	Announcement / Expression / Communication	0	0	0	30	0	0	0	30
	Attitude and motivation for learning	0	0	10	0	0	10	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	This evaluation will be made on the evaluation report written by the person in charge of the hosting lab.
	②		
	③	✓	
	④		
	⑤		
	⑥		
Presentations	①	✓	This evaluation will be made by the students' presentation at internship presentation session.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		This evaluation will be made by the report students write.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Lab work	Research		
2 /	Lab work	Research		
3 /	Lab work	Research		
4 /	Lab work	Research		
5 /	Lab work	Research		
6 /	Lab work	Research		
7 /	Lab work	Research		
8 /	Lab work	Research		
9 /	Lab work	Research		
10 /	Lab work	Research		

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Lab work	Research		
12 /	Lab work	Research		
13 /	Preparation for presentation	Making PowerPoint slides		
14 /	Preparation for presentation	Making PowerPoint slides		
15 /	Presentation			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Internship IIA	1	720300	First	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	MATSUSHITA, Omihito	Hakusanroku C 101:201		Make an appointment

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1 2 3 4 5	Career design Engineering skills and knowledge Skills for research Human skills	Students will receive practical training related to their career choices and future career at companies and universities. Students will be placed in situations that require more advanced knowledge and skills than Internship I. They will improve their specialized knowledge, learn the significance of engineering, how to be an engineer, manners as a member of society to become an engineer leader who can contribute to society in the future, autonomy, sense of responsibility, and sense of ethics.

Course Description and Expectations for Students (10.5pt)

Students will work on a project under the direction of their advisors, based on their chosen field of study.
Approximately 3 to 5 days of actual work is required to receive credit.

If no evaluation is submitted by the host, no credits will be awarded.

Advice on taking this class
- Be aware that this is an opportunity given to students by the host.
- Follow the directions of advisors and submit all assignments on time.
- Work independently and in groups.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

Academic and personal skills required as a technical college student in each specialized field.

No.	Program Objectives	Target Abilities for Students
①	a, h	Students will be able to complete tasks by applying what they have practiced.
②	e, i	Students will be able to understand their strengths and weaknesses better.
③	b, i	Students will be able to have a deeper understanding of their chosen industry.
④	b, i	Students will be able to develop a better idea of what they would like to pursue in the future.
⑤	b, i	Students will be able to reflect on what they did and set goals for the future.
⑥	c, d	Students will be able to develop attitudes and abilities needed to work productively with others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	40	40	0	0	20	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	0	0	0	4	14
	Ability to think, reason and create	0	0	15	10	0	0	4	29
	Collaboration and leadership	0	0	0	0	0	0	4	4
	Announcement / Expression / Communication	0	0	0	30	0	0	4	34
	Attitude and motivation for learning	0	0	15	0	0	0	4	19

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	・Write a report on the contents and results of the work experience. Rather than simply describing the process and results, reflect on the overall content of the experience and describe in detail the knowledge and skills that were utilized in each process. ・Based on the results of reflecting on work experience, plan how to use it in future activities and specify action goals to be implemented.
	②		
	③	✓	
	④		
	⑤		
	⑥		
Presentations	①	✓	This evaluation will be made by the students' presentation at internship presentation session.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Evaluation will be made by the host company as to whether the student can work/study in the field of expertise in accordance with the engineering ethics.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Understand the significance of the internship and set the purpose of participation in terms of both improving basic skills for working adults and to confirm the level of one's own expertise. Based on their own career development, they are able to decide which a host they would like to participate in and research the relevant industries or study fields. Students will be able to research the relevant field based on their own career development.	Understand the significance of internships and set a purpose for participating. To be able to research the field. To be able to carry out the work/study which the host gives without any problems.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Understand the purpose and the significant aspects of internship education. Prepare the necessary documents and materials for the internship program.	Lecture		
2 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
3 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed..	Practical work/study experience Instructed by a designated industry.		
4 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
5 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
6 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
7 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
8 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
9 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
10 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
12 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
13 /	Preparation for presentation	Making powerpoint slides		
14 /	Preparation for presentation	Making powerpoint slides		
15 /	Final presentation - Present the achievement of the internship program	Preparation		

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Internship IIB	1	720400	Second	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	MATSUSHITA, Omihito	Hakusanroku C 101:201		Make an appointment

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1 2 3 4 5	Career design Engineering skills and knowledge Skills for research Human skills	Students will receive practical training related to their career choices and future career at companies and universities. Students will be placed in situations that require more advanced knowledge and skills than Internship I. They will improve their specialized knowledge, learn the significance of engineering, how to be an engineer, manners as a member of society to become an engineer leader who can contribute to society in the future, autonomy, sense of responsibility, and sense of ethics.

Course Description and Expectations for Students (10.5pt)

Students will work on a project under the direction of their advisors, based on their chosen field of study.
Approximately 3 to 5 days of actual work is required to receive credit.

If no evaluation is submitted by the host, no credits will be awarded.

Advice on taking this class
- Be aware that this is an opportunity given to students by the host.
- Follow the directions of advisors and submit all assignments on time.
- Work independently and in groups.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

Academic and personal skills required as a technical college student in each specialized field.

No.	Program Objectives	Target Abilities for Students
①	a, h	Students will be able to complete tasks by applying what they have practiced.
②	e, i	Students will be able to understand their strengths and weaknesses better.
③	b, i	Students will be able to have a deeper understanding of their chosen industry.
④	b, i	Students will be able to develop a better idea of what they would like to pursue in the future.
⑤	b, i	Students will be able to reflect on what they did and set goals for the future.
⑥	c, d	Students will be able to develop attitudes and abilities needed to work productively with others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	40	40	0	0	20	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	0	0	0	4	14
	Ability to think, reason and create	0	0	15	10	0	0	4	29
	Collaboration and leadership	0	0	0	0	0	0	4	4
	Announcement / Expression / Communication	0	0	0	30	0	0	4	34
	Attitude and motivation for learning	0	0	15	0	0	0	4	19

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	・Write a report on the contents and results of the work experience. Rather than simply describing the process and results, reflect on the overall content of the experience and describe in detail the knowledge and skills that were utilized in each process. ・Based on the results of reflecting on work experience, plan how to use it in future activities and specify action goals to be implemented.
	②		
	③	✓	
	④		
	⑤		
	⑥		
Presentations	①	✓	This evaluation will be made by the students' presentation at internship presentation session.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Evaluation will be made by the host company as to whether the student can work/study in the field of expertise in accordance with the engineering ethics.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Understand the significance of the internship and set the purpose of participation in terms of both improving basic skills for working adults and to confirm the level of one's own expertise. Based on their own career development, they are able to decide which a host they would like to participate in and research the relevant industries or study fields. Students will be able to research the relevant field based on their own career development.	Understand the significance of internships and set a purpose for participating. To be able to research the field. To be able to carry out the work/study which the host gives without any problems.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Understand the purpose and the significant aspects of internship education. Prepare the necessary documents and materials for the internship program.	Lecture		
2 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
3 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed..	Practical work/study experience Instructed by a designated industry.		
4 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
5 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
6 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
7 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
8 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
9 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
10 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
12 /	Working on the internship program . -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
13 /	Preparation for presentation	Making powerpoint slides		
14 /	Preparation for presentation	Making powerpoint slides		
15 /	Final presentation - Present the achievement of the internship program	Preparation		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Computer Skills IVA	1	720600	First	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	KUSHIMA, Yoshihiro	31.117		16:50-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	MATLAB	To be able to acquire fundamental skills in numerical computation using MATLAB, learn basic programming concepts, know how to visualize and interpret data, acquire methods for solving differential equations, and construct mathematical models to perform and consider simulation results.
2	Numerical Computation	
3	Data Visualization	
4	Programing	
5	Simulation	

Course Description and Expectations for Students (10.5pt)

This course introduces fundamental skills for numerical computation and data analysis using MATLAB. Students will learn programming basics, matrix operations, data visualization, and numerical methods. Engineering problems will be treated through mathematical modeling and simulation rather than physical experiments.

This course will offer in-class programming exercises and simulation-based tasks as a type of active learning.

All exercises will be completed during class time, and students will acquire skills through hands-on practice in each session. Students are expected to review basic mathematics such as calculus and linear algebra.

Student performance will be evaluated based on continuous in-class exercises and a final project.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic knowledge of calculus (differentiation and integration)
Basic understanding of vectors and matrices
Fundamental computer operation skills
Ability to follow basic programming instructions

No.	Program Objectives	Target Abilities for Students (9pt)
①	d, h, j	Ability to perform numerical computation using MATLAB
②	d, h, j	Ability to implement basic programming structures
③	d, e, h	Ability to visualize and interpret engineering data
④	d, j, l	Ability to model physical phenomena mathematically
⑤	d, g, j	Ability to analyze simulation results logically
⑥	a, e, j	Ability to communicate results effectively

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	30	10	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	40	0	0	0	0	0	40
	Ability to think, reason and create	0	10	20	0	0	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	10	0	0	0	10
	Attitude and motivation for learning	0	10	10	0	0	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	In-class programming exercises are conducted in each class to evaluate students' understanding of basic concepts and skills. Students are required to complete assigned tasks within class time, and evaluation is based on correctness, completion, and ability to apply the learned methods.
	②	✓	
	③	✓	
	④		
	⑤	✓	
	⑥		
Reports	①		A final project is assigned in the latter part of the course. Students construct a mathematical model, implement simulations using MATLAB, and submit a report. Evaluation is based on the appropriateness of the model, correctness of implementation, and quality of analysis.
	②		
	③		
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		Students present the results of their final project. Evaluation is based on clarity of explanation, use of appropriate graphs and figures, and logical organization of the content.
	②		
	③	✓	
	④		
	⑤		
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can independently construct appropriate mathematical models, implement MATLAB programs without errors, and perform simulations correctly. They can analyze results quantitatively, compare different conditions, and provide logical interpretations using clear graphs and explanations.	Students can construct basic models with guidance, write MATLAB programs with minor errors, and obtain reasonable simulation results. They can interpret results at a basic level and present them using simple graphs and explanations.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	MATLAB installation and environment setup	Exercise	Complete installation and confirm MATLAB runs correctly	100
2 /	Introduction to MATLAB and basic operations	Lecture + Exercise	Run basic commands and simple calculations	100
3 /	Variables, vectors, and matrices	Lecture + Exercise	Practice matrix operations	100
4 /	Data visualization using plot functions	Lecture + Exercise	Modify and reproduce graphs	100
5 /	Conditional statements (if)	Lecture + Exercise	Modify conditional programs	100
6 /	Loops (for, while)	Lecture + Exercise	Extend loop calculations	100
7 /	Functions and scripts	Lecture + Exercise	Create and modify functions	100
8 /	Numerical calculation methods	Lecture + Exercise	Apply numerical methods	100
9 /	Ordinary differential equations and simulation	Lecture + Exercise	Solve ODEs and change parameters	100
10 /	Simulation of physical systems	Lecture + Exercise	Compare simulation results	100

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Data analysis and curve fitting	Lecture + Exercise	Apply fitting methods	100
12 /	Data handling and processing	Lecture + Exercise	Process and analyze data	100
13 /	Final project (model design)	Exercise	Define problem and model	100
14 /	Final project (implementation)	Exercise	Simulation and analysis	100
15 /	Final project presentation	Presentation	Final report submission	100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Computer Skills IVB	1	720700	Second	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	KUSHIMA, Yoshihiro	31.117		16:50-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Simulink	To be able to acquire fundamental skills in model-based design using Simulink, learn how to construct block diagram models of dynamic systems, know how to simulate and visualize system behavior, and consider system characteristics through parameter changes and control design.
2	Modeling	
3	Simulation	
4	Control Systems,	
5	Block Diagram	

Course Description and Expectations for Students (10.5pt)

This course introduces fundamental skills for modeling and simulation using Simulink. Students will learn how to construct dynamic system models using block diagrams and analyze system behavior through simulation. The course focuses on model-based design of engineering systems without physical experiments.

This course will offer in-class modeling exercises and simulation-based tasks as a type of active learning.

All exercises will be completed during class time, and students will acquire practical modeling and simulation skills through hands-on practice in each session. Students are expected to review basic mathematics such as calculus and differential equations.

Student performance will be evaluated based on continuous in-class exercises and a final project.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic MATLAB operation skills
Basic knowledge of calculus
Basic understanding of differential equations
Fundamental computer operation skills

No.	Program Objectives	Target Abilities for Students (9pt)
①	d, h, j	Ability to construct simulation models using Simulink
②	d, h, j	Ability to represent systems using block diagrams
③	d, e, h	Ability to visualize and interpret simulation results
④	d, j, l	Ability to model and analyze dynamic systems
⑤	d, g, j	Ability to evaluate system behavior and improve models
⑥	a, e, j	Ability to present simulation results and complete tasks independently

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	30	10	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	40	0	0	0	0	0	40
	Ability to think, reason and create	0	10	20	0	0	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	10	0	0	0	10
	Attitude and motivation for learning	0	10	10	0	0	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	In-class modeling exercises are conducted in each class to evaluate students' ability to construct models, simulate systems, and interpret results. Evaluation is based on correctness, completion, and appropriate use of Simulink blocks.
	②	✓	
	③	✓	
	④		
	⑤	✓	
	⑥		
Reports	①		A final project is assigned in the latter part of the course. Students construct a dynamic system model using Simulink and analyze its behavior. Evaluation is based on model design, correctness, and analysis.
	②		
	③		
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		Students present their simulation results. Evaluation is based on clarity, use of diagrams, and logical explanation.
	②		
	③	✓	
	④		
	⑤		
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can independently construct accurate Simulink models, design appropriate system structures, perform simulations without errors, and analyze system behavior quantitatively with clear explanations.	Students can construct basic Simulink models with guidance, perform simulations, and interpret results at a fundamental level using simple explanations.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Simulink installation and environment setup	Exercise	Confirm Simulink runs correctly	100
2 /	Introduction to Simulink and basic operations	Lecture + Exercise	Build a simple model	100
3 /	Basic blocks and signal flow	Lecture + Exercise	Connect blocks and simulate	100
4 /	Mathematical operations in Simulink	Lecture + Exercise	Implement mathematical models	100
5 /	Time-based simulation	Lecture + Exercise	Analyze time response	100
6 /	Subsystems and model organization	Lecture + Exercise	Create structured models	100
7 /	Modeling dynamic systems	Lecture + Exercise	Model simple systems	100
8 /	Transfer functions and system response	Lecture + Exercise	Analyze system response	100
9 /	Feedback systems	Lecture + Exercise	Implement feedback models	100
10 /	Parameter tuning	Lecture + Exercise	Compare system behaviors	100

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Simulation analysis	Lecture + Exercise	Interpret results	100
12 /	Model improvement and validation	Lecture + Exercise	Improve model accuracy	100
13 /	Final project (model design)	Exercise	Define system and model	100
14 /	Final project (implementation)	Exercise	Simulation and tuning	100
15 /	Final project presentation	Presentation	Final report submission	100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Mathematics for Engineers I	2	711500	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	YAMAOKA, Hidetaka	Kanazawa C:23.502		Make an appointment in class

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Graph of a Function	Students will learn: (1) graphs of fundamental functions and their displacement. (2) limit value and continuity of functions. (3) derivatives of basic functions and their applications. (4) higher order derivative and its applications. (5) power series expansion and its applications.
2	Limit and Continuity	
3	Differentiation and its Applications	
4	Higher Order Derivatives	
5	Power Series Expansions	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This is a basic course in integrated mathematics and science for engineering. We will cover the following topics:
1. Functions, their graphs, displacement of graphs, and the limit value and continuity of functions.
2. Differentiation and graph.
3. Applications of higher order derivatives.
4. Maclaurin's expansion and approximation of function.

Extra classes may be held depending the comprehension level of students.
Students are required to review and preview each class. As a matter of particular emphasis, students are required to attempt the exercises after each class.
Extra materials may be distributed if necessary.
Students are required to show their solution/calculation procedure logically and clearly in each assignment.
Students are expected to utilize the Math. and Science Education Research Center or the office hours of the teacher.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Calculus Volume 1, 2, 3 (OpenStax) https://openstax.org/details/books/calculus-volume-1, https://openstax.org/details/books/calculus-volume-2, https://openstax.org/details/books/calculus-volume-3
Reference books: Integrated Math and Science for Engineer (KIT Text)

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic calculation skills of numerical formulas (expansion, factorization, division, and calculation of fractional formula).

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Draw graphs of fundamental functions and understand the displacement of graphs.
②	h	Understand the theory, limits, and continuity of functions.
③	h	Understand the theory of differentiation and find the derivatives of basic functions.
④	h	Understand the increases and decreases of functions and their extreme values.
⑤	h	Understand the theory of power series expansion and find the approximate expressions of functions.
⑥	i	Be able to demonstrate an understanding of all topics, attend every class, and do the required work.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	10	0	0	0	30	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	0	0	0	0	5	30
	Ability to think, reason and create	0	19	6	0	0	0	5	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	8	2	0	0	0	10	20
	Attitude and motivation for learning	0	8	2	0	0	0	10	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Quiz 1 will focus on target abilities ①, ②, and ⑤. Quiz 2 will focus on target abilities ③, ④, and ⑤. In the final quiz, students will be evaluated on target abilities from ① to ⑤. The quizzes 1 and 2 will comprise 10% of the overall evaluation (for a total of 20%) and the final quiz will comprise 40% of the overall evaluation.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Students will be evaluated on the integrated subject (10%). Students are expected to display logical thinking in their report. Students are required to show their solution/calculation procedure logically and are not allowed to copy from others. The subject and the report deadline will be announced by the teacher.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	Students will be evaluated on homework, exercises, preparation, and review, which together will comprise 30% of the overall evaluation. Students are expected to utilize the Math. and Science Education Research Center or the office hours of the teacher if they have any questions.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Accurately draw graphs of basic functions. (2) Accurately explain the limit and continuity of a function. (3) Fully understand the theory of differentiation. (4) Accurately calculate power series expansion and find the approximate expression of a function. (5) Demonstrate an understanding of all topics and complete all homework.	(1) Draw graphs of basic functions. (2) Explain the limit and continuity of a function. (3) Understand the theory of differentiation. (4) Calculate power series expansion and find the approximate expression of a function. (5) Demonstrate an understanding of all topics and complete all homework.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Functions	Instruction Lecture and exercise	Understand the objectives of the class Rev.: Definition of function Prev.: Graph of a function	30 100 70
2 /	Graph of a function Polynomial functions and Power functions	Lecture and exercise	Self-study: Elementary functions Rev.: Odd and even functions Prev.: Translations of graph	50 100 50
3 /	Displacement of a graph Inverse functions	Lecture and exercise	Self-study: Graph of an inverse function Rev.: Inverse functions Prev.: Limit value of a function	50 100 50
4 /	Limit value of a function Continuity of a function	Lecture and exercise	Self-study: Gauss symbol Rev.: Limit value of a function Prev.: Shape of graph	50 100 50
5 /	Differential coefficients and Derivatives Characteristics of derivative functions	Lecture and exercise	Self-study: Derivative functions Rev.: Tangent and normal lines Prev.: Derivatives	100 50 50
6 /	Increase and decrease of functions	Lecture and exercise	Self-study: Increase and decrease Rev.: First and second derivative tests Prev.: Quiz 1	50 50 100
7 /	Quiz 1 Higher order derivatives and their application	Quiz Lecture and exercise	Self-study: Higher order derivatives Rev.: Quiz 1 Prev.: l'Hospital's theorem	50 100 50
8 /	l'Hospital's theorem Taylor's theorem and Maclaurin's expansion	Lecture and exercise Return quiz results Self-check	Self-study: Higher order derivatives Rev.: l'Hospital's theorem Prev.: Maclaurin's expansion Self-check: Self-reflection	50 90 40 20
9 /	Power series expansions of various functions	Lecture and exercise	Self-study: Taylor's expansion Rev.: Power series expansion Prev.: Approximation	50 100 50
10 /	n-th order approximation of function	Lecture and exercise	Self-study: Power series expansion Rev.: Approximation Prev.: Trigonometric functions	50 100 50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Euler’s formula	Lecture and exercise	Self-study: Complex numbers Rev.: Euler’s formula Prev.: Quiz 2	50 100 50
12 /	Quiz 2 [Report]	Quiz Lecture and exercise	Self-study: Rev.: Quiz 2 Prev.: Report	50 100 50
13 /	Review	Lecture and exercise Return quiz results Self-check	Rev.: Report Prev.: Final quiz	50 150
14 /	Review of the report Final quiz	Lecture Final quiz	Rev.: Final quiz Prev.: Self-reflection	150 50
15 /	Review of the final quiz Self-check	Review of the final quiz Result announcement of the final quiz Self-check Questionnaire	Rev.: Final quiz Self-check: Self-reflection	100 100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Mathematics for Engineers II	2	711600	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	YAMAOKA, Hidetaka	Kanazawa C:23.502		Make an appointment in class

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Definite and Indefinite Integrals	Students will learn: (1) definite and indefinite integrals. (2) integration by parts and integration by substitution. (3) exponential functions and logarithmic functions. (4) trigonometric functions and their derivatives. (5) inverse trigonometric functions and their derivatives.
2	Integration by Parts	
3	Integration by Substitution	
4	Exponential and Logarithmic Function	
5	Inverse Trigonometric Function	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This is a basic course in integrated mathematics and science for engineering. We will cover the following topics:

1. Definite and indefinite integrals, integration by parts and integration by substitution.
2. Various things related to exponential functions and logarithmic functions.
3. Properties of trigonometric functions and their derivatives.
4. Definition of inverse trigonometric functions and their derivatives.

Extra classes may be held depending the comprehension level of students.
Students are required to review and preview each class. As a matter of particular emphasis, students are required to attempt the exercises after each class.
Extra materials may be distributed if necessary.
Students are required to show their solution/calculation procedure logically and clearly in each assignment.
Students are expected to utilize the Math. and Science Education Research Center or the office hours of the teacher.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Calculus Volume 1, 2, 3 (OpenStax) https://openstax.org/details/books/calculus-volume-1, https://openstax.org/details/books/calculus-volume-2, https://openstax.org/details/books/calculus-volume-3
Reference books: Integrated Math and Science for Engineer (KIT Text)

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic calculation skills of numerical formulas (expansion, factorization, division, and calculation of fractional formula).

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Understand the definition of definite integrals and evaluate the integrals of various functions.
②	h	Use the integration by parts and integration by substitution to evaluate the integrals of various functions.
③	h	Understand and use the exponential functions and logarithmic functions.
④	h	Understand and use the trigonometric functions and their derivatives.
⑤	h	Understand and use the inverse trigonometric functions and their derivatives.
⑥	i	Be able to demonstrate an understanding of all topics, attend every class, and do the required work.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	10	0	0	0	30	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	0	0	0	0	5	30
	Ability to think, reason and create	0	19	6	0	0	0	5	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	8	2	0	0	0	10	20
	Attitude and motivation for learning	0	8	2	0	0	0	10	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Quiz 1 will focus on target abilities ①, ②, and ⑤. Quiz 2 will focus on target abilities ③, ④, and ⑤. In the final quiz, students will be evaluated on target abilities from ① to ⑤. The quizzes 1 and 2 will comprise 10% of the overall evaluation (for a total of 20%) and the final quiz will comprise 40% of the overall evaluation.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Students will be evaluated on the integrated subject (10%). Students are expected to display logical thinking in their report. Students are required to show their solution/calculation procedure logically and are not allowed to copy from others. The subject and the report deadline will be announced by the teacher.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	Students will be evaluated on homework, exercises, preparation, and review, which together will comprise 30% of the overall evaluation. Students are expected to utilize the Math. and Science Education Research Center or the office hours of the teacher if they have any questions.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Accurately explain the definition of definite integrals. (2) Accurately evaluate the integrals of various functions. (3) Accurately evaluate integrals of basic functions and use integration by substitution and integration by parts. (4) Accurately calculate exponential and logarithmic functions and their derivatives. (5) Accurately calculate trigonometric and inverse trigonometric functions and their derivatives. (6) Demonstrate an understanding of all topics and complete all homework.	(1) Explain the definition of definite integrals. (2) Evaluate the integrals of various functions. (3) Evaluate integrals of basic functions and use integration by substitution and integration by parts. (4) Calculate exponential and logarithmic functions and their derivatives. (5) Calculate trigonometric and inverse trigonometric functions and their derivatives. (6) Demonstrate an understanding of all topics and complete all homework.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Riemann sums	Instruction Lecture and exercise	Self-study: Sigma (summation) formula Rev.: Riemann sums Prev.: Primitive functions	50 100 50
2 /	Definite integrals Fundamental theorem of calculus	Lecture and exercise	Self-study: Various indefinite integrals Rev.: Exercises on integration Prev.: Integration by parts	50 100 50
3 /	Integration by parts	Lecture and exercise	Self-study: Indefinite integrals Rev.: Wallis formula Prev.:	50 50 100
4 /	Integration by substitution	Lecture and exercise	Self-study: Integration by substitution Rev.: Improper integrals Prev.: Review of integrations	50 100 50
5 /	Review of integrations		Self-study: Riemann sums Rev.: Review of integrations Prev.: Quiz 1	50 50 100
6 /	Quiz 1 Derivatives of composite functions Derivatives of inverse functions	Quiz Lecture and exercise	Self-study: Derivatives of inverse functions Rev.: Quiz 1 Prev.: Logarithmic function	50 100 50
7 /	Derivatives of exponential and logarithmic functions	Lecture and exercise	Self-study: Logarithmic equations and Inequalities Rev.: Natural logarithm Prev.: Common logarithm	50 100 50
8 /	Semi-logarithmic graph Logarithmic differentiation	Lecture and exercise	Self-study: Logarithmic law Rev.: Semi-logarithmic graph Prev.: Logarithmic differentiation	50 100 50
9 /	Trigonometric functions Inverse trigonometric functions	Lecture and exercise	Self-study: Radian method, a trigonometric function Rev.: Inverse trigonometric functions Prev.: Graph of an inverse trigonometric function	50 100 50
10 /	Derivatives of trigonometric functions and inverse trigonometric functions	Lecture and exercise Return quiz results Self-check	Self-study: Inverse trigonometric functions Rev.: Def. of an inverse trigonometric function Prev.: Integrals involving quadratics	50 100 50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Integrals Involving Quadratics	Lecture and exercise	Self-study: Decomposition of rational Rev.: Integrals involving quadratics Prev.: Relationships among trigonometric functions	50 100 50
12 /	Quiz 2 [Report]	Quiz Lecture and exercise	Self-study: Rev.: Quiz 2 Prev.: Report	50 100 50
13 /	Review	Lecture and exercise Return quiz results Self-check	Rev.: Report Prev.: Final quiz	50 150
14 /	Review of the report Final quiz	Lecture Final quiz	Rev.: Final quiz Prev.: Self-reflection	150 50
15 /	Review of the final quiz Self-check	Review of the final quiz Result announcement of the final quiz Self-check Questionnaire	Rev.: Final quiz Self-check: Self-reflection	100 100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Mathematics for Engineers III	2	711700	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	TANIGUCHI, Tetsuya / EVANS Davis	Kanazawa C:23.403		Make an appointment in class

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Separable differential equations	Students will learn: (1) how to solve separable differential equations. (2) how to solve 1st-order linear differential equations. (3) how to solve 2nd-order linear homogeneous differential equations. (4) calculate a double integral using the iterated integral approach. (5) calculate a double integral using the polar transformation.
2	1st-order linear differential equations	
3	2nd-order linear differential equations	
4	Double integral	
5	Polar Coordinate	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This is a basic course in integrated mathematics and science for engineering. We will cover the following topics:

1. 1st-order differential equations.
2. 2nd-order linear differential equations.
3. Multiple integrals and iterated integrations.
4. Double integrals in polar coordinate.

Extra classes may be held depending the comprehension level of students.
Students are required to review and preview each class. As a matter of particular emphasis, students are required to attempt the exercises after each class.
Extra materials may be distributed if necessary.
Students are required to show their solution/calculation procedure logically and clearly in each assignment.
Students are expected to utilize the Math. and Science Education Research Center or the office hours of the teacher.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Calculus Volume 1, 2, 3 (OpenStax) https://openstax.org/details/books/calculus-volume-1, https://openstax.org/details/books/calculus-volume-2, https://openstax.org/details/books/calculus-volume-3
Reference books: Integrated Math and Science for Engineer (KIT Text)

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Skills and knowledge from the Integrated Mathematics and Science for Engineering I and II.
Knowledge of exponential functions, logarithmic functions, and trigonometric functions.
Basic calculation skills for differentiation and integration.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Solve separable differential equations.
②	h	Solve 1st-order linear differential equations.
③	h	Solve 2nd-order, linear, homogeneous differential equations.
④	h	Understand the concept of multiple integration and perform it by iterated integration.
⑤	h	Evaluate double integrals by polar transformation.
⑥	i	Be able to demonstrate an understanding of all topics, attend every class, and do the required work.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	10	0	0	0	30	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	0	0	0	0	5	30
	Ability to think, reason and create	0	19	6	0	0	0	5	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	8	2	0	0	0	10	20
	Attitude and motivation for learning	0	8	2	0	0	0	10	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Quiz 1 will focus on target abilities ①, ②, and ⑤. Quiz 2 will focus on target abilities ③, ④, and ⑤. In the final quiz, students will be evaluated on target abilities from ① to ⑤. The quizzes 1 and 2 will comprise 10% of the overall evaluation (for a total of 20%) and the final quiz will comprise 40% of the overall evaluation.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Students will be evaluated on the integrated subject (10%). Students are expected to display logical thinking in their report. Students are required to show their solution/calculation procedure logically and are not allowed to copy from others. The subject and the report deadline will be announced by the teacher.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	Students will be evaluated on homework, exercises, preparation, and review, which together will comprise 30% of the overall evaluation. Students are expected to utilize the Math. and Science Education Research Center or the office hours of the teacher if they have any questions.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Accurately solve separable differential equations. (2) Accurately solve 1st-order linear differential equations. (3) Accurately solve 2nd-order, linear, homogeneous differential equations. (4) Understand the definition of multiple integrals, and accurately find multiple integrals of various functions. (5) Use polar transformation to find multiple integrals.	(1) Solve separable differential equations. (2) Solve 1st-order linear differential equations. (3) Solve 2nd-order, linear, homogeneous differential equations. (4) Understand the definition of multiple integrals, and find multiple integrals of various functions. (5) Use polar transformation to find multiple integrals.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Simple, 1st-order differential equations	Instruction Lecture and exercise	Rev.: Simple, 1st-order differential equations Prev.: Separable, 1st-order differential equations	150 50
2 /	Separable, 1st-order differential equations	Lecture and exercise	Rev.: Separable, 1st-order differential equations Prev.: 1st-order linear differential equations	150 50
3 /	1st-order linear differential equations	Lecture and exercise	Rev.: 1st-order linear differential equations Prev.: 2nd-order, linear, homogeneous differential equations	150 50
4 /	2nd-order, linear, homogeneous differential equations	Lecture and exercise	Rev.: 2nd-order, linear, homogeneous differential equations Prev.: Review of differential equations	150 50
5 /	Review of differential equations	Lecture and exercise	Prev.: Review of differential equations	200
6 /	Quiz 1 Multiple integrals	Quiz Lecture and exercise	Rev.: Quiz 1 Prev.: Iterated integrals	150 50
7 /	Iterated integrals	Lecture and exercise Return quiz results Self-check	Rev.: Iterated integrals Prev.: Nonrectangular region	150 50
8 /	Double integrals over a nonrectangular region	Lecture and exercise	Rev.: Double integrals over a nonrectangular region Prev.: Reversing the order of integration	150 50
9 /	Reversing the order of integration	Lecture and exercise	Rev.: Reversing the order of integration Prev.: Polar coordinate	150 50
10 /	Double integrals in polar coordinate	Lecture and exercise	Rev.: Double integrals in polar coordinate Prev.: Review of multiple integrals	150 50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Review of multiple integrals	Lecture and exercise	Prev.: Review of multiple integrals	200
12 /	Quiz 2 [Report]	Quiz Lecture and exercise	Rev.: Quiz 2 Prev.: Report	150 50
13 /	Review	Lecture and exercise Return quiz results Self-check	Rev.: Report Prev.: Final quiz	50 150
14 /	Review of the report Final quiz	Lecture Final quiz	Rev.: Report Prev.: Final quiz	100 100
15 /	Review of the final quiz Self-check	Review of the final quiz Result announcement of the final quiz Self-check Questionnaire	Rev.: Report Self-check: Self-reflection	100 100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Applied Mathematics	2	711800	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	NAKAGAWA, Hayato / HUSSIEN, Alaa	Kanazawa C: 23.502		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Vectors and matrices	Students will learn: (1) Vector operations and matrix operations. (2) Solving systems of linear equations using “row reduction.” (3) The properties of a determinant and a method to calculate determinants. (4) Eigenvalues and eigenvectors (5) Class management and a special lecture will be given in cooperation with local residents and companies.
2	Row reduction	
3	Determinants	
4	Eigenvalues and eigenvectors	
5	Regional cooperation	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This is a basic course in applied mathematics. We will cover the following topics:

1. Vectors and Matrices
2. Systems of linear equations and row reduction
3. Linear transformation
4. Determinants
5. Linearly independence
6. Eigenvalues and eigenvectors

Classes include exercises and quizzes.
Daily preparation and review are important. Students are required to complete the designated tasks.
Students should prepare reports and study research topics in a planned manner, and strictly avoid plagiarism.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: A First Course in Linear Algebra, K. Kuttler (https://cdn2.repo.bccws.ca/resources/textbooks/448/formats/OTB_136_03_A_First_Course_in_Linear_Algebra_2023_B_D_86b657ab54.pdf)
Reference books: Linear Algebra (KIT Mathematics, Science, Data Science and AI Programs)

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic computational skills for mathematical expressions (calculation of literal expressions, linear and quadratic equations, trigonometric functions) and knowledge of coordinate planes.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Understand the concept of vectors and matrices, and be able to properly perform operations.
②	h	Understand the concept of systems of linear equations by using row reduction.
③	h	Understand the properties of determinants and be able to calculate the value of a determinant.
④	h	Understand the concept of linear transformations and be able to find the eigenvalues and eigenvectors.
⑤	i	Understand the meanings of fundamental English words for mathematics.
⑥	i	Understand the contents of the course and be able to complete the required tasks by the announced deadlines.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	15	0	0	0	25	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	35	0	0	0	0	15	50
	Ability to think, reason and create	0	25	10	0	0	0	0	35
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	5	0	0	0	0	5
	Attitude and motivation for learning	0	0	0	0	0	0	10	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There will be three quizzes. Each of the 1st and 2nd quiz will comprise 15% of the overall evaluation, and the final quiz will comprise 30% (for a total of 30+30%). The final quiz will be given at the end of the semester to assess the degree of student achievement.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	To support students' self-study, reports will be given as out-of-class work, and the results will account for 15% of the overall evaluation.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		To support students' self-study, homework will be given as out-of-class work, and the results will account for 25% of the overall evaluation.
	②		
	③		
	④		
	⑤		
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
・Perform properly vector operations and matrix operations. ・Solve “complex” linear systems using row reduction. ・Understand the concept of linear transformations and properly determine representation matrices. ・Understand the definition and properties of determinants and be able to calculate determinants. ・Understand the properties of cofactors and find inverse matrices. ・Find the eigenvalues and eigenvectors of matrices and apply them to diagonalization.	・Perform vector operations and matrix operations. ・Solve “fundamental” linear systems using row reduction. ・Find representation matrices of linear transformations in a plane. ・Understand the properties of determinants and be able to calculate determinants. ・Find inverse matrices using cofactors. ・Find the eigenvalues and eigenvectors of simple matrices.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Vectors and vector operations (Addition, Subtraction, Scalar multiplication)	Lecture and exercises	Understand the objectives of class Review materials from the previous course Prepare for next class	200
2 /	Matrices and matrix operations (Addition, Subtraction, Scalar multiplication, Matrix multiplication) Square matrices	Lecture and exercises	Review materials from the previous course Prepare for next class	200
3 /	Inverse matrices Row reduction	Lecture and exercises	Review materials from the previous course Prepare for next class	200
4 /	Inverse matrices of order 3	Lecture and exercises	Review materials from the previous course Prepare for next class	200
5 /	Quiz (1) Definition of liner transformation and representation matrix	Quiz on the contents of #1 - #4 Lecture and exercises	Review materials from the previous course Prepare for next class	200
6 /	Compositions of linear transformations Inverse transformations	Lecture and exercises Return quiz results Self-check	Review materials from the previous course Prepare for next class	200
7 /	Definition of determinant Calculation of determinants of order 2 and 3	Lecture and exercises	Review materials from the previous course Prepare for next class	200
8 /	Calculation method of determinants based on the properties of determinants	Lecture and exercises	Review materials from the previous course Prepare for next class	200
9 /	Cofactor expansion and its applications	Lecture and exercises	Review materials from the previous course Prepare for next class	200
10 /	Quiz (2) Dot products of vectors Cross products of 3-dim vectors	Quiz on the contents of #5 - #9 Lecture and exercises	Review materials from the previous course Prepare for next class	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Linear independence, Linear dependence of vectors	Lecture and exercises Return quiz results Self-check	Review materials from the previous course Prepare for next class	200
12 /	Eigenvalues and eigenvectors	Lecture and exercises	Review materials from the previous course Prepare for next class	200
13 /	Diagonalization and its applications Review	Lecture and exercises	Review materials from the previous course. Study for the final quiz	200
14 /	Review Final quiz	Review Quiz on contents of #1 - #13	Study for the final quiz Review of this class	200
15 /	Review the final quiz Self-check	Review the final quiz Self-check	Review: Final quiz	200

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 専門科目 選択	技術者の統計	2	720900	前学期	講義／学修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4	渡辺　秀治	C:23.403		その都度日程調整する

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	データの整理とデータ分布	この科目では，データサイエンスの基礎となる統計的な処理についての学習を行う．偶然性を伴う現象は確率や確率変数を用いて表現することができる．観察や実験，その他のさまざまな取り組みで得られたデータの整理を通じて，確率変数や確率分布の概念を理解できる．また，代表的な確率分布である正規分布などの使用に習熟する．さらに，母集団や標本分布について学び，それらを用いて母数の統計的推定および検定ができる．さらに，統計用プログラミング言語「R」を用いて社会の実データ統計分析を行うことができるようになる．
2	確率と確率分布	
3	確率論に基づく統計的評価	
4	推定と検定	
5	データサイエンス	

授業の概要および学習上の助言

本講義は学修単位であるため，１単位を５０分４５回分の学習とし，５０分授業１５回に対して５０分３０回分の自学自習を行って下さい．
本授業は，以下の内容を扱います．

１．　データの整理とデータ分布
２．　変数間の関係
３．　確率論の基礎
４．　統計的データ解析の基礎
５．　統計的仮説検定と多変量解析
６．　実データを用いた、プログラミング言語Rによる統計解析

授業には演習と小テスト（クイズ）が含まれます．日々の予習・復習は重要であり，指定された課題に取り組むことが求められます．各課題では，解答・計算過程を論理的かつ明確に示してください．必要に応じて，数理・理科教育研究センターや担当教員のオフィスアワーを活用してください．

【教科書および参考書・リザーブドブック】
教科書：なし
参考書：なし
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：なし

履修に必要な予備知識や技能

基礎的な計算技能．順列・組合せ・確率に関する基礎的な計算技能．

No.	教育目標(DP)（記号表記）	学生が達成すべき行動目標
①	h, i	データの整理を行うとともにデータの基本的特徴量を求めることができる．
②	h, i	確率変数の平均と分散を計算できる．
③	h, i	適切な統計量を計算し，データを分析できる．
④	h, i	標本分布を用いて，母平均・母分散・母比率の推定および検定ができる．
⑤	i	継続的に学修し，正確な知識を身につけて効果的に活用できる．
⑥		

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	50	20	0	0	0	30	100
総合力指標	知識を取り込む力	0	30	10	0	0	0	5	45
	思考・推論・創造する力	0	20	5	0	0	0	5	30
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	3	0	0	0	0	3
	学習に取組む姿勢・意欲	0	0	2	0	0	0	20	22

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	小テスト（クイズ）は3回実施します. 第１回・第２回の小テストはそれぞれ成績評価の１０%を占め，第３回の小テストは３０%を占めます．合計で成績評価の５０%です.
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
レポート	①	レ	プログラミング言語Rを用いたレポート課題を4回課します．なお，レポート課題は授業外学習として実施します. 各レポートは成績評価の５%を占めます. 各レポートは，文章・数式・数値・グラフを用いて，論理的に記述しなければなりません. 他者のレポートのコピーを含む盗用（剽窃）は厳禁です.
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①	レ	宿題（課題）は１０回課します. 宿題は成績評価の３０%を占めます. 宿題の目的は，単に正答を得ることではなく，理解を深めることです. 宿題は，問題解決への取り組み（試行錯誤や工夫），自己評価・振り返り，および自身の学修の進捗に対する理解に基づいて評価します.
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
（1）データサイエンスの基盤となるデータの整理方法を理解する. （2）確率変数の概念を正しく理解し，確率分布の平均と分散が計算できる. （3）代表的な確率分布を用いて，さまざまな状況で確率を計算できる. （4）データ分析に必要な統計量を正確に計算できる （5）標本分布を用いて，適切な区間推定および仮説検定を行える. （6）授業内容を多様な統計的問題に適用できる.	（1）統計用語を正しく理解し，基本的な統計量を計算できる. （2）条件付き確率に関する問題を解くことができる. （3）確率分布関数から，離散・連続確率変数の確率および基本的な統計量を求めることができる. （4）標本データを用いて，母平均・母分散の点推定および区間推定を行うことができる. （5）仮説検定を正しく実施できる.

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	データの取得と種類 量的データの分布の特徴	講義・演習	課題：宿題１ 復習：授業内容の復習 予習：R のインストールと初期設定	100 50 50
2 ／	データの整理	講義・演習	課題：レポート１ 復習：授業内容の復習 予習：次回授業の内容	150 40 10
3 ／	２変数データの整理 相関と相関係数 回帰分析	講義・演習	課題：宿題２ 復習：第１回～第３回の内容 予習：−	100 100
4 ／	小テスト１（第１回～第３回） 確率論の基本的な考え方	小テスト 講義・演習	課題：宿題３，レポート２ 復習：授業内容の復習 予習：次回授業の内容	150 40 10
5 ／	確率論の基本的な考え方 離散量の確率分布	講義・演習	課題：宿題４ 復習：授業内容の復習 予習：次回授業の内容	150 40 10
6 ／	条件付き確率とベイズの定理	講義・演習	課題：宿題５ 復習：授業内容の復習 予習：次回授業の内容	150 40 10
7 ／	離散量の確率分布	講義・演習	課題：レポート３ 復習：授業内容の復習 予習：次回授業の内容	150 40 10
8 ／	連続量の確率分布	講義・演習	課題：宿題６ 復習：授業内容の復習 予習：次回授業の内容	100 100
9 ／	小テスト２（第４回～第６回） 母集団と標本／標本抽出	小テスト 講義・演習	課題：宿題７ 復習：授業内容の復習 予習：次回授業の内容	150 40 10
10 ／	推測統計の基礎概念 母平均の統計的推定①	講義・演習	課題：宿題８ 復習：授業内容の復習 予習：次回授業の内容	150 40 10

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	母平均の統計的推定②	講義・演習	課題：宿題９ 復習：授業内容の復習 予習：次回授業の内容	150 40 10
12 ／	統計的仮説検定①	講義・演習	課題：宿題１０ 復習：授業内容の復習 予習：次回授業の内容	150 40 10
13 ／	統計的仮説検定②	講義・演習	課題：レポート４ 復習：授業内容の復習 予習：次回授業の内容	100 100
14 ／	小テスト３（第７回～第１３回） 授業内容の総合的応用 （さまざまな統計問題への適用）	小テスト 講義・演習	課題：なし 復習：小テストの振り返り 予習：	200
15 ／	授業の振り返り 自己評価	確認 自己評価	課題：なし 復習：第１回から第１４回の復習 予習：	200

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 専門科目 選択	データサイエンス物理	2	721000	前学期	講義／学修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4年	西岡 圭太	金沢C 23.502		授業時に予約

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	位置・速度・加速度	身の回りの自然現象が物理法則に従っていることを学び，物理学を用いて考えることができる論理的思考力を養成する．また，測定データを解析して帰納的に未知の事象を推論することは，データサイエンスで必要となる重要なスキルである．本科目では，ベクトルと微分積分を用いて，位置・速度・加速度，運動の三法則，仕事とエネルギー，運動量と衝突，回転運動と振動等，物理学の基礎を学び，それらの知識を応用し，論理的思考に基づいたデータ解析を通して，自然現象の背景にある物理を洞察する能力を養成することを目標とする．
2	運動の三法則	
3	仕事とエネルギー	
4	運動量と衝突	
5	回転運動と振動	

授業の概要および学習上の助言

本講義は学修単位であるため、１単位を50分45回分の学習とし、50分授業15回に対して50分30回分の自学自習を行って下さい。
物理学において，最初に体系的にまとめられた分野は力学であり，力学を範として他の分野が体系化されて発展してきたことから，力学は物理学全体の基礎を成している．また，測定データを解析し，未知の事象を帰納的に推論することは，データサイエンスにおいて重要なスキルである．本授業では，実際の測定データを用いてデータ解析を行い，論理的思考に基づいて自然現象の背後にある物理法則を洞察することを目的とする．

１．運動と力
　物理量の表し方ー単位・有効数字，位置・速度・加速度の関係，１・２次元の運動，力の概念，運動の三法則，
　微分方程式と積分，簡単な微分方程式の解
２．仕事とエネルギー
　仕事，運動エネルギー，保存力と非保存力，ポテンシャルエネルギー，力学的エネルギー保存則
３．運動量と衝突
　運動量，力積，運動量保存則，1次元および2次元での衝突
４．回転運動と振動
　角速度，角加速度，トルク，角運動量，回転運動の法則，角運動量保存則，円運動，単振動

物理学ではベクトル・微積分の知識が必要であるのでよく復習をしておくこと．

【教科書および参考書・リザーブドブック】
教科書：サーウェイ 基礎物理学 Ｉ．力学[東京化学同人] ISBN 978-4-8079-0830-1
参考書：物理学基礎 第5版 Web動画付[学術図書出版社] ISBN 978-4-7806-0950-9
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：物理の基礎（力学）[学術図書出版社] ISBN 978-4-7806-9022-4

履修に必要な予備知識や技能

予備知識：三角比，ベクトル，微分法，積分法等，初等数学の基本的な知識
技能：三角比，ベクトル，微分法，積分法等，初等数学の計算技能

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	h, i	位置・速度・加速度の関係を理解し，微分を用いて速度，加速度を求める計算ができる．
②	h, i	積分と微分方程式の計算ができ，運動方程式を立てて解くことにより物体の運動を数式で表すことができる．
③	h, i	仕事とエネルギーの関係を理解し，積分を用いて仕事やポテンシャルエネルギーの計算ができる．
④	h, i	力学的エネルギー保存則，運動量保存則，角運動量保存則を理解し，数式で表すことができる．
⑤	h, i	測定データを用いてデータ解析を行い，論理的思考に基づいてデータの解釈ができる．
⑥	h, i	毎回の授業に出席し，授業内容の理解に努めて，宿題をやり遂げ，グループ活動にも積極的に参加することができる．

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	60	20	0	0	0	20	100
総合力指標	知識を取り込む力	0	30	5	0	0	0	5	40
	思考・推論・創造する力	0	20	5	0	0	0	5	30
	コラボレーションとリーダーシップ	0	0	5	0	0	0	0	5
	発表・表現・伝達する力	0	0	0	0	0	0	0	0
	学習に取組む姿勢・意欲	0	10	5	0	0	0	10	25

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	小テストを2回以上実施する（授業形態に応じて，担当教員が実施回数を決定する）． 小テストで，達成すべき行動目標の①～④の達成度を，総合評価割合６０％として評価する． 小テストを3回実施する場合の小テストの範囲と試験を実施する授業回数は，それぞれ授業明細表に記載してある．
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
レポート	①		計２回のグループ学習で実施した成果をレポートとして提出する．各レポートは総合評価の割合１０％とし，合計で総合評価割合の２０％として評価する．実施する授業回数は，授業明細表に記載してある．
	②		
	③		
	④		
	⑤	レ	
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①		学びの成果が発揮されるまで努力を続けられる能力はとても重要である．授業内容に関連した問題演習，授業前後の予習・復習の宿題などを授業外学習課題とし，総合評価割合の２０％として評価する．
	②		
	③		
	④		
	⑤		
	⑥	レ	

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・位置・速度・加速度を，数式を用いて正確に表すことができる．ベクトルを用いた表現もできる． ・質点の運動方程式を立てて解くことにより，物体の運動を正確に把握することができる． ・仕事とエネルギーを理解し，積分を用いてポテンシャルエネルギーの計算が正確にできる． ・運動量保存則を用いて2物体の衝突を正確に理解することができる． ・基本的な専門用語および簡単な物理現象の英語表現を理解するだけでなく自ら表現することができる． ・毎回の授業に出席し，授業を理解し宿題を正確にやり遂げることができ，グループ活動ではリーダーとして活動できる．	・位置・速度・加速度を，数式を用いて表すことができる． ・質点の運動方程式を立てて解くことにより，物体の運動を把握することができる． ・仕事とエネルギーを理解し，積分を用いてポテンシャルエネルギーの計算ができる． ・運動量保存則を用いて2物体の衝突を理解することができる． ・基本的な専門用語および簡単な物理現象の英語表現を理解することができる． ・授業回数の２／３以上の授業に出席し，宿題をやり遂げることができ，グループ活動では自分の考えを説明することができる．

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	ガイダンス 序論(単位，次元，有効数字など) 1次元の運動(平均速度，瞬間速度，加速度，等速直線運動，等加速度直線運動)	演習を適宜取り入れながら，講義を中心として運営する．	予習：長さ，質量，時間の基準を確認する．平均速度，瞬間速度，加速度の定義を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
2 ／	ベクトルとスカラー，ベクトルの諸性質，2次元の運動(位置ベクトル，速度ベクトル，加速度ベクトル，放物運動)	演習を適宜取り入れながら，講義を中心として運営する．	予習：ベクトルを用いた平均速度，瞬間速度，加速度の定義を確認する．放物運動の飛距離と最大高度の求め方を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
3 ／	2次元の運動(等速円運動，相対速度，相対加速度) 運動の法則(力の概念)	演習を適宜取り入れながら，講義を中心として運営する．	予習：等速円運動する質点の位置・速度・加速度の表式を確認する．相対速度と相対加速度を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
4 ／	運動の法則(ニュートンの運動の三法則，ニュートンの第二法則を使った分析モデル)	演習を適宜取り入れながら，講義を中心として運営する．	予習：ニュートンの第一法則，第法則，第三法則の記述を読み内容を理解する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
5 ／	ニュートンの法則のさらなる応用(摩擦力，等速円運動，速度に依存する抵抗力があるときの運動)	演習を適宜取り入れながら，講義を中心として運営する．	予習：静止摩擦力と動摩擦力の違いを確認する．向心加速度の求め方を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
6 ／	小テスト１(第1回～第5回で学習した内容の理解度を確認する) 系のエネルギー(系と外界，仕事，仕事-運動エネルギーの定理，保存力，非保存力)	小テスト１を行う． 演習を適宜取り入れながら，講義を中心として運営する．	予習：小テスト１に備えて復習をする．系と外界の記述を読み内容を理解する．仕事，運動エネルギー，保存力，非保存力の定義を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
7 ／	グループ活動(第1回～第6回で学習した内容に関連した課題をグループで取り組む．課題にはデータサイエンスの要素を取り入れる)	グループに分かれ課題に取り組む．	予習：指定された課題の内容を確認する． 復習：レポートを作成する． 自己点検：授業の理解度を確認する．	60 120 20
8 ／	系のエネルギー(ポテンシャルエネルギー) エネルギーの保存(力学的エネルギーの保存，非保存力による力学的エネルギーの変化)	演習を適宜取り入れながら，講義を中心として運営する．	予習：ポテンシャルエネルギーの定義，力学的エネルギーの保存則の内容を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
9 ／	運動量と衝突(運動量，力積，運動量の保存，衝突)	演習を適宜取り入れながら，講義を中心として運営する．	予習：運動量の定義を確認する．力積ー運動量の定理の記述を読み内容を理解する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
10 ／	回転運動(角速度，角加速度，トルク，角運動量，角運動量の保存)	演習を適宜取り入れながら，講義を中心として運営する．	予習：角速度，角加速度，トルク，角運動量の定義を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	小テスト２(第6回～第10回で学習した内容の理解度を確認する) 単振動(ばねに取り付けられた物体の運動)	小テスト２を行う． 演習を適宜取り入れながら，講義を中心として運営する．	予習：小テスト２に備え復習をする． 単振動における振幅，角振動数，周期，振動数の定義を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
12 ／	グループ活動(第8回～第11回で学習した内容に関連した課題をグループで取り組む．課題にはデータサイエンスの要素を取り入れる)	グループに分かれ課題に取り組む．	予習：指定された課題の内容を確認する． 復習：レポートを作成する． 自己点検：授業の理解度を確認する．	60 120 20
13 ／	単振動(単振り子，減衰振動) 小テスト３に向けた総復習	演習を適宜取り入れながら，講義を中心として運営する．	予習：単振り子，減衰振動の内容を確認する． 復習：授業で取り扱った例題を復習し，関連する基本問題を解く． 自己点検：授業の理解度を確認する．	60 120 20
14 ／	小テスト３に向けた総復習 小テスト３(第1回～第13回で学習した内容の理解度を確認する)	復習のポイントを講義形式で解説する． 小テスト３を行う．	予習：小テスト３に備え復習をする． 復習：小テスト３で分からなかった問題の内容を復習する．	140 60
15 ／	小テスト３の返却・解説，レポートの解説，アンケート	自己点検をする．	予習：小テスト３，レポートの内容を見返す． 自己点検：小テスト３の結果を踏まえ授業全体を振り返る．	140 60

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Data Science I	2	712200	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	SANG-NGENCHAI, Apirak	KC 31-117-1		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Data Aggregation	This course covers data aggregation, including preparation, cleaning, and collection. Students will also learn machine learning techniques, clustering analysis for pattern recognition, and building decision trees and neural networks to support transparent decision-making. The course considers how these data-driven methods contribute to Society 5.0 and its human-centered tech ecosystem. Overall, it aims to equip students to become responsible, impactful, data-driven innovators.
2	Machine Learning	
3	Clustering Analysis	
4	Decision Tree	
5	Neural Network	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This course will offer experiential learning in class as a type of active learning.

This course introduces students to the essential principles and practices of modern Data Science, focusing on acquiring, analyzing, and interpreting data to solve real-world problems. Students will learn to aggregate data, apply machine learning techniques, conduct clustering analysis, and develop decision tree and neural network models to generate meaningful insights. In addition, students are required to complete a final project in which they apply the full data science pipeline, from data aggregation to model development, to address a real or simulated societal problem, demonstrating both technical mastery and creative, responsible innovation.

Advice on taking this course:
- **B**e Prepared: Review lecture slides beforehand.
- **O**rganize Your Work: Keep clear notes, structure code, and document projects.
- **S**tay Hands-On: Participate actively in labs and practice sessions.
- **S**eek Solutions: When facing challenges, investigate, troubleshoot, and ask questions.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic knowledge of data literacy and Microsoft Excel is essential, and it is highly recommended that students also have a basic understanding of statistics for engineers.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Students will be able to understand the basics of data aggregation
②	a, h, i	Students will be able to learn and apply fundamental machine learning methods
③	g, h	Students will be able to perform clustering analysis
④	a, h, i	Students will be able to build and interpret decision-tree models
⑤	a, h, i	Students will be able to construct and evaluate basic neural network models
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	20	20	0	60	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	10	10	0	30	0	0	50
	Ability to think, reason, and create	0	10	10	0	30	0	0	50
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by the Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Students will take short in-class quizzes to check their understanding of the content. There will be a quiz in weeks 4, 7, 10, and 14, which is 20% of the total score.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Students must submit a report covering their final project from initiation to completion, accounting for 20% of the total grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students must complete weekly assignments based on lectures, which count for 30% of their grade. Absent students should get the assignment sheet from the teacher and submit it on time; otherwise, their score will be deducted after the deadline. For the project, each student will create an application that shows what they've learned in this course. They are required to research, design, and develop an application outside of class, which will constitute 30% of their overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students will demonstrate a deep and comprehensive understanding of data science techniques and apply them in a creative, precise, and independent manner. Students will understand data aggregation concepts and effectively combine complex datasets from various sources. Employing machine learning techniques such as clustering, decision trees, and neural networks.	Students will demonstrate a foundational understanding of data science techniques and apply them correctly with some guidance. Students will grasp key data-aggregation concepts and merge datasets from multiple sources in a clear, organized way. Additionally, students will use machine learning methods such as clustering, neural networks, and decision trees to generate reasonable results, though these may lack depth or optimization.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course Guidance Data Science Introduction Final Project Overview	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
2 /	Data Aggregation	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
3 /	Data Mining	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
4 /	Machine Learning	Lecture Exercise	Read the lecture slides given and proceed with the exercises. Quiz from lessons 1-3	200
5 /	Cluster Analysis (1)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
6 /	Cluster Analysis (2)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
7 /	Decision Tree (1)	Lecture Exercise	Read the lecture slides given and proceed with the exercises. Quiz from lessons 4-6	200
8 /	Decision Tree (2)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
9 /	Decision Tree (3)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
10 /	Neural Network (1)	Lecture Exercise	Read the lecture slides given and proceed with the exercises. Quiz from lessons 7-9	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Neural Network (2)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
12 /	Neural Network (3)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
13 /	Final Project (1)	Lecture Exercise	Read the lecture slides given and proceed with the exercises. Quiz from lessons 10 – 12	200
14 /	Final Project (2)	Exercise	Read the given tutorial and proceed with the self-project.	200
15 /	Project Showcase & Wrap-up	Exercise	Read the given tutorial and proceed with the self-project.	200

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Data Science II	2	712300	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	HAYASHI, Ryoko	Yatsukaho C:67.321		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1 2 3 4 5	Probability Statistics Data science	Probability and statistics are two of the basic knowledge of science and technology. Machine learning has been attracting attention in recent years, and probability and statistics are the basis of machine learning. In this course, students will acquire basic knowledge of probability and statistics, which are essential in science and technology, through classroom lectures and practical training.

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This course will offer computer exercises in class as a type of active learning.
In this course, you will learn the basic contents of probability and statistics in classroom lectures, and deepen your understanding through computer exercises.
You will use Python for most computer exercises, but also use Excel.
The order of the learning contents shown in the course schedule is a guide, and the details will be provided by the instructor.
At least the following contents will be included:

- Basics of Python, basics of Excel
- Probability (dependent and independent, conditional probability, random variable, normal distribution)
- Statistics (representative values, scatter, correlation, statistical hypothesis testing, confidence intervals, Bayesian inference)

Other contents may be added at the discretion of the instructor.
Some programming experience is desirable, but not required at the beginning of the course. If necessary, study by yourself during the course period to supplement the programming abilities required to acquire this course.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Data Science from Scratch, Second Edition, Joel Crus, O'Reilly, (2019).
Reference books:
Reserved books: 「ゼロからはじめるデータサイエンス第２版」, (2020) (in Japanese).

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge of mathematics is required. Specifically, you should have a general understanding of the basics of inequalities, equations, elementary functions such as polynomial functions and exponential functions, and calculus.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b	Students will learn the application of probability and understand the significance of returning the knowledge to society.
②	g	Students will learn the basics of how to handle data and understand the possibility of creating new value from data.
③	h	Students will be able to express their thoughts on statistical information on various events.
④	i	Students will acquire basic probability and statistical knowledge and experience with a view to developing into data science.
⑤		
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	0	0	0	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	30	0	0	0	0	10	40
	Ability to think, reason and create	0	30	0	0	0	0	10	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	10	10
	Attitude and motivation for learning	0	0	0	0	0	0	10	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✔	Make sure that you understand the basic knowledge of probability and statistics, and that you can apply it properly.
	②	✔	
	③	✔	
	④	✔	
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✔	Make sure that you understand the basic knowledge of probability and statistics, and that you can apply it properly. In order to confirm whether you can handle the learning contents properly using a computer, you may need to submit deliverables of computer training. Assignments will be given and evaluated during class time, based on learning done outside of class time.
	②	✔	
	③	✔	
	④	✔	
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
You can fully understand the learning contents related to probability and statistics and apply them to real-world problems. You can master both Python and Excel in computer training and apply the learning contents to actual data.	You can generally understand the learning contents related to probability and statistics, and apply the basic contents to real-world problems. In computer training, you can apply the learning contents to actual data using at least one of Python and Excel.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance. Explanation of outline of the subject, how to proceed with the lesson, preparation, review, and evaluation method Textbook Chapter 1 Introduction	It is basically face-to-face, but it may be done online.	Review (install and check Python, try using Python)	200
2 /	Textbook Chapter 2 (First Half) Python Quick Learning Course Chapter 3 Data Visualization	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140
3 /	Textbook Chapter 2 (Second Half) Python Quick Learning Course Chapter 4 Linear algebra	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140
4 /	Textbook Chapter 5 Statistics Excel work for Statistics	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140
5 /	Textbook Chapter 6 Probability (First half) Comprehensive Exercise 1	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140
6 /	Quiz 1 Textbook Chapter 6 Probability (Second half)	It is basically face-to-face, but it may be done online.	Review (lean the previous parts of the textbook) Review (resolve the problem)	60 140
7 /	Textbook Chapter 7 Hypothesis and Presumption (First half) Quiz 1 review	It is basically face-to-face.	Preparation for quiz Review (actually process data on a computer using Python)	140 60
8 /	Textbook Chapter 7 Hypothesis and Presumption (Second half)	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140
9 /	Textbook Chapter 8 Gradient descent method Comprehensive Exercise 2	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140
10 /	Quiz 2 Textbook Chapter 9 Getting Data (First half)	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Textbook Chapter 9 Getting data (Second half) Quiz 2 review	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140
12 /	Textbook Chapter 10 Working with Data (First half)	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140
13 /	Textbook Chapter 10 Working with Data (Second half) Comprehensive exercise 3	It is basically face-to-face, but it may be done online.	Review (lean the previous parts of the textbook) Review (resolve the problem)	140 60
14 /	Quiz 3 Textbook Chapter 11 Machine Learning	It is basically face-to-face.	Preparation for quiz Review (actually process data on a computer using Python)	140 60
15 /	Quiz 3 review For future development of probability and statistics, further learning	It is basically face-to-face, but it may be done online.	Preparation (learn the relevant part of the textbook) Review (actually process data on a computer using Python)	60 140

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Discrete Mathematics	2	721200	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	GUO, Qinglian	31.104		Wednesday 2

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Logic	(1) To learn the foundations of logic and sets (2) To learn the basics of counting (3) To learn graphs and the applications (4) To learn trees and the applications
2	Sets	
3	Counting	
4	Graphs	
5	Trees	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.

This course will offer group discussion in class as a type of active learning.

Students are expected to have high school graduate level mathematic knowledge. Also, they are required to have basic skills of using PowerPoint to draw graphs.

【Required Materials (textbooks, reference books, reserved books)】
Textbooks:
Reference books: Discrete mathematics and its application, Kenneth H. Rosen (AT&T), McGraw-Hill, Inc.
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

No.	Program Objectives	Target Abilities for Students (9pt)
①	g, h, i	Ability to capture the basic knowledge of sets, graphs, and trees
②	g, h, i	Ability to use the knowledge of logic, counting, and sets to explain and solve problems
③	b, c, d	Ability to collaborate with members to design 3D models using the knowledge of discrete mathematics
④	g, h, i	Ability to explain sorting algorithms using the knowledge of trees
⑤		
⑥		

Evaluation Criteria

Evaluation Method / Total Percentage		Exams	Quizzes	Reports	Presentations	Works	Portfolio	Other	Total
Total Percentage		0	60	0	0	40	0	0	100
Comprehensive Strength Criterion	Ability to capture knowledge	0	40	0	0	8	0	0	48
	Ability to think, reason and create	0	20	0	0	8	0	0	28
	Collaboration and leadership	0	0	0	0	8	0	0	8
	Announcement / Expression / Communication	0	0	0	0	8	0	0	8
	Attitude and motivation for learning	0	0	0	0	8	0	0	8

* The numerical breakdown shown by Comprehensive Strength Criterion is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Twice 2*30%
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	External evaluations Evaluations related to learning conducted outside of class (including assignments, etc.) eight times 8*5%
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Ability to explain the basic knowledge and applications of logic, sets, counting, graphs, trees, and sorting algorithms. Ability to collaborate with members to design 3D models using the knowledge of discrete mathematics. Ability to create animation of the models.	Ability to explain the basic knowledge of sets, graphs, and trees. Ability to collaborate with members to design 3D models using the knowledge of discrete mathematics.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Orientation Install software of Blender The foundations of logic	Lecture and exercise	Review	200
2 /	Sets Set operations Practicing of set operations (using Blender) Work No. 1	Lecture and exercise	Preview Review	80 120
3 /	Set operations Set applications Practicing of 3D models design and creation Work No.2	Lecture and exercise	Preview Review	80 120
4 /	The basics of counting Practicing of 3D models design and creation	Lecture and exercise	Preview Review	80 120
5 /	Counting and discrete probability Practicing of 3D models design and creation Work No.3	Lecture and exercise	Preview Review	80 120
6 /	Introduction to graphs	Lecture and exercise	Preview Review	80 120
7 /	Various graphs Practicing of 3D models design and creation Work No. 4	Lecture and exercise	Preview Review	80 120
8 /	Euler and Hamilton paths Quiz (30%)	Quiz and exercise	Preview Review	80 120
9 /	Shortest path problems Graph coloring Practicing of 3D models design and creation	Lecture and exercise	Preview Review	80 120
10 /	Introduction to tree Practicing of 3D models design and creation Work No. 5	Lecture and exercise	Preview Review	80 120

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Tree traversal Practicing of trees and 3D models creation	Lecture and exercise	Preview Review	80 120
12 /	Trees and sorting tree Work No. 6	Lecture and exercise	Preview Review	80 120
13 /	Trees and sorting tree Trees and computer Work No. 7	Lecture and exercise	Preview Review	80 120
14 /	Trees and sorting tree Trees and computer Work No. 8	Lecture and exercise	Preview Review	80 120
15 /	Quiz (30%) Explain and Answers Summary Interview	Exam and lecture	Preview Review	80 120

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 専門科目 選択	マーケティング	2	725600	前学期	講義／学修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4年	三原　克久	8.301		授業時に予約

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	マーケティング調査＆戦略	講義を通じて、企業経営に必要なマーケティング活動の概念や理論および手法などを学習し、情報収集と事例分析によってそれらの役割と効果を確認する。 具体的には世界的に広くマーケティング論の学習に使用されているコトラー＆ケラーのマーケティングマネジメントの第一部の習得とコーオプ教育、ＣＤＩＯの実践等の社会との共創に向けたイメージ作りも目指す。
2	Ｎｅｅｄｓ、ＳＴＰ、４Ｐ	
3	ブランディング	
4	地域志向・地域連携	
5	社会との共創	

授業の概要および学習上の助言

本講義は学修単位であるため、１単位を50 分45 回分の学習とし、50分授業15 回に対して50 分30 回分の自学自習を行って下さい。また、この授業ではアクティブラーニングの一環としてグループワークを行います。

【授業の概要（進め方）】

○本科目では、①マーケティングの基本概念と戦略の関係、②マーケティングリサーチ、③マーケティングの4P（製品、価格、流通、販売促進）の要点、④ブランドの形成、について主に学習する。

○授業ではPowerPointと板書を併用する。重要なキーワードやポイントを挙げ、事例に対するグループ検討、議論によって理論への理解を深める。また、映像やネット情報なども取り入れ、効果的に学習できるように心掛ける。

【助言】

○知識の丸暗記ではなく、自分の考えを持つことを求める。

○常に最新のマーケットに注目し、その動きに対して自らの考えや解釈を出すこと。その際には、なぜそのように考えたかを論理的に提示すること。

○毎回積極的に授業へ参加することが非常に重要である。欠席・遅刻・態度不良は厳禁である。

【その他（連絡事項）】

※授業の進捗状況により、内容を一部変更する場合があります。また、外部講師による講演も検討しています。予定が変更する場合事前に周知しますので。あらかじめご了承ください。

【教科書および参考書・リザーブドブック】

教科書：コトラー＆ケラーのマーケティングマネジメント　基本編　第3版[丸善出版]

参考書：

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

◎常にマーケットの動向に注目し、市場の最新情報を収集することが望まれる。

◎予習は基本的に不要であるが、復習は必須です。

No.	教育目標(DP)（記号表記）	学生が達成すべき行動目標
①	h, g	マーケティングの目的と要件を理解し、企業におけるマーケティング活動の重要性について説明できる。
②	h, g	マーケティングに関する重要な概念を平易な言葉で説明できる。
③	h, g	想定する製品市場における各製品のマーケティング手法の共通点、相違点を説明できる。
④	h, g	企業におけるブランド構築の必要性を理解し、説明できる。
⑤	h, g	ある特定市場の動向を常に観察し、マーケット動向を簡潔にまとめ、説明できる。
⑥	h, g	マーケティングの視点から、様々な経営課題解決のための戦略を立案することができる。

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	40	20	10	0	0	30	100
総合力指標	知識を取り込む力	0	20	10	0	0	0	0	30
	思考・推論・創造する力	0	20	10	0	0	0	0	30
	コラボレーションとリーダーシップ	0	0	0	0	0	0	10	10
	発表・表現・伝達する力	0	0	0	10	0	0	10	20
	学習に取組む姿勢・意欲	0	0	0	0	0	0	10	10

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	クイズ（小テスト）…10点 ・授業内容を理解できているか確認するために実施する 達成度確認試験…30点 ・マーケティング基礎内容を理解し、自身の見解を論理的な文章で論じられているかを評価する 【評価のポイント】①問題を適切に捉えて、それに対し自らの意見を主張できているか ②論理的にストーリを書けているか ③重要なポイントを押さえているか
	②	レ	
	③	レ	
	④	レ	
	⑤		
	⑥		
レポート	①	レ	課題レポート…20点 ・課題レポートの作成は、授業時間外で実施する ・特別講義の内容を適切にレポートできているかを評価する ・マーケティングに関する課題。広く調べて自分なりの経験・言葉でまとめる能力を評価する
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
成果発表 （口頭・実技）	①	レ	講義内容に沿ったチーム研究を最終講義にて発表する…10点 ・原則　１チーム5分＋質疑応答 ・授業内ではチーム方針やアクションアイテムを話し合い、調査や作業は授業時間外で実施する ・課題の解決策の理由、表現の仕方、説明の明瞭さを評価する
	②	レ	
	③		
	④		
	⑤	レ	
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①	レ	授業への貢献度…20点 ・授業への参加度として、質問の回数を評価する。 ・チーム研究に対する貢献度をチーム員で相互に査定し、その内容を評価とする 課題への取組み…10点 ・課題提出について、期日提出、遅延提出、未提出をカウントし、その累積を評価とする
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
①マーケティングの目的と要件を理解し、企業におけるマーケティング活動の重要性について論理的に説明できる。 ②マーケティングに関する重要な概念を平易な言葉で明確に説明できる。 ③想定する製品市場における各製品のマーケティング手法の共通点、相違点を詳細に説明できる。 ④企業におけるブランド構築の必要性を理解し、明確に説明できる。 ⑤感心のある特定市場の動向を常に観察し、マーケット動向を簡潔にまとめ、分かりやすく説明できる。 ⑥マーケティングの視点から、様々な経営課題解決のための戦略を適切に立案することができる。	①マーケティングの目的と要件を理解し、企業におけるマーケティング活動の重要性について概ね説明できる。 ②マーケティングに関する重要な概念を平易な言葉である程度説明できる。 ③想定する製品市場における各製品のマーケティング手法の共通点、相違点をある程度説明できる。 ④企業におけるブランド構築の必要性をある程度理解し、説明できる。 ⑤ある特定市場の動向を継続に観察し、マーケット動向をある程度にまとめられ、説明できる。 ⑥マーケティングの視点から、様々な経営課題解決のための戦略をある程度計画することができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	ガイダンス ・授業の全体像 ・スケジュール ・ルールと評価基準 マーケティングとは	PowerPointを用いた講義 質疑応答 アンケート実施	情報収集	100
2 ／	前回レポートの解説 環境分析 ・外部環境 ・業界分析 ・内部環境 ・目標設定	PowerPointを用いた講義 質疑応答	情報収集	300
3 ／	前回レポートの解説 マーケティングリサーチ ・データ収集 ・一次データ二次データ ・定性と定量	PowerPointを用いた講義 質疑応答	情報収集	300
4 ／	前回レポートの解説 市場特定 ・細分化（S） ・標的市場（T） ・立ち位置（P）	PowerPointを用いた講義 質疑応答	情報収集	300
5 ／	前回レポートの解説 製品マネジメント 振り返り①	PowerPointを用いた講義 質疑応答	情報収集	300
6 ／	価格マネジメント	PowerPointを用いた講義 質疑応答	情報収集	300
7 ／	流通マネジメント	PowerPointを用いた講義 質疑応答	情報収集	300
8 ／	前回レポートの解説 プロモーション・マネージメント	PowerPointを用いた講義 質疑応答	今までの内容を復習 情報収集	300
9 ／	クイズ ・基本概念の確認 ・ケース分析 振り返り②	筆記テスト	情報収集	300
10 ／	特別講演 ・外部講師による講演	PowerPointを用いた講演 Ｑ＆Ａ	情報収集	300

授業明細表

ＣＬＩＰ学習プロセスについて

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※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	特別講演 ・外部講師による講演（予定）	PowerPointを用いた講演 Ｑ＆Ａ	情報収集	300
12 ／	ブランディング ・本質的機能 ・構成要素	PowerPointを用いた講演 Ｑ＆Ａ	情報収集	300
13 ／	特別講義 外部講師による講演（予定）	pptによる口頭説明 Ｑ＆Ａ	総合演習課題向けの情報収集	300
14 ／	筆記試験	筆記試験		300
15 ／	チーム研究成果の発表 振り返り③ 授業アンケート	各チーム5分の口頭・pptによる成果発表 成績のフィードバック	振り返り	50

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 専門科目 選択	企業会計	2	725700	前学期	講義／学修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4年	北川 達也	金沢C：15.509		授業時に予約

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	簿記手続きの一巡	経営者および企業の利害関係者の意思決定に寄与する会計情報について、その作成過程を理解するとともに、会計情報伝達手段である財務諸表の内容・役割の理解を目標とする。
2	決算手続き	
3	決算書	
4	減価償却	
5	発生主義	

授業の概要および学習上の助言

本講義は学修単位であるため、１単位を50分45回分の学習とし、50分授業15回に対して50分30回分の自学自習を行って下さい。

企業は、その活動状況について、簿記を用いて記録・集計を行い、財務諸表によって経営者や利害関係者に会計情報を提供している。本科目では、「簿記手続きの一巡」を学習した後で、会計情報提供ツールである財務諸表の意義や作成方法・活用方法を学ぶ。演習課題が豊富に準備されているので、それらに積極的に取り組むことによって、簿記や財務諸表作成・分析の技術的側面と企業活動を貨幣価値によって捉える“ものの考え方”を養うことが大切である。

実務経験と授業科目との関連性

公認会計士として法定監査業務経験を持つ教員が、財務諸表作成方法指導経験・財務諸表の分析経験を活かして、簿記や財務諸表作成・分析の技術的側面と企業活動を貨幣価値によって捉える“ものの考え方”を養う教育を行っている

【教科書および参考書・リザーブドブック】

教科書：よくわかる簿記シリーズ　合格テキスト 日商簿記3級 Ver.15.0[[TAC出版]]　ISBN： 9784300115824

参考書：指定なし

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：指定なし

履修に必要な予備知識や技能

この科目では、企業活動を貨幣価値で記録・集計して、経営者や利害関係者の意思決定に寄与する会計情報を作成するための技術である「簿記」を学ぶ。また、会計情報の伝達媒体である財務諸表について、その意義・作成方法や利用方法を学ぶ。したがって、これらを適用する企業の活動や企業を取り巻く経済環境に関心を持ち、日々のニュースからの情報収集や関連基礎科目からの知識の習得に心掛けて授業に臨むことが望ましい。

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	h	資産・負債・資本・収益・費用について理解し、具体的な項目名を挙げることができる。
②	h	簿記手続き一巡（仕訳・転記・決算・財務諸表の作成）を理解し、簡単な資料で行う演習課題を提出することができる。
③	h	減価償却の考え方を理解し、減価償却費の計算ができる。
④	h	貸借対照表を作成することができる。また、貸借対照表に示された情報の概要を読むことができる。
⑤	h	損益計算書を作成することができる。また、損益計算書に示された情報の概要を読むことができる。
⑥		

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作　品	ポートフォリオ	その他	合　計
総合評価割合		0	40	60	0	0	0	0	100
総合力指標	知識を取り込む力	0	30	20	0	0	0	0	50
	思考・推論・創造する力	0	10	10	0	0	0	0	20
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	10	0	0	0	0	10
	学習に取組む姿勢・意欲	0	0	20	0	0	0	0	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①	レ	次のものを評価する。 ①　中間テストの結果 ②　期末テストの結果
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		
レポート	①	レ	次のものを評価する。授業外の課題の目的は、単に正答を得ることではなく、理解を深めること、継続的な学習習慣を身につけることにあります。 ①　各単元ごとに行う小レポート（授業外の課題、13回分の課題を予定）
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①		
	②		
	③		
	④		
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
・会計情報が企業の経営者や利害関係者の意思決定に有用であることを理解できる。 ・会計情報を作成するための「簿記手続きの一巡」について理解し、演習課題を解くことができる。また、主要簿と補助簿の関係を理解することができる。 ・減価償却の考え方が理解でき、減価償却費の計算ができる。 ・発生主義会計の考え方が理解できる。 ・貸借対照表・損益計算書を作成し、さらに、キャッシュ・フロー計算書へ発展させることができる。	・会計情報が企業の経営者や利害関係者の意思決定に有用であることを理解できる。 ・会計情報を作成するための「簿記手続きの一巡」について理解し、演習課題を解くことができる。 ・減価償却費の計算ができる。 ・貸借対照表・損益計算書を作成することができる。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	・ガイダンス：講義方針、運営方法（授業日程、講義方法、課題実施・提出方法、出席確認方法、成績評価方法など）を説明し、講義への取り組み姿勢と具体的な指導方法を確認する。 ・企業会計の必要性 ・決算書と利益計算	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら企業会計の利益計算構造について理解を深める。	50 150
2 ／	仕訳と元帳転記	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら仕訳・元帳転記・簿記手続きの一巡について理解を深める。	50 150
3 ／	簿記手続き一巡 Part1	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら仕訳・元帳転記・簿記手続きの一巡について理解を深める。	50 150
4 ／	簿記手続き一巡 Part2	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら決算予備手続きの理解を深める。	50 150
5 ／	簿記手続き一巡 Part3	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら、決算整理事項、勘定口座の締切について理解を深める。	50 150
6 ／	商品有高帳	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら商品有高帳の記入方法、売上原価計算方法について理解を深める。	50 150
7 ／	【総合演習】 1回から6回までの授業内容の総合演習	講義及び質疑応答、演習	予習：１回から６回までの授業内容を復習する。 復習：総合演習の問題について復習し、理解を深める。	50 150
8 ／	【振り返り】 1回から6回までの振り返り 【中間テスト】 1回から7回までの授業内容に関するテスト	講義及び質疑応答、演習 テスト	予習：テスト範囲の内容を復習する。 復習：テストでできなかった問題について、正解を確認し、できるようにしておく。	150 50
9 ／	貸借対照表の意義と内容	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら、貸借対照表の意義と作成方法について理解を深める。	50 150
10 ／	損益計算書の意義と内容・減価償却 Part1	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら、損益計算書の意義と作成方法、減価償却費及び発生主義会計について理解を深める。	50 150

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	損益計算書の意義と内容・減価償却 Part2	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら、損益計算書の意義と作成方法、減価償却費及び発生主義会計について理解を深める。	50 150
12 ／	貸借対照表および損益計算書の総合作成演習	講義及び質疑応答、演習	予習：テキストの当該箇所を読んで、質問事項を整理しておく。 復習：課題を行いながら、貸借対照表および損益計算書の作成方法について理解を深める。	50 150
13 ／	キャッシュ・フロー計算書 【総合演習】 9回から13回までの授業内容の総合演習	講義及び質疑応答、演習	復習：講義内容を復習して、キャッシュ・フロー計算書について理解を深める。9回から13回の講義内容について復習して理解を深める	200
14 ／	【振り返り】 9回から13回までの振り返り 【期末テスト】 9回から13回までの授業内容に関するテスト	講義及び質疑応答、演習 テスト	予習：テスト範囲の内容を復習する。 復習：テストでできなかった問題について、正解を確認し、できるようにしておく。	150 50
15 ／	期末テストの解説 企業会計基礎の学習・教育内容に関する質疑応答 アンケート 自己点検	講義及び質疑応答 アンケート 自己点検	復習：期末テストの内容について再度確認し、理解する。本科目で学習した内容について再度総合的に確認する。	200

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Electrical and Electronic Circuits I	1	712800	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	SANG-NGENCHAI, Apirak	KC 31-117-1		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Electrical Power	In this course, students gain basic knowledge of electrical and electronic circuits. Students explore electronic components, electrical power, and circuit design. Through hands-on activities, students learn to assemble circuits on breadboards and design prototypes on PCBs. By the end of the course, students can analyze, design, and test circuits, applying these skills to create various solutions and applications.
2	Electronics Components	
3	Circuit Design	
4	Printed Circuit Board (PCB)	

Course Description and Expectations for Students (10.5pt)

This course offers a hands-on, experiential approach in class, using active learning to understand electrical and electronic circuits. Students will explore the fundamentals of AC and DC circuits, electrical power, and essential components such as resistors, capacitors, inductors, diodes, transistors, and FETs. The course emphasizes practical skills in circuit design using breadboards, prototyping boards, and online circuit simulation tools. Students will also learn circuit design and PCB development. The students' experience concludes with a final project in which students use their knowledge to design and build a circuit that combines concepts covered during the course.

Advice on taking this course:
- **B**e Prepared: Review electrical and electronic basics and component functions before class.
- **O**rganize Your Work: Keep clear notes, circuit diagrams, and project documentation to avoid confusion later.
- **S**tay Hands-On: Actively participate in labs and practice using breadboards, PCBs, and online circuit design tools.
- **S**eek Solutions: When you face challenges, investigate, troubleshoot, and ask questions. Problem-solving is key to mastering circuits.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books: Teach Yourself Electricity and Electronics
(Stan Gibilisco and Simon Monk), ISBN 978-1-2595-8553-1
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

- Basic Mathematics: Understanding algebra and simple equations for circuit analysis.
- Physics Fundamentals: Familiarity with electrical concepts such as voltage, current, and resistance.
- Computer Literacy: Ability to use web-based tools and simulation software for circuit design.
- Problem-Solving Skills: Logical thinking and troubleshooting ability for circuit issues.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Students will be able to understand the fundamentals of electricity.
②	g, h	Students will be able to identify and apply electronic components.
③	a, g	Students will be able to analyze and design circuits.
④	h, i	Students will be able to utilize digital tools for circuit simulation and PCB design.
⑤	a, g, i	Students will be able to develop and implement a functional circuit.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	15	25	0	60	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	10	10	0	30	0	0	50
	Ability to think, reason and create	0	5	10	0	25	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	5	0	5	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Students will take short in-class quizzes to check their understanding of the content. There will be a quiz in weeks 5, 10, and 15.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①		Students are required to write a report for their final project assignment.
	②		
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students must complete weekly assignments covering class lectures. If a student is absent, they must obtain the exercise from the teacher and submit it on time. For the final project, each student will design an application that demonstrates the knowledge gained in this class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
1. Students can explain the fundamentals of electricity. 2. Students can identify and apply electronic components. 3. Students can analyze and design circuits. 4. Students can utilize digital tools for circuit simulation and PCB design. 5. Students can develop and implement a functional circuit.	1. Students can define voltage, current, resistance, and power. 2. Students can correctly identify components and understand their basic functions. 3. Students can design circuits, perform calculations, and validate designs through simulation and testing. 4. Students can independently use simulation software and PCB design tools to design, test, and optimize circuits. 5. Students can design and build a fully functional circuit.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course Guidance & Safety Basic Electrical/Electronic Concepts - Background Physics - Electrical Units - Introduction to Semiconductors	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
2 /	Fundamentals of AC and DC Circuits - Characteristics of AC vs DC - Series and parallel circuits - Kirchhoff’s Laws	Lecture Exercise Experiment	Read the lecture slides given and proceed with the exercises.	200
3 /	Electrical Power and Energy - Power in AC/DC circuits - Real, reactive, and apparent power	Lecture Exercise Experiment	Read the lecture slides given and proceed with the exercises.	200
4 /	Resisters and Circuit Analysis - Types of Resistors - Purpose of the Resistor	Lecture Exercise Experiment	Read the lecture slides given and proceed with the exercises.	200
5 /	Capacitors and Inductors - Types of Capacitors - Charging/discharging behavior - Applications in filtering	Lecture Exercise Experiment	Read the lecture slides given and proceed with the exercises. Quiz from lessons 1-4	200
6 /	Diodes and Rectifiers - Types of Diodes - Diode characteristics, rectification	Lecture Exercise Experiment	Read the lecture slides given and proceed with the exercises.	200
7 /	Transistors and FETs - Types of Transistors - Types of FETs - Switching and amplification principles	Lecture Exercise Experiment	Read the lecture slides given and proceed with the exercises.	200
8 /	Circuit Design Basics - Circuit Design Fundamentals - Circuit Design Software	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
9 /	Circuit Simulation Basics - Circuit Schematics - Online Circuit Simulation platforms	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
10 /	PCB Design Fundamentals - Introduction to PCB design tools - PCB layout principles, schematic capture.	Lecture Exercise	Read the lecture slides given and proceed with the exercises. Quiz from lessons 5-9	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Advanced Circuit Design - Combining analog and digital components - Integrated Circuits	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
12 /	Electronic Control for Actuators / Motors - Direct-Current Motors - Types of Motors	Lecture Exercise Experiment	Read the lecture slides given and proceed with the exercises.	200
13 /	Project Initialization and Planning	Lecture Exercise	Read the given tutorial and proceed with the self-project.	200
14 /	Project Development	Lecture Exercise	Read the given tutorial and proceed with the self-project.	200
15 /	Project Showcase & Wrap-Up	Activity	Read the given tutorial and proceed with the self-project. Quiz from lessons 10-14	200

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Electrical and Electronic Circuits II	1	712900	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	OGAWA, Hayato	31-115		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Digital number system	Students will learn to understand the operation and design of combinational and sequential logic circuits that construct computer memory systems. This course will guide the students to perform conversion of the digital number system, understanding the working of logic gates, using Karnaugh map to simply Boolean expression, and designing a digital counter circuit using flip-flops.
2	Logic gates	
3	Boolean algebra	
4	Karnaugh map	
5	Sequential circuits	

Course Description and Expectations for Students (10.5pt)

In this course, students will be introduced to the basics of digital circuits and systems. The course is prepared to provide students with basic knowledge of digital memory circuits based on combinational logic circuits and sequential circuits. After completing the course, students should be able to explain and discuss the basics principles of digital memory circuits. This course includes lectures, hands-on work, and an individual project.

Advice on taking this course:

- Be prepared for class and study the incoming topics in advance.
- Do the assignment and make sure to submit all your work on time.
- English will be the main challenge in this course. Make sure you ask for help from the teacher or friends.

The use of an electronics dictionary is strongly encouraged.

This course will offer discovery learning, problem-solving learning, experiential learning, investigative learning in class as a type of active learning.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books:

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

1. Ability to perform simple algebra operations.
2. Basics knowledge of mathematical operations (add, subtraction, multiplication, and division)

No.	Program Objectives	Target Abilities for Students (9pt)
①	a,h	Students will be able to perform the conversion of digital number systems.
②	a,h	Students will be able to write Boolean algebra expressions of the given combinational circuits.
③	a,h	Students will be able to use the Karnaugh map to simplify Boolean algebra expression.
④	a,h,i	Students will be able to design circuits from the simplified Boolean algebra expression.
⑤	a,h	Students will be able to explain the operation of latches and flip-flop.
⑥	a,h,i	Students will be able to design an Asynchronous counter and a Synchronous counter.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	20	40	0	40	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	10	0	0	20	0	0	30
	Ability to think, reason and create	0	10	20	0	20	0	0	50
	Collaboration and leadership	0	0	10	0	0	0	0	10
	Announcement / Expression / Communication	0	0	5	0	0		0	5
	Attitude and motivation for learning	0	0	5	0	0	0	0	5

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There are five quizzes in this course. Each quiz accounted for 5 points out of a total of 25 points. • Students who are absent during the day can ask the teacher to reschedule the quiz. • However, rescheduling must be within the same week of the quiz.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Weekly exercises will be handed to the students based on what they have learned in the week. All target ability related question will be included in the exercise. • If a student is absent, it is the responsibility of the student to collect the weekly exercise from the teacher. Completed weekly exercise must be submitted on time as mentioned by the teacher.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	There are two small projects and one final project. Each small project accounted for 5 points out of the total of 40 points. The remaining 20 points are covered in the final project. The projects will test students' cognitive and psychomotor skills related to what they have learned in the class. Project assignment/worksheet must be submitted on time as mentioned by the teacher.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can understand and explain the working principle of logic gates with the correct schematic diagram. Students can perform simplification of Boolean expressions using the Karnaugh map. Students can design Asynchronous and Synchronous counter complete with the logic circuits and timing diagram	Students can understand the concept of the working principle of logic gates correctly. Students can perform simplification of Boolean expressions using the Karnaugh map. Students can design Asynchronous and Synchronous counter correctly.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	i. Syllabus guidance ii. Digital number system - Binary, decimal, hexadecimal Conversion of the number system	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
2 /	i. Quiz 1 (Binary, decimal, and hexadecimal) ii. Introduction to basic logic gates and universal gates - Read MIL symbol and Boolean expression. Boolean algebra	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
3 /	i. Quiz 2 (Boolean Algebra) ii. Sum-of-Product (SOP) & Product-of-Sum (POS) Karnaugh map (K-Map)	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
4 /	i. Simplification of Boolean expression using Karnaugh map - Draw circuits from the simplified Boolean expression. Quiz 3 (K-Map)	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
5 /	Project 1 (Simulation software) Design of Binary-Coded Decimal (BCD) circuit.	- Project worksheet	- Read PowerPoint notes. Complete Exercise	200
6 /	i. Binary addition and arithmetic circuits 1 Understand half adder and full adder circuits	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
7 /	i. Binary addition and arithmetic circuits 2 - Subtraction using 2`complement method. - Understand adder-subtractor circuits. ii. Quiz 4 (Binary addition and subtraction)	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
8 /	i. Decoder and Encoder Understand decoder and encoder circuits	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
9 /	i. Latches and flip – flops 1 - Introduction to SR, JK, and D flip-flops - Understand the characteristics of a flip-flop with a truth table and timing diagrams.	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
10 /	i. Latches and flip – flop 2 - Introduction to SR, JK, and D flip-flops - Understand the characteristics of a flip-flop with a truth table and timing diagrams. Quiz 5 (flip-flop)	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	i. Asynchronous counter - Understand the working principle of asynchronous counter. - Design asynchronous counter.	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
12 /	i. Project 2 (Hardware) Design a asynchronous counter.	- Construct a digital circuit. complete project worksheet	- Read PowerPoint notes. Complete Exercise	200
13 /	i. Synchronous counter - Understand the working principle of synchronous counter. - Design a synchronous counter.	- Lecture Worksheet	- Read PowerPoint notes. Complete Exercise	200
14 /	i. Final Project (Simulation software)	- Design and construct a counter simulation using software. worksheet	- Read PowerPoint notes. Complete Exercise	200
15 /	i. Final Project (Simulation software)	- Operation confirmation and trouble shooting worksheet	- Read PowerPoint notes. Complete Exercise	200

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Computer Architecture	2	722500	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	SANG-NGENCHAI, Apirak	KC 31-117-1		Make an appointment in class

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Von Neumann Architecture	This course introduces the principles of computer architecture, including the Von Neumann Architecture, the Instruction Set Architecture, and the roles of key components such as the numbering system, logic gates, the Arithmetic Logic Unit (ALU), and the central processing unit (CPU). Students will gain both theoretical understanding and practical skills, culminating in the design and implementation of a simple 4-bit CPU through hands-on projects.
2	Instruction Set Architecture	
3	Logic Gates	
4	Arithmetic Logic Unit	
5	Central Processing Unit	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This course will offer an experiential, active-learning approach in class. Students will engage in active learning through hands-on projects that reinforce theoretical knowledge.
This course introduces the fundamentals of computer architecture, covering key concepts such as the Von Neumann Architecture, the Instruction Set Architecture, numbering systems, logic gates, the Arithmetic Logic Unit (ALU), and the central processing unit (CPU). By the end of the course, students will design, simulate, and implement a simple 4-bit CPU. The course emphasizes collaboration, problem-solving, and practical application to bridge theory with real-world digital system design.

Advice on taking this course:
- **B**e Prepared: Review lecture slides beforehand.
- **O**rganize Your Work: Keep clear notes, structure code, and document projects.
- **S**tay Hands-On: Participate actively in labs and practice sessions.
- **S**eek Solutions: When facing challenges, investigate, troubleshoot, and ask questions.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books: Digital Fundamentals (Thomas L. Floyd), ISBN 978-1-2920-7598-3
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

A basic understanding of computers, CPU architecture, digital logic, and binary number systems.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Students will be able to understand and explain the principles of computer architecture
②	a, h	Students will be able to understand and describe instruction set architecture
③	a, h	Students will be able to understand and describe the CPU functionality
④	g, i	Students will be able to design, simulate, and implement a simple 4-bit CPU
⑤		
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	15	20	0	65	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	10	10	0	30	0	0	50
	Ability to think, reason and create	0	5	10	0	30	0	0	45
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	5	0	0	5

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Students will take short in-class quizzes to check their understanding of the content. There will be a quiz in weeks 5, 10, and 15, which is 15% of the total score.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Reports	①		Students must submit a report covering their final project from initiation to completion, accounting for 20% of the total grade.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students must complete weekly assignments based on lectures, which count for 35% of their grade. Absent students should get the assignment sheet from the teacher and submit it on time; otherwise, their score will be deducted after the deadline. For the project, each student will create an application that shows what they've learned in this course. They are required to research, design, and develop a 4-bit CPU outside of class, which will constitute 30% of their overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
1. Students can explain the principles of computer architecture, Instruction Set Architecture, and CPU functionality with detailed examples. 2. Students can design, simulate, and successfully implement a fully functional 4-bit CPU. 3. Students can integrate theoretical knowledge with practical application and communicate their design effectively.	1. Students can explain the basic principles of computer architecture, Instruction Set Architecture, and CPU functionality. 2. Students can design and simulate a simple 4-bit CPU and demonstrate partial or basic implementation. 3. Students can apply theoretical concepts to practical exercises with guidance.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course Guidance Recapping Computing Final Project Overview	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
2 /	Von Neumann Architecture	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
3 /	Numbering system	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
4 /	Logic Gates	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
5 /	Electric Memory and Storage	Lecture Exercise	Read the lecture slides given and proceed with the exercises. Quiz from lessons 1-4	200
6 /	Central Processing Unit (CPU)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
7 /	Pipeline Processor	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
8 /	Instruction Set Architecture	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
9 /	A 1-bit ALU	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises.	200
10 /	A 4-bit ALU	Lecture Exercise Activity	Read the lecture slides given and proceed with the exercises. Quiz from lessons 5 - 9	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	CPU Design: ROM	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
12 /	CPU Design: Registers	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
13 /	CPU Design: Decoder	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
14 /	CPU Design: 4-bit CPU	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
15 /	Project Showcase & Wrap-Up	Activity	Read the given tutorial and proceed with the self-project. Quiz from lessons 10 - 14	200

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Computer Systems	2	722600	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	SANG-NGENCHAI, Apirak	KC 31-117-1		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Hardware	In this course, students will learn the fundamental technologies of computers, including hardware, software, and networks. Students will gain practical experience with single-board computer technologies, applying theory to real-world digital system design. By the end of the course, students understand hardware-software interaction and can use single-board computers in future projects through hands-on application.
2	Software	
3	Network	
4	Single-board computer	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This course will offer experiential learning in class as a type of active learning.
This course introduces the fundamental technologies of computers, including how computers work and the roles of memory, CPU, programming, storage, networks, operating systems, and input/output devices. Students will gain a comprehensive understanding of the interaction between hardware and software in modern computing systems. In addition, the course emphasizes practical experience through assignments that involve configuring and using a Raspberry Pi. By combining theory with hands-on activities, students will develop the skills necessary to apply single-board computer technologies in future system development projects.

Advice on taking this course:
- **B**e Prepared: Review lecture slides beforehand.
- **O**rganize Your Work: Keep clear notes, structure code, and document projects.
- **S**tay Hands-On: Participate actively in labs and practice sessions.
- **S**eek Solutions: When facing challenges, investigate, troubleshoot, and ask questions.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic knowledge of computers and CPU architecture.

No.	Program Objectives	Target Abilities for Students (9pt)
①	i	Students will be able to understand the hardware components of a computer
②	i	Students will be able to understand computer software and its interaction with hardware
③	i	Students will be able to understand the fundamentals of computer networks
④	a, h, i	Students will be able to configure single-board computers
⑤	a, h, i	Students will be able to implement single-board computers in practical applications
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	10	40	20	30	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	15	0	0	0	0	20
	Ability to think, reason and create	0	5	15	0	25	0	0	45
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	5	10	0	0	0	15
	Attitude and motivation for learning	0	0	5	10	5	0	0	20

* The numerical breakdown shown by the Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Students will take short in-class quizzes to check their understanding of the content. There will be a quiz in weeks 5 and 10, which is 10% of the total score.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Students will receive weekly exercises related to the week's material, which count for 20% of their grade. If a student is absent, they must obtain the assignment sheet from the teacher and submit it on time. Otherwise, their score will be deducted after the deadline. Students must submit a report covering their final project from initiation to completion, accounting for 20% of the total grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①	✓	Students will give an oral presentation on their projects, which accounts for 20% of their grade. The instructors will specify the format for the presentations, such as slides, posters, or another method, in class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Works	①	✓	Students will engage in many hands-on exercises, beginning with Python programming and establishing a connection to the Raspberry Pi. Outside of class, there is a project in which each student will need to design an application that combines two or more electronic components. This project will constitute 30% of their overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
1. Students can explain the function of each hardware and software element in computer architecture. 2. Students can explain computer networking and perform IP address calculations correctly. 3. Students can design and implement more than a single-board computer.	1. Students can understand the concepts of hardware and software in computer architecture. 2. Students can understand the basics of computer networking and perform simple IP address calculations. 3. Students can design an outline of possible uses for single-board computers.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance, Recapping Computing Overview of what computers do. Final Project Overview	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
2 /	Numbering system	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
3 /	Electric Memory and Storage	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
4 /	Processors	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
5 /	Computer Input and Output	Lecture Exercise	Read the lecture slides given and proceed with the exercises. Quiz from lessons 1 - 4	200
6 /	Computer Networking (1)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
7 /	Computer Networking (2)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
8 /	Operating System	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
9 /	Basic Linux Command	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
10 /	Raspberry Pi Electronic Project (1)	Lecture Exercise	Read the lecture slides given and proceed with the exercises. Quiz from lessons 5 - 9	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Raspberry Pi Electronic Project (2)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
12 /	Raspberry Pi Electronic Project (3)	Lecture Exercise	Read the lecture slides given and proceed with the exercises.	200
13 /	Final Project (1)	Lecture Exercise	Read the given tutorial and proceed with the self-project.	200
14 /	Final Project (2)	Exercise	Read the given tutorial and proceed with the self-project.	200
15 /	Project Showcase & Wrap-Up	Presentation	Read the given tutorial and proceed with the self-project.	200

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	System Programming I	1	713000	First	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	OGAWA, Hayato / FUJISAWA, Takeshi	KC 31-115		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	C programming	This course introduces students to fundamental C programming leading to procedural C programming on a Windows PC (WSL) and compile/run/debug C programs. Learn to write procedural C programs using data types, operators, standard I/O, control structures, arrays, and functions, Apply basic algorithmic thinking to solve programming problems and evaluate solutions logically.
2	Data type	
3	Standard I/O	
4	Control Structures	
5	Algorithm	

Course Description and Expectations for Students (10.5pt)

This course will offer experiential learning in class as a type of active learning
In this System Programming 1 course, students learn C programming fundamentals (data types, standard I/O, operators/expressions, control structures, functions, arrays, recursion, user-defined types, file handling, and command-line arguments) using a WSL-based development environment on a Windows PC.
In preparation for System Programming 2, where students are introduced to microprocessor-based embedded systems and Raspberry Pi hardware. Students will use C to interact with peripheral boards/sensors and will build, debug, and test simple hardware–software functions.
Advice on taking this course:
- Have laptops or notebooks ready before class starts.
- Be sure to prepare sufficiently for class and the incoming topics in advance.
- Submit assignments on time.

At the end of the course, students will apply their knowledge to a hands-on project where they will design and build their own embedded system.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge and experience learned and acquired so far in computer languages and logical thinking.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a,h	Students will be able to analyze a given programming problem, identify required inputs/outputs, and plan a solution.
②	a,h	Students will be able to implement correct C programs using appropriate data types and control structures.
③	a,h	Students will be able to implement correct C programs using appropriate functions, and basic data structures.
④	a,h	Students will be able to debug and test programs using compiler messages and simple test cases and improve code quality.
⑤	a,h,i	Students will be able to communicate their work clearly through code comments and short reports, explaining results.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	0	50	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	0	10	0	0	20
	Ability to think, reason and create	0	0	20	0	20	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	10	0	0	20
	Attitude and motivation for learning	0	0	10	0	10	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Exercises will be done on every topic. The exercises should be finished by the next class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students will involve a lot of hands-on exercises starting with programming and establishing a connection to microcontroller peripherals boards. There is a final project in which each student will need to design an application that combines two or more basic functions.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can design and implement C programs using control structures, functions, arrays, pointers, and structures with clean code and comments. Students can debug systematically using compiler messages and printf, and explain the cause of bugs and their fixes logically. Collaborative Learning: Work collaboratively on projects and labs, and participate in peer learning activities. assignments.	By the end of the course, students can write basic C programs using variables, data types, operators, conditionals, loops, and functions. Students can use arrays and pointers at a basic level, and use structures in simple programs when given examples. Students can fix common errors by reading compiler messages and testing, and can correct simple logic mistakes with guidance. Collaboration: Skills in working effectively in teams, demonstrating flexibility,

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Introduction to C fundamentals course and WSL Environment setup for C programming on Windows PC.	Lecture	Read the given lecture slides.	20
2 /	Basic concept Hardware/software, integer/real type, operator, and standard I/O	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
3 /	Programming input/output (continue)	Exercise	Read the given tutorial and proceed with exercises.	20
4 /	Operators and Expressions	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
5 /	Control structures, loops, breaks	Exercise	Read the given tutorial and proceed with exercises.	20
6 /	Control/Decision-Making Statements, if statements	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
7 /	Understanding Math.h Library	Exercise	Read the given tutorial and proceed with exercises.	20
8 /	Introduction to Arrays	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
9 /	Different types of Functions	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
10 /	Recursions and storage class	Lecture Exercise	Read the given tutorial and proceed with exercises.	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	User defined datatypes	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
12 /	File types and command line arguments	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
13 /	Introduction to microprocessor-based computer hardware system, peripherals boards and C programming environment.	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
14 /	Raspberry Pi hardware introduction	Lecture Exercise	Read the given tutorial and proceed with exercises.	20
15 /	Freenove Raspberry Pi overview	Lecture Exercise	Read the given tutorial and proceed with exercises.	20

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	System Programming II	1	713100	Second	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	OGAWA, Hayato	KC 31-115		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Embedded systems	This course introduces students to embedded programming through hands-on microcontroller projects using C, based on prior experience. Programming the digital input/output, Interrupts, Analog to Digital conversion (ADC), PWM control, and User input and output devices. Knowledge from this course is usable in designing digital control units for consumer electronics, industrial automation, telecommunication systems, etc.
2	Microcontrollers	
3	Microprocessors	
4	Real-Time Operating Systems	
5	C programming language	

Course Description and Expectations for Students (10.5pt)

This course will offer experiential learning in class as a type of active learning

This course introduces students to the basis of a microprocessor-based computer hardware system with software that is designed to carry out computation for real-time operations. This course includes lectures, hands-on works, and an individual project. Particularly the Raspberry pi will be studied and utilized together with various microcontroller peripherals. The microcontroller peripherals boards will be built and debugged by students. Students will learn through hands-on experience while doing several experiments and projects.
Advice on taking this course:
- Have laptops or notebooks ready before class starts.
- Be sure to prepare sufficiently for class and the incoming topics in advance.
- Submit assignments on time.

At the end of the course, students will apply their knowledge to a hands-on project where they will design and build their own embedded system.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge and experience learned and acquired so far

No.	Program Objectives	Target Abilities for Students (9pt)
①	a,h	Students will be able to use the C to program digital input/output and an interrupts condition.
②	a,h	Students will be able to use the C to perform Analog to Digital conversion.
③	a,h	Students will be able to use the C for Pulse Width Modulation control (PWM).
④	a,h	Students will be able to use the C to program user input and output devices.
⑤	a,h,i	Students will be able to design an application that utilizes two or more basic functions together.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	0	50	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	0	10	0	0	20
	Ability to think, reason and create	0	0	20	0	20	0	0	40
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	10	0	0	20
	Attitude and motivation for learning	0	0	10	0	10	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Exercises will be done on every topic. The exercises should be finished by the next class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students will involve a lot of hands-on exercises starting with programming and establishing a connection to microcontroller peripherals boards. There is a final project in which each student will need to design an application that combines two or more basic functions.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to understand and explain the concept of a microprocessor-based computer hardware system for real-time operations with a correct schematic diagram. Students are able to perform and improvise the learned basic operation of the microcontroller using a programming language. Students are able to design an application that utilizes more than three basic operations together. Collaborative Learning: Work collaboratively on projects and labs, and participate in peer learning activities. assignments.	Students are able to understand the concept of a microprocessor-based computer hardware system for real-time operations correctly. Students are able to perform the learned basic operation of the microcontroller using a programming language. Students are able to design an application that utilizes at least three basic operations together. Collaboration: Skills in working effectively in teams, demonstrating flexibility,

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Review System Programming 1 microprocessor-based computer hardware system, peripherals boards and C programming environment.	Lecture	Read the given lecture slides.	200
2 /	Programming of digital input/output	Lecture Exercise	Read the given tutorial and proceed with exercises.	200
3 /	Programming of digital input/output (continue)	Exercise	Read the given tutorial and proceed with exercises.	200
4 /	Programming for Pulse Width Modulation (PWM) control	Lecture Exercise	Read the given tutorial and proceed with exercises.	200
5 /	Programming for PWM control (continue)	Exercise	Read the given tutorial and proceed with exercises.	200
6 /	Programming for Analog to Digital conversion.	Lecture Exercise	Read the given tutorial and proceed with exercises.	200
7 /	Programming for Analog to Digital conversion (continue).	Exercise	Read the given tutorial and proceed with exercises.	200
8 /	Programming for Motor & Driver	Lecture Exercise	Read the given tutorial and proceed with exercises.	200
9 /	Programming for 4-Digit 7-Segment Display.	Lecture Exercise	Read the given tutorial and proceed with exercises.	200
10 /	Programing for the LED Matrix.	Lecture Exercise	Read the given tutorial and proceed with exercises.	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Programing for the LCD.	Lecture Exercise	Read the given tutorial and proceed with exercises.	200
12 /	Final Project (1) Understanding a final project and choosing electronic elements for own project.	Lecture Exercise	Read the given tutorial and proceed with self-project.	200
13 /	Final Project (2) Continuing to work on self-project for a raspberry pi electronic project.	Exercise	Read the given tutorial and proceed with self-project.	200
14 /	Final Project (3) Continuing to work on self-project for a raspberry pi electronic project.	Exercise	Read the given tutorial and proceed with self-project.	200
15 /	Final Project (4) Continuing to work on self-project for a raspberry pi electronic project.	Exercise	Read the given tutorial and proceed with self-project.	200

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Object-oriented Programming I	1	713200	First	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	EVANS, Davis	31.118-1		Weekdays 16:50 ~ 17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Programming	Students should be able to design moderately complex coding projects that use the principles of object-oriented programming to make flexible and well-organized code. Students should also be able to rewrite and refactor codes into modules to efficiently accomplish the program's stated goals.
2	Object-oriented	
3	Refactor	
4	Encapsulation	
5	Interface	

Course Description and Expectations for Students (10.5pt)

This course uses the Python programming language as a medium to teach modern object-oriented and design pattern focused programming skills. Students will expand upon skills learned in previous programming courses, and learn how to refactor code, organize it into distinct modules using encapsulation, and design interfaces for those discrete modules to work with each other.

This course implements active learning through live tutorials and project-based exercises during class sessions.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: Fluent Python: Clear, Concise, and Effective Programming, 2nd Edition
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students should understand the basics of programming in Python, including the use of development tools like VS Code, and it's Python related packages. This course is design as a follow-up to the introductory programming skills learned in Computer Skills IIB.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Students should be able to understand and describe the use of functions, classes, & methods
②	g, h, i	Students should be able to understand and describe the benefits of using an object-oriented programming style.
③	g, h, i	Students should be able to organize and refactor code into encapsulated modules and interfaces.
④	a, b, g	Students should be able to apply the concept of object-oriented programming to real-world problem solving.
⑤	d, f, h	Students should be able to read, understand, and explain the function of code written by themselves and others.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	20	30	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	0	0	0	20
	Ability to think, reason and create	0	0	20	10	20	0	0	50
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	10	0	0	0	10
	Attitude and motivation for learning	0	0	10	0	10	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Students will submit in-class coding exercises for evaluation on a weekly basis.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		Students will have a final presentation of their created coding project at the end of the semester.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥		
Works	①	✓	Students will have a capstone coding project to be submitted at the end of the semester.
	②		
	③	✓	
	④	✓	
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students should be able to create well documented, efficient object-oriented code in Python to solve a variety of given problem statements.	Students should be able to create functional Python code to solve a variety of given problem statements, that implements some object-oriented techniques.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance VS Code & Python Installation Check Review of Functions, Classes, & Methods	Lecture Exercise	Review Textbook Finish In-class Exercise	30
2 /	Review of Documentation and Commenting Review of Libraries and Importing Review of Error types and Troubleshooting	Lecture Exercise	Review Textbook Finish In-class Exercise	30
3 /	Class Layout & Refactoring	Lecture Exercise	Review Textbook Finish In-class Exercise	30
4 /	UML Diagram Reading & Drawing	Lecture Exercise	Review Textbook Finish In-class Exercise	30
5 /	What is an “object” in programming? Constructors and methods	Lecture Exercise	Review Textbook Finish In-class Exercise	30
6 /	Python special methods, collections, & typing	Lecture Exercise	Review Textbook Finish In-class Exercise	30
7 /	Object references, mutability, and recycling	Lecture Exercise	Review Textbook Finish In-class Exercise	30
8 /	Inheritance: Parent & Child Classes Interfaces, Dependencies, & APIs	Lecture Exercise	Review Textbook Finish In-class Exercise	30
9 /	Encapsulation: public vs. private variables and methods	Lecture Exercise	Review Textbook Finish In-class Exercise	30
10 /	Modularity and combining objects to form a program.	Lecture Exercise	Review Textbook Finish In-class Exercise	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Graphical User Interfaces (GUI) & the Python tkinter library	Lecture Exercise	Review Textbook Finish In-class Exercise	30
12 /	Project assignment & introduction	Lecture Project Work	Work on project	30
13 /	Project workday #1	Project Work	Work on project	30
14 /	Project workday #2	Project Work	Work on project	30
15 /	Project Submission & Presentation	Presentation	Finish project	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Object-oriented Programming II	1	713300	Second	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	EVANS, Davis	31.118-1		Weekdays 16:50 ~ 17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Programming	Students should be able to design moderately complex coding projects that use the principles of object-oriented programming to make efficient code. Students will be able to apply design patterns to make complex programs in a well-organized manner. Furthermore, they should be able to use more advanced techniques such as object composition and concurrency tools like multi-threading to make even more flexible code.
2	Object-oriented	
3	Design-Patterns	
4	Object Composition	
5	Concurrency	

Course Description and Expectations for Students (10.5pt)

This course continues from Object-oriented Programming I in expanding student understanding of object-oriented programming techniques using the Python coding language as the medium. In this course students will learn about common design-patterns for designing more complex coding projects in a logical manner, as well as techniques such as object composition to allow for more flexibility in object-oriented code design. Students will also be introduced to concurrency tools like multi-threading to make non-linear and parallel code execution possible to divide large processing loads effectively.

This course implements active learning through live tutorials and project-based exercises during class sessions.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Fluent Python: Clear, Concise, and Effective Programming, 2nd Edition
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students should understand the basics of programming in Python, including the use of development tools like VS Code, and it's Python related packages. This course is designed as a follow-up to first semester course Object-oriented Programming I

No.	Program Objectives	Target Abilities for Students (9pt)
①	g, h, i	Students should be able to understand and describe the benefits of using an object-oriented programming style.
②	a, b, g	Students should be able to apply the concept of object-oriented programming to real-world problem solving.
③	g, h, i	Students should be able to understand, explain, and implement design patterns in their coding project design.
④	g, h, i	Students should be able to understand, explain, and implement coding techniques such as object composition and concurrency.
⑤	d, f, h	Students should be able to read, understand, and explain the function of code written by themselves and others.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	20	30	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	0	0	0	20
	Ability to think, reason and create	0	0	20	10	20	0	0	50
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	10	0	0	0	10
	Attitude and motivation for learning	0	0	10	0	10	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Students will submit in-class coding exercises for evaluation on a weekly basis.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		Students will have a final presentation of their created coding project at the end of the semester.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥		
Works	①	✓	Students will have a capstone coding project to be submitted at the end of the semester.
	②		
	③	✓	
	④	✓	
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students should be able to create well documented, efficient object-oriented code in Python to solve a variety of given problem statements. Students should use tools like design patterns and concurrency to make their code well-organized and efficient.	Students should be able to create functional Python code to solve a variety of given problem statements, that implements some object-oriented techniques. Students may partially implement some tools like design patterns and concurrency in their projects.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance VS Code & Python Installation Check Review of Class structure and inheritance	Lecture Exercise	Review Textbook Finish In-class Exercise	30
2 /	Review of collections and implicit typing Introduction to dynamic typing and “duck typing” in Python	Lecture Exercise	Review Textbook Finish In-class Exercise	30
3 /	Object representation	Lecture Exercise	Review Textbook Finish In-class Exercise	30
4 /	Interfaces, Protocols, and ABCs	Lecture Exercise	Review Textbook Finish In-class Exercise	30
5 /	Review of class inheritance Inheritance vs Object composition	Lecture Exercise	Review Textbook Finish In-class Exercise	30
6 /	Design patterns introduction	Lecture Exercise	Review Textbook Finish In-class Exercise	30
7 /	Design pattern examples and exercises	Lecture Exercise	Review Textbook Finish In-class Exercise	30
8 /	Design pattern examples and exercises (cont.)	Lecture Exercise	Review Textbook Finish In-class Exercise	30
9 /	Concurrency, Parallelism, & Multi-threading	Lecture Exercise	Review Textbook Finish In-class Exercise	30
10 /	Concurrency, Parallelism, & Multi-threading (cont.)	Lecture Exercise	Review Textbook Finish In-class Exercise	30

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Project assignment & introduction	Lecture Project Work	Work on project	30
12 /	Project workday #1	Project Work	Work on project	30
13 /	Project workday #2	Project Work	Work on project	30
14 /	Project workday #3	Project Work	Work on project	30
15 /	Project Submission & Presentation	Presentation	Finish project	30

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Data Structures and Algorithms	2	722700	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	FUJISHIMA, Satoshi	Kanazawa C 31.116		Thu. 16:30 - 17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Data Structures	Data structures and algorithms are fundamental concepts of computer science. Knowledge of data representation, data structures, and algorithms is essential in the development, use, and maintenance of adaptable, reusable, and efficient software. In this course, students will learn about basic data structures and algorithms that provide a foundation for writing efficient computer programs.
2	Algorithms	
3	Divide and Conquer	
4	Dynamic Programming	
5	Hash Function	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.

This course will offer experiential learning in class as a type of active learning.
Data structures and algorithms have become essential in computer science to develop efficient programs. These programs are used to create web applications, supercomputing, and AI programs, etc.
This course will introduce students to theoretical backgrounds using mathematics. Students will be able to apply their programming knowledge through creating original applications.

Advice on taking this course:
- Have laptop ready before class starts.
- Be sure to prepare sufficiently for class and the incoming topics in advance.
- Submit assignments on time.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students must have the ability to express their ideas logically.

No.	Program Objectives	Target Abilities for Students (9pt)
①	g, h, i	Students will be able to recognize the importance of data structures.
②	g, h, i	Students will be able to recognize the importance of algorithms.
③	g, h, i	Students will be able to understand basics of sorting algorithms.
④	g, h, i	Students will be able to understand basics of lists, queues and stacks
⑤	g, h, i	Students will be able to understand the divide and conquer vs dynamic programming.
⑥	g, h, i	Students will be able to understand the hash functions.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	15	45	0	40	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	0	15	0	0	30
	Ability to think, reason and create	0	5	15	0	15	0	0	35
	Collaboration and leadership	0	0	5	0	5	0	0	10
	Announcement / Expression / Communication	0	5	10	0	0	0	0	15
	Attitude and motivation for learning	0	0	5	0	5	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There will be three quizzes to check the understanding of the content.
	②	✓	
	③	✓	
	④		
	⑤	✓	
	⑥		
Reports	①	✓	Reports are worksheet exercises and written assignments for final project. The reports should be submitted by the due date designated by the instructors. All “Reports” assigned during class also serve as out-of-class learning assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Works are programming exercise assignments assigned during class. The Python source code should be submitted by the due date designated by the instructors. All “Works” assigned during class also serve as out-of-class learning assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can recognize the importance of data structures and algorithms in computer science. Students further understand that using them is crucial to develop efficient software.	Students can recognize the importance of data structures and algorithms to some extent. Students generally understand their definitions.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Prime numbers Maze Coloring Problem	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
2 /	Big O Sorting: Selection sort	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
3 /	Sorting: Merge sort (1)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
4 /	Sorting: Merge sort (2)	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
5 /	Sorting: Quick sort (1)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
6 /	Sorting: Quick sort (1)	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
7 /	Stack & Queue Quiz (1)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
8 /	Knapsack Problem Dynamic programming	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
9 /	Divide and Conquer & Dynamic Programming	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
10 /	Huffman Coding Quiz (2)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Huffman Coding (2) Implementation: Coding Quiz (2)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
12 /	Huffman Coding (3) Implementation: Decoding	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
13 /	Hash (1)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
14 /	Hash (2) Quiz(3)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
15 /	Hash (3)	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Computer Networks	2	722800	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	FUJISHIMA, Satoshi	Kanazawa C 31.116		Thu. 16:30 - 17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Computer networks	This course introduces the knowledge and theory of TCP/IP protocols supporting the current Internet, and imparts various related communication technologies to students taking this course. Through this, students will gain an understanding of computer networks such as LAN and WAN to acquire basic skills related to network operations.
2	Protocols	
3	OSI reference model	
4	TCP/IP	
5	Internet	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.

Students will systematically learn the basic knowledge and theories related to computer networks as shown below.

1. Basic mechanisms of computer networks
2. OSI reference model and TCP/IP
3. Physical layer and datalink layer
4. Network layer and transport layer
5. Routing protocol and application layer

As part of the active learning approach, students will explain their answers to each assignment in class to deepen their understanding.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic knowledge of computers

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to explain the basic mechanisms of computer networks.
②	h,i	Students will be able to explain the functions of each layer in the OSI reference model.
③	h,i	Students will be able to explain the functions of each layer in TCP/IP protocols.
④	h,i	Students will be able to explain the basic mechanisms of the Internet.
⑤	h,i	Students will be able to perform network diagnostics using basic network commands.
⑥	h,i	Students will be able to perform network diagnostics using basic network analyzation tools.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	10	40	0	50	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	0	20	0	0	35
	Ability to think, reason and create	0	0	15	0	20	0	0	35
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	5	0	0	15
	Attitude and motivation for learning	0	5	5	0	5	0	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There will be several quizzes to check the understanding of basic knowledge and theories related to computer networks.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Reports are worksheet assignments assigned during class. The reports should be submitted by the due date designated by the instructors. All “Reports” assigned during class also serve as out-of-class learning assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Works are Packet Tracer exercise assignments assigned during class. The Works should be submitted by the due date designated by the instructors. All “Works” assigned during class also serve as out-of-class learning assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to explain the following items systematically related to computer networks: 1. Basic information and communication systems 2. OSI reference model and TCP/IP model 3. Physical layer and datalink layer 4. Network layer and transport layer 5. Routing protocol and application layer Students are able to use appropriate network commands and tools for network maintenance and management.	Students are able to explain the basic contents of the following items related to computer networks: 1. Basic information and communication systems 2. OSI reference model and TCP/IP model 3. Physical layer and datalink layer 4. Network layer and transport layer 5. Routing protocol and application layer Students are able to use appropriate network commands and tools for basic network diagnostics

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Fundamentals of Networking	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
2 /	Basic Switch & End Device Configuration	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
3 /	Basic Switch & End Device Configuration (2)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
4 /	Protocols & Models	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
5 /	Wired & Wireless LAN	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
6 /	Data Link Layer & Ethernet Switching	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
7 /	Network Layer	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
8 /	Address Resolution	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
9 /	Basic Router Configuration	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
10 /	IPv4 Addressing	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	VLSM Addressing Quiz (1)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
12 /	VLSM Addressing (2) Quiz (2)	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
13 /	Transport Layer	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
14 /	Application Layer	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
15 /	Network Security	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective * Practical	Database	2	723000	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	* FUJISAWA, Takeshi	Kanazawa C 31:113		Fri. 15:30 – 17:30

Course Objectives

Keywords		Learning Objectives
1	Relational Database	In today's advanced information society, the amount of data handled by information processing systems is enormous, and the growth of data volume is accelerating. The need for data scientists is increasing every year. This course provides an overview of databases, mainly relational databases, and how to write and operate SQL.
2	SQL	
3	Database normalization	
4	Relational Algebra	
5	Transaction	

Course Description and Expectations for Students

This will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This course will offer Problem-solving and experiential learning in class as a type of active learning.

Learn the basics of data models and database management systems, focusing on relational databases. Students will learn the basics of data models and database management systems, focusing on relational databases. Assignments will be given to improve students' understanding and grasp of the content of the course. In the curriculum, this course aims to develop software development skills using databases. In the curriculum, this course aims to cultivate the ability to develop software using databases, and students should take this course with the mastery of SQL as a programming language in mind.

Relevance of practical experience to class subjects

Faculty members with practical experience in software development at major information companies and IT-related Internet venture companies will practice database design and database programming. In the programming exercises, they use database engines that are actually used in the real world, so that students can acquire practical and practical programming know-how based on their work experience.

Required Materials (textbooks, reference books, reserved books)

Textbooks: The Manga Guide to Databases (No Starch Press) ISBN 978-1-59327-190-9

Reference books: None

Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites)

Students should have the skills to install a relational database management system. In the first class, we will practice how to install the relational database management system and how to build the environment. Be sure to bring your textbook and notebook PC to each class.

No.	Program Objectives	Target Abilities for Students
①	i,h	Understand what the given SELECT statement is querying.
②	i,h	Can design a database and create tables.
③	i,h	Can transform from first normal form to third normal form
④	i,h	Can explain the difference between second normal form and third normal form
⑤	h	Can write programs that manipulate SQL.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		55	0	0	0	30	0	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	0	0	0	15	0	5	40
	Ability to think, reason and create	20	0	0	0	0	0	5	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	15	0	0	0	15	0	5	35

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①	✓	Check whether the students have acquired basic knowledge and skills about each unit they have studied.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		Students will be evaluated about the knowledge and skills about creating a program to operate a database.
	②		
	③		
	④		
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	An assignment will be given to support self-study, and its validity will be assessed as the result of self-study done 30 times in 50 minutes.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
In addition to the standard achievement levels, the student should be able to (5) Can write complex SQL statements, including joins and subqueries (6) Can design a database that is correctly implemented up to the third normalization. (7) Can write programs to manipulate databases.	(1) Can explain what a relational data model is. (2) Can write SQL for a given relational algebra. (3) Represent the real world using the entity-relationship model, and translate the representation into a relational database schema. (4) Explain in detail the normalization procedure

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	What is a database? Able to explain why a database is necessary.	Lecture	Read textbook and Assignment	200
2 /	What is a relational database? Able to explain what relational database is.	Lecture	Read textbook and Assignment	200
3 /	Relational Algebra Able to perform relational algebra operations.	Lecture	Read textbook and Assignment	200
4 /	Let's design a database Able to draw E-R model diagrams. Able to normalize non-normal form data to first normal form.	Lecture	Read textbook and Assignment	200
5 /	2nd Normal Form Able to normalize 1st normal form to 2nd one	Lecture	Read textbook and Assignment	200
6 /	3rd Normal Form Able to normalize 2nd normal form to 3rd one	Lecture Quiz	Read textbook and Assignment	200
7 /	SQL① Basic Of SQL	Lecture	Read textbook and Assignment	200
8 /	SQL② Able to make basic select SQL statement Able to create tables Able to insert , update or delete data rows	Lecture	Read textbook and Assignment	200
9 /	SQL③ Able to group data and extract data by using complex extraction conditions of SQL.	Lecture	Read textbook and Assignment	200
10 /	SQL④ Able to make complex SQL statement and join tables, Able to make SQL with subquery	Lecture Quiz	Read textbook and Assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Let’s operate a database / Transaction. Able to explain ACID Able to perform SQL operations using transactions	Lecture	Read textbook and Assignment	200
12 /	Let’s operate a database / Transaction. why deadlock happens. When Disaster Strikes Indexes	Lecture Quiz	Read textbook and Assignment	200
13 /	DB programming ① Basic of a DB programming	Lecture	Read textbook and Assignment	200
14 /	DB programming ② Create a program to perform CRUD operations	Self-Study	Assignment of DB programming	200
15 /	DB programming ③ Create a program to perform CRUD operations	Self-Study	Assignment of DB programming	200
16 /	Final exam			
17 /	Review of final exam and assignment results Self-check Submit assignments			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Robot Programming I	1	723400	First	Exercise Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	HAN, Justin	Kanazawa C 31.119		Make an appointment in class

Course Objectives

Keywords		Learning Objectives
1	Robots	Robots are machines that interact with the world through the use of various sensors. In this course, students will first learn about the operations of various basic sensors and how to process the information received through those sensors. They will then use the process information to program a microcontroller-equipped mobile robot to react to the environment.
2	Arduino	
3	Sensors	
4	Programming	
5		

Course Description and Expectations for Students

This course will offer problem-based learning and discovery learning in class as types of active learning.

The progression of the class is as follows:

1. Experiments with sensor kits
2. Experiments with Robot kits
3. Comprehensive Project

Students are expected to bring their laptops to every class.

Required Materials (textbooks, reference books, reserved books)

Textbooks:

Reference books:

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

An understanding of:

- basic programming methodology
- basic electronics

No.	Program Objectives	Target Abilities for Students
①	g, h, i	Be able to read and understand simple circuit diagrams
②	g, h, i	Be able to connect sensors to a microcontroller and read input signals
③	g, h, i	Be able to process input signals and generate output behaviors
④	g, h, i	Be able to connect and program an Arduino microcontroller robot
⑤	g, h, i	Be able to program an Arduino controlled robot to create emergent and specific behavior
⑥	g, h, i	Be able to read and debug errors in Arduino programs

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	60	0	40	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	30	0	10	0	0	40
	Ability to think, reason and create	0	0	10	0	20	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	5	0	0	15
	Attitude and motivation for learning	0	0	10	0	5	0	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	There will be a mini-project associated with the introduction of each new topic. Each mini-project will require a written report summarizing the results of each project.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	There will be a final comprehensive assignment at the end of the class that will test the students' knowledge and use of sensors. Time will be given during class. However, if this assignment is not completed within the allotted time, students are expected to complete it outside of class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
- Able to understand and explain simple circuit diagrams. - Able to connect various sensors to obtain sensor input data. - Able to process input signals to directly control output behaviors. - Able to set up and program an Arduino controlled robot - Able to use sensor data to create desired output behaviors - Able to create a program to navigate a robot in an environment.	- Able to read and use simple circuit diagrams. - Able to connect various sensors according to a circuit diagram to read sensor signals. - Able to use input signals to decide output signals. - Able to use and program an Arduino controlled robot - Able to use sensor data to create output behaviors - Able to create a program to allow a robot to react to the environment.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Guidance and Review Students learn about sensors and review their understanding of programming.	Lecture	Complete the provided assignment.	50
2 /	Project #1 Students learn about a specific sensor and complete a mini-project based on the sensor.	Exercise	Complete the provided assignment.	50
3 /	Project #1 Students learn about a specific sensor and complete a mini-project based on the sensor.	Exercise	Complete the provided assignment.	50
4 /	Project #2 Students learn about a specific sensor and complete a mini-project based on the sensor.	Exercise	Complete the provided assignment.	50
5 /	Project #2 Students learn about a specific sensor and complete a mini-project based on the sensor.	Exercise	Complete the provided assignment.	50
6 /	Project #3 Students learn about a specific sensor and complete a mini-project based on the sensor.	Exercise	Complete the provided assignment.	50
7 /	Project #3 Students learn about a specific sensor and complete a mini-project based on the sensor.	Exercise	Complete the provided assignment.	50
8 /	Project #4 Students learn about a specific sensor and complete a mini-project based on the sensor.	Exercise	Complete the provided assignment.	50
9 /	Project #4 Students learn about a specific sensor and complete a mini-project based on the sensor.	Exercise	Complete the provided assignment.	50
10 /	Project #5 Students learn about a pre-built robot and complete a mini-project based on the robot and its attached sensors.	Exercise	Complete the provided assignment.	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Project #5 Students learn about a pre-built robot and complete a mini-project based on the robot and its attached sensors.	Exercise	Complete the provided assignment.	50
12 /	Comprehensive Assignment Students learn how to apply their knowledge of sensors and programming to complete a designated task.	Exercise	Complete the provided assignment.	50
13 /	Comprehensive Assignment Students learn how to apply their knowledge of sensors and programming to complete a designated task.	Exercise	Complete the provided assignment.	50
14 /	Comprehensive Assignment Students learn how to apply their knowledge of sensors and programming to complete a designated task.	Exercise	Complete the provided assignment.	50
15 /	Comprehensive Assignment Students learn how to apply their knowledge of sensors and programming to complete a designated task.	Exercise	Complete the provided assignment.	50

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Robot Programming II	1	723500	Second	Exercise Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	HAN, Justin	Kanazawa C 31.119		Make an appointment in class

Course Objectives

Keywords		Learning Objectives
1	Robotics simulation	Robots are machines that interact with the world through the use of various devices. In this course, students will be introduced to the advanced ways robots interact with the world from advanced sensors to actuators. They will then use this knowledge to program a robot to interact and impose effects on the objects in their environment.
2	Python	
3	PID Controller	
4	Sensors	
5	Actuators	

Course Description and Expectations for Students

This course will offer problem-based learning and discovery learning in class as types of active learning.

The progression of the class is as follows:

1. Simulator setup
2. Basic programming tutorials to learn simulator interactions
3. Comprehensive Project

Students are expected to bring their laptops to every class.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books:

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

An understanding of:

- basic programming methodology
- basic calculus

No.	Program Objectives	Target Abilities for Students
①	g, h, i	Be able to program and move a simulated robot
②	g, h, i	Be able to process and analyze signals from simulated sensors
③	g, h, i	Be able to use simulated actuators to create designated behaviors
④	g, h, i	Be able to explain PID control
⑤	g, h, i	Be able to use python to implement PID control
⑥	g, h, i	Be able to use python to use various simulated sensors and actuators to perform designated tasks

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	60	0	40	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	30	0	10	0	0	40
	Ability to think, reason and create	0	0	10	0	20	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	5	0	0	15
	Attitude and motivation for learning	0	0	10	0	5	0	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	For every lab, students will be required to document their progress and results in a written report. If not completed during class, the students are expected to complete them outside of class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	There will be a final comprehensive assignment at the end of the class that will test the students' knowledge and use of sensors. Time will be given during class. However, if these problems are not completed within the allotted time, students are expected to complete them outside of class.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
- Able to use python to navigate a robot in a simulated environment. - Able to process and analyze the signals from multiple advanced sensors. - Able to use specific actuators to interact with the simulated environment. - Able to explain the method and implementation of PID control. - Able to use PID control to navigate a complicated simulated environment. - Able to incorporate sensors and actuators to navigate the environment and complete a task.	- Able to use python to move a robot in a simulated environment. - Able to process and analyze the signals from a sensor. - Able to use actuators to perform specific behaviors. - Able to explain and implement PID control. - Able to use PID control to navigate a simple simulated environment. - Able to use sensors and actuators to complete a task.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Guidance and setup Students will be introduced to the class and will set up the robotics simulation environment on their computers.	Lecture	Complete the provided assignment.	50
2 /	Lab #1 Students learn how to operate a robot in a simulated environment.	Exercise	Complete the provided assignment.	50
3 /	Lab #1 Students learn how to operate a robot in a simulated environment.	Exercise	Complete the provided assignment.	50
4 /	Lab #2 Students learn how to use a robot to perform line-tracking in a simulated environment.	Exercise	Complete the provided assignment.	50
5 /	Lab #2 Students learn how to use a robot to perform line-tracking in a simulated environment.	Exercise	Complete the provided assignment.	50
6 /	Lab #3 Students learn how to perform simple localization using sensors.	Exercise	Complete the provided assignment.	50
7 /	Lab #3 Students learn how to perform simple localization using sensors.	Exercise	Complete the provided assignment.	50
8 /	Lab #4 Students learn how to implement PID control.	Exercise	Complete the provided assignment.	50
9 /	Lab #4 Students learn how to implement PID control.	Exercise	Complete the provided assignment.	50
10 /	Lab #5 Students learn how to navigate their robot in a simulated environment.	Exercise	Complete the provided assignment.	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Lab #5 Students learn how to navigate their robot in a simulated environment.	Exercise	Complete the provided assignment.	50
12 /	Comprehensive Assignment Students learn how to apply their knowledge of sensors and actuators to complete a designated task in the simulator.	Exercise	Complete the provided assignment.	50
13 /	Comprehensive Assignment Students learn how to apply their knowledge of sensors and actuators to complete a designated task in the simulator.	Exercise	Complete the provided assignment.	50
14 /	Comprehensive Assignment Students learn how to apply their knowledge of sensors and actuators to complete a designated task in the simulator.	Exercise	Complete the provided assignment.	50
15 /	Comprehensive Assignment Students learn how to apply their knowledge of sensors and actuators to complete a designated task in the simulator.	Exercise	Complete the provided assignment.	50

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Robotics	2	723600	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	HAYASHI Michihiro / HAN Justin	31-126-1		Class day: 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Mechanism	Students will: (1) learn the basics of robot mechanisms and control. (2) learn how to calculate robot motion. (3) learn how to control a 2-linked robotic arm.
2	Mathematical model	
3	Kinematics	
4	Programming	
5	Engineer ethics	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This course will offer problem-solving learning and experimental learning in class as a type of active learning.
This course deals with the fundamentals of robot mechanisms and control. Further, students will consider the role of robots in society and learn about the ethics of engineers who work with robots.

(1) Basics of robot mechanisms and control
(2) Types of industrial robots
(3) Mathematical models of robot for positioning control
(4) Direct kinematics
(5) Inverse kinematics
(6) Engineering ethics

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Physics, mathematics (trigonometric functions, matrix)
Spreadsheet application (MS-Excel)
Microcomputer programming (Arduino)

	Program Objectives	Target Abilities for Students (9pt)
①	g,h	Be able to explain mechanisms and control of industrial robots.
②	g,h	Be able to make mathematical model of 2-linked robotic arm.
③	g,h	Be able to calculate end effector position from joints angles by using direct kinematics.
④	g,h	Be able to calculate joint angles from end effector position by using inverse kinematics.
⑤	d,h	Be able to assemble and check the operation of 2-linked robotic arm.
⑥	b,e,h	Be able to consider engineering ethics about many types of robots in society.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	20	40	0	20	0	20	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	10	20	0	10	0	10	50
	Ability to think, reason and create	0	10	20	0	10	0	10	50
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	∠	Students will be evaluated based on their quizzes about direct and inverse kinematics of 2-linked robotic arms. Quiz #1 is about direct kinematics. Quiz #2 is about inverse kinematics.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥		
Reports	①	∠	Students will be evaluated based on their reports such as mechanical drawings, mathematical models, spread sheets for calculation of robotic arm position, and roles of robots in society. Report #1 is about engineering ethics and robots that are working in society. Report #2 is about industrial robots. Report #3 is about mathematical models of robot manipulators. Report #4 is about motion control of robotic arms.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	∠	Students will be evaluated based on their works such as trajectory and joint angle changes of 2-linked robotic arm.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	∠	Students will be evaluated based on their drawings and pictures and figures in their report as out-of-class learning activities.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Able to fully understand the mechanisms of robots. (2) Able to explain the functions of many types of industrial robots. (3) Able to build mathematical models of various types of robots. (4) Able to create robot motion by using direct and inverse kinematics. (5) Able to understand engineering ethics about robots that are working in society.	(1) Able to understand the mechanisms of robots. (2) Able to explain the functions of some types of industrial robots. (3) Able to build mathematical models of the 2-linked robotic arm. (4) Able to calculate end effector position from joint angles by using direct kinematics. (5) Able to understand engineering ethics about robots that are working in society.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Relationship between robots and society Engineer ethics Basics of mechatronics and robotics	Lecture and Q&A Self-check	Understand the course objectives Confirm the course schedule	200
2 /	The role of robots in society	Lecture and Q&A Self-check	Desktop research	200
3 /	Engineering ethics The risks and benefits of robots	Lecture and Q&A Self-check	Desktop Research Report #1	200
4 /	Basic configuration of robots Classification of robots	Lecture and Q&A Self-check	Desktop research	200
5 /	Types and characteristics of industrial robots	Lecture and Q&A Self-check	Desktop research Report #2	200
6 /	Mathematical model of robots (1) Coordinate system Matrix	Lecture and Q&A Self-check	Confirm types of coordinate system	200
7 /	Mathematical model of robots (2) 2-linked robotic arm	Lecture and Q&A Self-check	Draw the coordinate system of 2-linked robotic arm Report #3	200
8 /	Direct kinematics of 2-linked robotic arm (1)	Lecture and Q&A Self-check	Confirm coordinate system of a 2-linked robotic arm	200
9 /	Direct kinematics of 2-linked robotic arm (2)	Lecture and Q&A Self-check	Calculate the position of end effector of 2-linked robotic arm	200
10 /	Inverse kinematics of 2-linked robotic arm (1)	Lecture and Q&A Self-check Quiz #1	Confirm the method to calculate joint angles from end effector position	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Inverse kinematics of 2-linked robotic arm	Lecture and Q&A Self-check	Calculate joint angles of 2-linked robotic arm	200
12 /	Assembling 2-lnked robotic arm (1)	Lecture and Q&A Self-check Quiz #2	Confirm assembly diagram	200
13 /	Assembling 2-linked robotic arm (2)	Lecture and practice Self-check	Complete assembly 2-linked robotic arm	200
14 /	Programming for positioning control	Lecture and practice Self-check	Confirm robot motions	200
15 /	Positioning control experiment PTP control CP control	Lecture and practice Self-check	Complete report Report #4	200

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Robot Mechanics I	2	723700	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	EVANS, Davis	31.118-1		Weekdays 16:50-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Particle Dynamics	Continue improving your understanding of Newton's equation of motion as the basis for dynamics, such as the movement of a particle caused by external force or torque. Prepare for subsequent specialized mechanics courses. Acquire the knowledge necessary for the design and analysis of complex machines such as robots.
2	Kinematics	
3	Kinetics	
4	Momentum	
5	Impulse	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes. Out-of-class engineering assignments will be assigned weekly and evaluated in the “Reports” section of the evaluation criteria.

This course will offer experimental learning in class as a type of active learning.

This is a continuation of Engineering Mechanics. For studying mechanics, it is important to solve a variety of mechanical problems independently in addition to understanding the meaning of terms and mathematical formulas. In this course, the following basic mechanics topics are covered: Kinematics of a Particle - Force and Acceleration - Work and Energy - Impulse and Momentum

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: Engineering Mechanics: Dynamics in SI Units (PEARSON)
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Be familiar with the mathematics and physics used in basic engineering to solve a number of exercise problems. Acquire the content of this class, which is essential for understanding specialized subjects in the following year.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Be able to explain Rectangular, Normal and Tangential Coordinates.
②	h, i	Be able to explain Systems of Particles
③	h, i	Be able to explain Power and Efficiency, for particles or a system of particles.
④	h, i	Be able to explain Conservative Forces, Potential Energy and Conservation of Energy, for particles or a system of particles.
⑤	h, i	Be able to explain Linear Impulse and Momentum, for particles or a system of particles.
⑥	h, i	Be able to explain Angular Impulse and Momentum, for particles or a system of particles.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	20	30	0	20	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	10	10	0	0	0	0	35
	Ability to think, reason and create	15	10	10	0	10	0	0	45
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	10	0	0	20
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	A final comprehensive exam will be held at the end of the semester to check students' overall comprehension of the course material
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	Quizzes will be held periodically in class to check student comprehension of specific subjects and learning material
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students will be given weekly out-of-class homework assignments. These assignments are expected to fulfill the out-of-class learning requirements of this course.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Certain class sessions will be reserved for practical in-class lab exercises. The results from these labs (experiment reports, design files, and other products) will be evaluated under this category.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Able to fully explain the following subjects as they relate to particles or systems of particles: - Rectangular, Normal and Tangential Coordinates. - Systems of Particles. - Power and Efficiency. - Conservative Forces, Potential Energy and Conservation of Energy. - Linear Impulse and Momentum. - Angular Impulse and Momentum	Understanding and the ability to solve simple problems regarding the following subjects as they relate to particles or systems of particles: - Rectangular, Normal and Tangential Coordinates. - Systems of Particles. - Power and Efficiency. - Conservative Forces, Potential Energy and Conservation of Energy. - Linear Impulse and Momentum. - Angular Impulse and Momentum

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Kinematics of a Particle: Basics Week 1	Lecture Out-of-class exercises	Do assigned exercises	200
2 /	Kinematics of a Particle: Basics Week 2	Lecture Out-of-class exercises	Do assigned exercises	200
3 /	Kinematics of a Particle: Basics Quiz	Quiz Out-of-class exercises	Prepare for quiz Do assigned exercises	200
4 /	Kinematics of a Particle: Force & Acceleration Week 1	Lecture Out-of-class exercises	Do assigned exercises	200
5 /	Kinematics of a Particle: Force & Acceleration Week 2	Lecture Out-of-class exercises	Do assigned exercises	200
6 /	Kinematics of a Particle: Force & Acceleration Week 3	Lecture Out-of-class exercises	Do assigned exercises	200
7 /	Kinematics of a Particle: Force & Acceleration Lab	In-class lab Out-of-class exercises	Do assigned exercises	200
8 /	Kinematics of a Particle: Work & Energy Week 1	Lecture Out-of-class exercises	Do assigned exercises	200
9 /	Kinematics of a Particle: Work & Energy Week 2	Lecture Out-of-class exercises	Do assigned exercises	200
10 /	Kinematics of a Particle: Work & Energy Quiz	Quiz Out-of-class exercises	Prepare for quiz Do assigned exercises	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Kinematics of a Particle: Impulse and Momentum Week 1	Lecture Out-of-class exercises	Do assigned exercises	200
12 /	Kinematics of a Particle: Impulse and Momentum Week 2	Lecture Out-of-class exercises	Do assigned exercises	200
13 /	Kinematics of a Particle: Impulse and Momentum Week 3	Lecture Out-of-class exercises	Do assigned exercises	200
14 /	Kinematics of a Particle: Impulse and Momentum Lab	Lecture Out-of-class exercise	Do assigned exercises	200
15 /	Pre-Exam Review	Review	Prepare for exam	200
16 /	Final Exam	Exam	Prepare for exam	
17 /	Test Return			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Robot Mechanics II	2	723800	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	EVANS, Davis	31.118-1		Weekdays 16:50-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Rigid Body Dynamics	Continue improving your understanding of Newton's equation of motion as the basis for dynamics, such as the movement of a particle caused by external force or torque. Prepare for subsequent specialized mechanics courses. Acquire the knowledge necessary for the design and analysis of complex machines such as robots.
2	Kinematics	
3	Kinetics	
4	Momentum	
5	Impulse	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes. Out-of-class engineering assignments will be assigned weekly and evaluated in the “Reports” section of the evaluation criteria.

This course will offer experimental learning in class as a type of active learning.

This is a continuation of Engineering Mechanics & Robot Mechanics 1. For studying mechanics, it is important to solve a variety of mechanical problems independently in addition to understanding the meaning of terms and mathematical formulas. In this course, continuing from the particle mechanics introduced in Robot Mechanics 1, the following basic mechanics topics are covered as applied to rigid bodies: Force and Acceleration - Work and Energy - Impulse and Momentum

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Engineering Mechanics: Dynamics in SI Units (PEARSON)
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Be familiar with the mathematics and physics used in basic engineering to solve a number of exercise problems. Acquire the content of this class, which is essential for understanding specialized subjects in the following year.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Be able to explain Rectangular, Normal and Tangential Coordinates.
②	h, i	Be able to explain the concept of a Planar Rigid Body
③	h, i	Be able to explain Power and Efficiency, for planar rigid bodies.
④	h, i	Be able to explain Conservative Forces, Potential Energy and Conservation of Energy, for planar rigid bodies.
⑤	h, i	Be able to explain Linear Impulse and Momentum, for planar rigid bodies.
⑥	h, i	Be able to explain Angular Impulse and Momentum, for planar rigid bodies.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	20	30	0	20	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	15	10	10	0	0	0	0	35
	Ability to think, reason and create	15	10	10	0	10	0	0	45
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	10	0	0	20
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	A final comprehensive exam will be held at the end of the semester to check students' overall comprehension of the course material
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	Quizzes will be held periodically in class to check student comprehension of specific subjects and learning material
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students will be given weekly out-of-class homework assignments. These assignments are expected to fulfill the out-of-class learning requirements of this course.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Certain class sessions will be reserved for practical in-class lab exercises. The results from these labs (experiment reports, design files, and other products) will be evaluated under this category.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Able to fully explain the following subjects as they relate to rigid bodies: - Rectangular, Normal and Tangential Coordinates. - Power and Efficiency. - Conservative Forces, Potential Energy and Conservation of Energy. - Linear Impulse and Momentum. - Angular Impulse and Momentum	Understanding and the ability to solve simple problems regarding the following subjects as they relate to rigid bodies: - Rectangular, Normal and Tangential Coordinates. - Power and Efficiency. - Conservative Forces, Potential Energy and Conservation of Energy. - Linear Impulse and Momentum. - Angular Impulse and Momentum

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Planar Kinematics of a Rigid Body: Basics Week 1	Lecture Out-of-class exercises	Do assigned exercises	200
2 /	Planar Kinematics of a Rigid Body: Basics Week 2	Lecture Out-of-class exercises	Do assigned exercises	200
3 /	Planar Kinematics of a Rigid Body: Basics Quiz	Quiz Out-of-class exercises	Prepare for quiz Do assigned exercises	200
4 /	Planar Kinetics of a Rigid Body: Force & Acceleration Week 1	Lecture Out-of-class exercises	Do assigned exercises	200
5 /	Planar Kinetics of a Rigid Body: Force & Acceleration Week 2	Lecture Out-of-class exercises	Do assigned exercises	200
6 /	Planar Kinetics of a Rigid Body: Force & Acceleration Week 3	Lecture Out-of-class exercises	Do assigned exercises	200
7 /	Planar Kinetics of a Rigid Body: Force & Acceleration Lab	In-class lab Out-of-class exercises	Do assigned exercises	200
8 /	Planar Kinetics of a Rigid Body: Work & Energy Week 1	Lecture Out-of-class exercises	Do assigned exercises	200
9 /	Planar Kinetics of a Rigid Body: Work & Energy Week 2	Lecture Out-of-class exercises	Do assigned exercises	200
10 /	Planar Kinetics of a Rigid Body: Work & Energy Quiz	Quiz Out-of-class exercises	Prepare for quiz Do assigned exercises	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Planar Kinetics of a Rigid Body: Impulse and Momentum Week 1	Lecture Out-of-class exercises	Do assigned exercises	200
12 /	Planar Kinetics of a Rigid Body: Impulse and Momentum Week 2	Lecture Out-of-class exercises	Do assigned exercises	200
13 /	Planar Kinetics of a Rigid Body: Impulse and Momentum Week 3	Lecture Out-of-class exercises	Do assigned exercises	200
14 /	Planar Kinetics of a Rigid Body: Impulse and Momentum Lab	Lecture Out-of-class exercise	Do assigned exercises	200
15 /	Pre-Exam Review	Review	Prepare for exam	200
16 /	Final Exam	Exam	Prepare for exam	
17 /	Test Return			

2026 Syllabus

Instructor with"*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Fundamentals of Control Engineering	2	724000	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	KUSHIMA, Yoshihiro	31.117		16:50-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Complex numbers	Students will: (1) Review complex numbers for frequency response (2) Learn Laplace transforms for solving linear differential equations (3) Learn inverse Laplace transforms for solving linear differential equations (4) Learn transfer function for frequency analysis (5) Learn block diagrams
2	Laplace transforms	
3	Inverse Laplace transforms	
4	Transfer functions	
5	Block diagrams	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This course will offer experimental learning in class as a type of active learning.

This is a basic course in control engineering. We will cover the following topics:
1. Complex numbers
2. Laplace transforms
3. Inverse Laplace transforms
4. Transfer functions
5. Block diagrams

Students are expected to understand the meaning of the analysis method for control systems and expected to determine the stability of a control system.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Sufficient mathematical calculation skills.
Basic knowledge of differential and integral calculus.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Be able to Calculate complex numbers.
②	h, i	Be able to use basic Laplace transforms.
③	h, i	Be able to solve linear differential equations with inverse Laplace transforms.
④	h, i	Be able to use transfer functions.
⑤	h, i	Be able to understand block diagrams.
⑥		

Evaluation Criteria

	Criteria and Ratio \ Evaluation Method	Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
	Total Evaluation Ratio	40	20	0	0	0	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	0	0	0	0	20	50
	Ability to think, reason and create	10	5	0	0	0	0	10	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	10	5	0	0	0	0	10	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	A written exam is given at the end of the term and the results will account for 40% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①	✓	Several 50-minute quizzes are given to improve comprehension and the results will account for 20% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	To support self-directed learning, assignments will be given as out-of-class work and the results will account for 40% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Can show physical phenomena as differential equations and represent them as dynamic systems for analyzing physical phenomena. Discriminate what is necessary in characterizing physical phenomena and analyze dynamic systems appropriately.	Be able to represent physical phenomena presented as differential equations as dynamic systems for analysis. Understand the matters that characterize physical phenomena and be able to analyze dynamic systems appropriately.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Overview of System Control Complex numbers Trigonometric Functions	Guidance Lecture and Q&A	Understand the objectives of the course Preview and Review	200
2 /	Laplace Transforms (1)	Lecture and Q&A	Preview and Review lecture content and assignments	200
3 /	Laplace Transforms (2)	Lecture and Q&A	Preview and Review lecture content and assignments	200
4 /	Inverse Laplace Transforms	Lecture and Q&A	Preview and Review lecture content and assignments	200
5 /	Solving differential equations by Laplace transform	Lecture and Q&A	Preview and Review lecture content and assignments	200
6 /	Review for Quiz 1	Review	Prepare for quiz Preview and Review	200
7 /	Quiz 1	Quiz	Preview and Review	200
8 /	Quiz 1 Return Transfer Function (1)	Lecture and Q&A	Preview and Review lecture content and assignments	200
9 /	Transfer Function (2)	Lecture and Q&A	Preview and Review lecture content and assignments	200
10 /	Transfer Function (3)	Lecture and Q&A	Preview and Review lecture content and assignments	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Block Diagram (1)	Lecture and Q&A	Preview and Review lecture content and assignments	200
12 /	Block Diagram (2)	Lecture and Q&A	Preview and Review lecture content and assignments	200
13 /	Review for Quiz 2	Review	Prepare for quiz Preview and Review	200
14 /	Quiz 2	Quiz	Review	200
15 /	Quiz 2 Return Review for Final Exam	Review	Prepare for the final exam	200
16 /	Final Exam	Exam	Review all materials	
17 /	Returning Final Exam Results	Review Self-evaluation		

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 専門科目 選択	グローバル開発論	2	726000	後学期	講義／学修

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4年	土橋　喜人	15.306		授業時に予約

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	グローバル開発	本科目では、従来の国際協力の在り方を学ぶとともにグローバル開発の意義を考える。国際協力の在り方も多様化しており、日常生活においても、国内外での協力に携わることが多くなっている。必ずしも開発援助機関、国際機関やNGOでなくても、関わることができるような社会となっている。そのことから、本科目では、様々な関わり方が可能となっていること、それらのことについて理解を深めること、そして自ら考えて行動し、グローバル開発や国際協力に貢献できるようになることを目指す。
2	国際協力	
3	グローバルサウス	
4	貧困	
5	共助	

授業の概要および学習上の助言

（本講義は学修単位であるため、１単位を50分45回分の学習とし、50分授業15回に対して50分30回分の自学自習を行うこと。この授業ではアクティブラーニングの一環としてグループワークを行う。）

（授業の概要）　本科目では、多様化する世界情勢について目を向ける契機となるべく、国内外での協力活動について学ぶ。主には開発援助機関、国際機関、NGOが行ってきたグローバル開発についての基礎を学び、その背景を理解できるようになる講義を目指す。　学生は現代社会における、グローバル開発、共助、協力などといったものの考え方や、実際の取り組みを学び、KITのK（思いやりの心）、I（誠実）、T（共同と共想の精神）といったことの実現に向けた実際の取り組みを学び、将来的に行動できるような心構えを身に着ける。

（学習上の助言）

1）日常から世界に目を向けていくこと、国内外の社会課題に目を向けていくこと、そのようなことに関心を持ち続ける姿勢が望まれる。

2）これらの国際問題、社会課題は、KITにおける技術者として社会に出ていく際に役に立つものであり、その社会課題の解決を行うことがKIT卒業生には望まれる。

3)尚、受講人数や学習環境によっては、授業内容を適宜変更することもある。

4)グローバル開発の実務経験者／実務者による特別講義を予定（外部講師と日程調整後、一部講義内容順を変更予定）　尚、講師は、国際協力銀行および国際協力機構というODA実施機関での正規総合職員としての勤務経験があり、かつ、青年海外協力隊（現・JICA海外協力隊）も経験し、NGO/NPO法人の役員も務めており、本授業でもその経験の社会還元を図る。

【教科書および参考書・リザーブドブック】

教科書：

参考書：：開発協力白書[外務省]、世界開発報告書[世界銀行]、国際協力機構年次報告書[国際協力機構]、貧しい人を助ける理由 ： 遠くのあの子とあなたのつながり[日本評論社]

ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

履修に必要な予備知識や技能は特になし。日常より国際問題に関心を持っていることが望ましい。参考程度に一部は英語の教材を使うこともあるが、雰囲気を感じることができれば問題はない。

No.	教育目標(DP)（記号表記）	学生が達成すべき行動目標
①	b, c, d	グローバル開発がどうして必要なのかを理解し、説明できる
②	b, c, d	ODAの役割と必要性について理解し、説明できる
③	b, c, d	政府レベル（ODA）、市民社会（NGO）レベル、民間企業レベルのグローバル開発の在り方を理解し、説明できる
④	d, e, f	国際社会の変化とグローバル開発の変化の関係について説明できる
⑤	d, e, g	自分が現在や近い将来に実施可能なグローバル開発の取り組みについて計画することができる
⑥	g, h, i	グローバル開発やODAに関しての批判的な視点を持つことができる

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作　品	ポートフォリオ	その他	合　計
総合評価割合		0	0	40	30	0	26	4	100
総合力指標	知識を取り込む力	0	0	10	6	0	13	0	29
	思考・推論・創造する力	0	0	10	6	0	13	0	29
	コラボレーションとリーダーシップ	0	0	0	6	0	0	0	6
	発表・表現・伝達する力	0	0	10	6	0	0	0	16
	学習に取組む姿勢・意欲	0	0	10	6	0	0	4	20

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評価方法	行動目標		評価の実施方法と注意点
試験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①	レ	レポート（その１）：JICA海外協力隊への応募書類作成。過去に公募があったJICA海外協力隊の公募案件への応募書類を記載して応募するつもりで回答する。（30点） レポート（その２）：外部講師の特別講義に関するレポート。（10点） （注）いずれも授業内外で実施する。
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
成果発表 （口頭・実技）	①	レ	グループワーク（その１）：青年海外協力隊の印象：青年海外協力隊の授業およびビデオを見ての感想をグループごとに発表する。（10点） グループワーク（その２）：SDGsの順番を並べ替え：SDGsの順番の並べ替えを、その理由も考えて、グループごとに発表する。（10点） グループワーク（その３）：貧しい人を助ける理由の講義をうけてのグループワークを通じて感じたことを発表する。（10点） （注）いずれも授業内外で実施する。
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
作品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①	レ	リアクションペーパー：毎授業ごとに授業に関するまとめや所感について、100字以上にまとめる。15回中13回。1回分はレポート（その２）と内容が被るため、提出不要。1回分は最終回にあたるため提出不要。 （注）いずれも授業外で実施する。
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
その他	①	レ	取り組み姿勢（4点）：外部講師の講義の理解度（１点）、３回のグループワークへの参加度合い（３点）、について、レポート（その２）および３回分のグループワーク・個人ワークの成果（発言や提出物等）から評価する。
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
学際的・多角的な視点から「途上国」　「グローバルサウス」「貧困」とは何かを分析、議論できる手段と方法を理解する。その過程で貧困に立ち向かうグローバル開発の思想的背景を理解する。その上で自らが関与しうるグローバル開発のあるべき姿・これからの自分のキャリアとの関わりを具体的に語ることができる能力を身につける。	一般常識としての視点から「途上国」　「グローバルサウス」「貧困」とは何かを学ぶ。その過程で貧困に立ち向かうグローバル開発の思想的背景を学ぶ。その上で自らが関与しうるグローバル開発の取り組みやこれからの自分のキャリアとの関わりを考える。

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
1 ／	講師の紹介・ガイダンスおよび本講義への期待・希望・要望講師から本講義に関しての概要の説明を受け、学生からは要望を伝える。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
2 ／	講師を通じてみる国際協力（JOCV、IDEAS、IDPM、JBIC、JICA）講師が自らの国際協力の経験を語り、学生は身近な講師の経験を聞くことで、国際協力を身近に感じてもらう。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
3 ／	世界の国々：OECD・アジア・アフリカ・中南米・中近東世界各地の概要についての説明を受け、世界／国際社会の関心を持つようになる。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
4 ／	国際協力とは・ODAとは・日本の援助国際協力の概要、また、その中心である政府開発援助について解説をうけ、仕組みを理解する。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
5 ／	JICAの役割と機能日本における政府開発援助の主たる実施機関である国際協力機構（JICA)の役割と機能について解説を受け、仕組みを理解する。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
6 ／	JICA海外協力隊事業 JICA事業の中でも最も国民に知られたJICA海外協力隊（青年海外協力隊）についての仕組みや実績などについて解説を受けて仕組みを理解する。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
7 ／	青年海外協力隊OBの経験談：講師の場合講師が青年海外協力隊として派遣された経験についての解説を受け、青年海外協力隊を身近に感じる。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
8 ／	JICA海外協力隊：ビデオ鑑賞討論会（グループワーク）JICA海外協力隊に関して、公開されている映像を視聴して、グループワークを行い、どのような学びがあったかを確かめ合う。	講義・演習 グループワーク（その１）	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
9 ／	NGO論国際協力の中でも最も草の根で活動している国際NGOを中心に、NGOの役割と意義について学ぶ。（尚、「NGO論」の一部と重複はある）	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
10 ／	SDGs他の講義や大学の取り組みでなされているSDGsについて、改めてその背景・仕組み・詳細等を体系立てて学ぶ。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60

授業明細表

ＣＬＩＰ学習プロセスについて

一般に、授業あるいは課外での学習では：**「知識などを取り込む」→「知識などをいろいろな角度から、場合によってはチーム活動として、考え、推論し、創造する」→「修得した内容を表現、発表、伝達する」→「総合的に評価を受ける、ＧｏｏｄＷｏｒｋ！」**：のようなプロセス（一部あるいは全体）を繰り返し行いながら、応用力のある知識やスキルを身につけていくことが重要です。このような学習プロセスを大事に行動ください。
※学習課題の時間欄には、指定された学習課題に要する標準的な時間を記載してあります。学修単位科目については、各授業に応じた時間（例えば2単位科目の場合、予習・復習で200分／週）を取るよう努めてください。詳しくは教員の指導に従って下さい。

回数 日付	学習内容	授業の運営方法	学習課題(予習・復習)	時間(分)
11 ／	SDGsワークショップ（グループワーク）SDGsの17のゴールの順番を並べ替えるグループワークを行って発表する。学生はそのワークを通じて、改めてSDGsのそれぞれの意義を考える。	講義・演習 グループワーク（その２）	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
12 ／	民間企業の社会的役割民間企業による国際協力も行われていることから、その取り組みや意義、社会的背景を学ぶ。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す） レポート（その１）JICA海外協力隊レポート	60 60 60 300
13 ／	貧しい人を助ける理由とグループワーク「貧しい人を助ける理由」（参考書）の概要の講義を受けた上で、改めてなぜ貧しい人を助ける必要があるのかを考え直すグループワークを行い、発表する。	講義・演習 グループワーク（その３）	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（eシラバスの資料に目を通す）	60 60 60
14 ／	障害と開発日本などの先進国においても障害者の地位は低く、途上国では最貧層である。その実情とそれに対する可能な支援について学ぶ。	講義・演習	授業の振り返り（eシラバスの資料に目を通す） リアクションペーパー 次回の講義の予習（資料を読む） レポート（その２）：外部講師講義レポート	60 60 60 120
15 ／	本講義の振り返り（まとめ、成績開示、自己点検）本講義の学びに関する考察をする。	講義・演習	通期の授業の振り返り（eシラバスの資料に目を通す）	60

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 専門 選択	課題学修（専門）	2	725200	－	－　／認定

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4	－	－		

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	高度専門知識の習得	学生が専門的な資格取得を通じて、将来のキャリアに直結する実践的な知識・技術を主体的に習得することを目的とする。
2	自主的・継続的学習	
3	キャリア設計	
4	自己評価	
5		

授業の概要および学習上の助言

課題学修（専門）として認定の対象となる資格については学生便覧2026 p.94 別表１に記載されたものに限定する。
申請時には申請書に合格通知書・免状などの原本とコピーを提出し、クラス担任の確認印を受けること。
専門担当教員や指導教員に事前相談し、適切な資格を選定することを推奨する。
第3学年3月末までに課題学修の条件を満たし、第4学年4月に単位の認定を申請すること。

【教科書および参考書・リザーブドブック】
教科書：なし
参考書：各資格試験の公式テキスト・問題集
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

各資格試験の受験要件および関連する専門科目の知識

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	i	取得資格に関連する専門的知識・技術を体系的に理解できる。
②	i	卒業を見据えた長期的な学修計画を自ら立て、実行できる
③	i	資格取得の経験を進路選択や将来設計に結びつけることができる
④	i	学修の成果と課題を整理し、次のステップに向けた目標を設定できる
⑤		
⑥		

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	0	0	0	0	0	100	100
総合力指標	知識を取り込む力	0	0	0	0	0	0	100	100
	思考・推論・創造する力	0	0	0	0	0	0	0	0
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	0	0	0	0	0	0
	学習に取組む姿勢・意欲	0	0	0	0	0	0	0	0

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①	✓	別表に定める資格の取得（合格）をもって評価する
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
合格した資格試験の知識を実社会で応用できる。	目標の資格試験に合格する。

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 専門 選択	課題学修（プロジェクト）	2	725300	－	－ ／認定

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
4	－	－		

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	高度専門知識の習得	学生がプロジェクト活動を通じて、将来のキャリアに直結する実践的な知識・技術を主体的に習得することを目的とする。
2	自主的・継続的学習	
3	キャリア設計	
4	自己評価	
5		

授業の概要および学習上の助言

課題学修（プロジェクト）として認定の対象となるコンテスト、地域連携活動については学生便覧2026 p.95 別表２に記載されたものに限定する。
申請時には活動の概要、参加者の役割分担、取り組み時間、成果などがわかる資料を添えて申請書を作成し、クラス担任の確認印を受けること。
第3学年3月末までに課題学修の条件を満たし、第4学年4月に単位の認定を申請すること。

【教科書および参考書・リザーブドブック】
教科書：なし
参考書：なし
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

コンテストの参加要件および関連する専門科目の知識

No.	教育目標(DP)（記号表記）	学生が達成すべき行動目標
①	i	コンテスト・プロジェクト活動に関連する専門的知識・技術を体系的に理解できる。
②	i	卒業を見据えた長期的な学修計画を自ら立て、実行できる
③	i	活動の経験を進路選択や将来設計に結びつけることができる
④	i	学修の成果と課題を整理し、次のステップに向けた目標を設定できる
⑤		
⑥		

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	0	0	0	0	0	100	100
総合力指標	知識を取り込む力	0	0	0	0	0	0	100	100
	思考・推論・創造する力	0	0	0	0	0	0	0	0
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	0	0	0	0	0	0
	学習に取組む姿勢・意欲	0	0	0	0	0	0	0	0

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①	✓	別表に定めるプロジェクトの成果をもって評価する
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
プロジェクト活動を通じて得た知識・経験を実社会で応用できる。	目標の成果を得る。

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Engineering Mathematics	4	711400	All year	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
4	HUSSIEN, Alaa	Kanazawa C 31.15		Friday 16:30-17:30

Course Objectives

	Keywords	Learning Objectives
1	Differentiation	To enable students to apply general mathematical principles and equip them with appropriate engineering mathematical skills to solve engineering problems
2	Matrices	
3	Laplace transform	
4	Integration	
5	Differential Equations	

Course Description and Expectations for Students

At the successful completion of this course, students will be able to:
1. Apply techniques of algebra to solve engineering-related problems
2. Apply matrices to solve engineering-related problems
3. Apply techniques of calculus including integration and differential equations to solve engineering-related problems.
4. The lecture style of this course is conducted through a discussion and Q&A between the teacher and students in order to get them involved in to the class. In addition, students help each other through peer learning during the work sheet solving time. These are two types of the active learning applied in the class.

Required Materials (textbooks, reference books, reserved books)
Textbooks: None:
Reference books: None
Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites)

Fundamental understanding of Algebra and Trigonometry

No.	Program Objectives	Target Abilities for Students
①	e	Students will be able to solve engineering problems using algebra.
②	e	Students will be able to perform basic matrix mathematics and use them for real-life applications
③	e	Students will be able to use Laplace transformations
④	e	Students will be able to solve simple math problems using differentiation.
⑤	e	Students will be able to solve simple math problems using integration.
⑥	e	Students will be able to create simple mathematical models to model engineering systems.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	60	25	0	0	15	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	30	10	0	0	5	0	45
	Ability to think, reason and create	0	30	5	0	0	0	0	35
	Collaboration and leadership	0	0	5	0	0	0	0	5
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	5	0	0	10	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There will be four quizzes to test students 'comprehension and ability to apply techniques taught in this class. The first quiz will be in the 7th week and the second quiz will be in the 15th week. The third quiz will be in 22nd week and the fourth quiz will be in the last week of the year. Each quiz is worth 15% of the total score.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Students will be given a worksheet every class. They will have to solve the problems and submit it by the beginning of the next class. The reports ae worth 25% of the total score The grading criteria will be based on whether or not they checked the model answer and have corrected their mistakes completely. There will be a rubric that will determine your score.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	The portfolio aspect of the grade is meant to make sure the student is keeping up with all the daily material in a neat and organized manner. The portfolio is worth 15% of the total score. There will be a rubric that will determine your final score for your portfolio. The rubric will measure the following: 1-Notebook – Did the student take a decent amount of notes for each lecture? 5% 2-Binder – Are the papers of all sections well organized? 5% 3-Work– Did the student go back to correct mistakes in their HW/quizzes? 5%
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①	✓	
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Be able to understand the mathematics topics such as differentiation and integration and use them to solve complicated real-life application	Be able to understand the mathematics topics such as differentiation and integration and use them to solve simple real-life application

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 ~ 2 /	Differential Calculus Definition, differentiation of basic Functions.	Lecture Worksheet	Review course notes	40
3 ~ 4 /	Differential Calculus Product, quotient and chain rule. Turning points, 2nd derivative test.	Lecture Worksheet	Review course notes	40
5 ~ 6 /	Differential Calculus Optimization	Lecture Worksheet	Review course notes	40
7 ~ 8 /	Differential Calculus Parametric differentiation.	Lecture Worksheet	Review course notes	40
9 ~ 10 /	Differential Calculus Implicit differentiation.	Lecture Worksheet	Review course notes	40
11 ~ 12 /	Differential Calculus Application–radius & center of Curvature	Lecture Worksheet	Review course notes	40
13 ~ 14 /	Review lecture Qui z#1	Q&A session Quiz	Prepare for the Quiz	40
15 ~ 16 /	Integral Calculus Integration of basic functions. Linear function rule.	Lecture Worksheet	Review course notes	40
17 ~ 18 /	Integral Calculus Substitution method.	Lecture Worksheet	Review course notes	40
19 ~ 20 /	Integral Calculus Integration by parts. Trig Integrals	Lecture Worksheet	Review course notes	40
21 ~ 22 /	Integral Calculus Partial fractions.	Lecture Worksheet	Review course notes	40

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Min)
23 ~ 24 /	Integral Calculus The definite integral, areas under and between curves.	Lecture Worksheet	Review course notes	40
25 ~ 26 /	Integration Applications Lengths, areas of revolution	Lecture Worksheet	Review course notes	40
27 ~ 28 /	Integration Applications Volumes & centroids	Lecture Worksheet	Review course notes Study for the exam	100
29 / 30	Review lecture Quiz #2	Q&A session Quiz	Study for the quiz	100
31 ~ 32 /	Linear Algebra Systems of equations two-variables and several - variables-Gaussian elimination	Lecture Worksheet	Review course notes	40
33 ~ 34 /	Linear Algebra Matrix definitions REF and RREF methods	Lecture Worksheet	Review course notes	40
35 ~ 36 /	Linear Algebra Matrix Algebra Matrix Inverse	Lecture Worksheet	Review course notes	40
37 ~ 38 /	Linear Algebra Determinants Cramer Rule	Lecture Worksheet	Review course notes	40
39 ~ 40 /	Linear Algebra Matrices Engineering Applications	Lecture Worksheet	Review course notes	40
41 ~ 42 /	Linear Algebra Matrices Engineering Applications	Lecture Worksheet	Review course notes	40
43 ~ 44 /	Review lecture Quiz #3	Q&A session Quiz	Prepare for the Quiz	40

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Min)
45 ~ 46 /	Laplace transform-definition Laplace transform of basic functions	Lecture Worksheet	Review course notes	40
47 ~ 48 /	Inverse Laplace transform Engineering Applications	Lecture Worksheet	Review course notes	40
49 ~ 50 /	Differential Equations Introduction. Direct differential equations, separable and Homogeneous DE's.	Lecture Worksheet	Review course notes	40
51 ~ 52 /	Differential Equations 1st order linear DE's Differential Equations 2^{nd} order linear DE's	Lecture Worksheet	Review course notes	40
53 ~ 54 /	Differential Equations Engineering Applications	Lecture Worksheet	Review course notes	40
55 ~ 56 /	Differential Equations Engineering Applications	Lecture Worksheet	Review course notes	40
57 ~ 58	Introduction to Fourier series	Lecture Worksheet	Review course notes	100
59 ~ 60	Review Quiz #4	Q&A session Quiz	Study for the quiz	100

2026 Syllabus

Instructor with "＊" means an instructor with company experience.

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Comprehensive English IIA	1	511300	First	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	REYNOLDS, Stephanie / UTSUNOMIYA, Takako	Kanazawa C: 31.104		TBA

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Critical Thinking	In this course, students will be able to further improve English communication skills while sharing opinions in discussions, writing, and presentations. Students will apply critical thinking skills and gain knowledge about various topics related to engineering, science, technology, and society. Additionally, students will learn how to apply effective and appropriate communication strategies in discussions, presentations, and writing.
2	Communication	
3	Engineering	
4	Writing	
5	Presentation	

Course Description and Expectations for Students (10.5pt)

This course will offer discussion, group work, and reflection as types of active learning.
Students will prepare and participate in English discussions using the language skills that are already known.
Students will practice and apply new strategies for effective communication in discussions, presentations, and writing.
Students will write some academic essays/written reports and prepare some academic presentations.

It will be important for students to share their own opinions in relation to information from a variety of sources. Appropriate use of AI tools will be discussed, and students will learn how to appropriately reference and cite sources.
Students should be prepared with a binder or folder to keep handouts, writing tools for in-class work, and laptop computers for preparing presentations, researching related information, downloading class materials, and submitting online assignments.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: Pathways: Reading, Writing, and Critical Thinking, 3rd Edition, Levels 2, 3, and 4
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate English ability
Basic computer skills

No.	Program Objectives	Target Abilities for Students (9pt)
①	d	Students will be able to share opinions and ideas through discussions in English.
②	h	Students will be able to think critically about various topics related to environmental and biological engineering.
③	g	Students will be able to write an academic essay/report.
④	c	Students will be able to make academic presentations in English.
⑤	c	Students will be able to apply effective communication strategies in presentations and writing.
⑥	b	Students will be able to reference and cite sources appropriately.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	20	30	30	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	5	0	5	0	25
	Ability to think, reason and create	0	5	10	5	0	5	0	25
	Collaboration and leadership	0	0	0	10	0	5	0	15
	Announcement / Expression / Communication	0	5	10	10	0	0	0	25
	Attitude and motivation for learning	0	5	0	0	0	5	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		Vocabulary, skill review, written response, reading/listening comprehension, and/or skill review assessments based on the content of in-class activities and assignments (20%) Feedback will be given in the following class session.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Reports	①		Some academic essays/written reports (30%) Each assignment will include an outline, first draft, writing conferences, and final draft. Feedback will be given during the following class session.
	②	✓	
	③	✓	
	④		
	⑤	✓	
	⑥	✓	
Presentations	①		Some academic presentations (30%) Each presentation will include an outline, preparation of supplementary materials, delivery & participation in discussion, and self-evaluation/reflection. Feedback will be given during the following class session.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	In-class or assignment handouts for preparation, review, and/or reflection of discussion activities (20%) Feedback will be given during the following class session.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Professional-level, academic writing and presentations. Discuss 100% in fluent English.	Comprehensible writing and presentations. Discussions mostly in English.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction/ Topic 1 (1) Students will be introduced to the syllabus and contents of the course. Students will participate in brainstorming and background building communication activities.	Brainstorming as a pre-reading technique, individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
2 /	Topic 1 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
3 /	Topic 1 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 4) Reading	50
4 /	Topic 2 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
5 /	Topic 2 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
6 /	Topic 2 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 7) Reading	50
7 /	Topic 3 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
8 /	Topic 3 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
9 /	Topic 3 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 10) Reading	50
10 /	Topic 4 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Topic 4 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
12 /	Topic 4 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 13) Reading	50
13 /	Review of Readings and Topics 1-4 Presentation preparation Students will review and discuss topics related to the reading or videos, brainstorm ideas and opinions, and research information for an academic presentation	Individual, pair, and group work; discussion	Preview: Brainstorm Review: Complete outline and supplemental materials Reading	50
14 /	Review of Readings and Topics 1-4 Students will deliver presentations with appropriately cited sources and supplemental materials connected to their topic of research. Students will share peer feedback and reflect on their learning in the course.	Individual, pair, and group work; discussion	Preview: Practice presentation Review: Complete written reflection Reading	50
15 /	Self-Evaluation Students will be given oral and written feedback both overall and individually on their work. Students will also be encouraged to share their feedback about the course. *Presentation Project Returned*	Individual, pair, and group work; discussion		

2026 Syllabus

Instructor with "＊" means an instructor with company experience.

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S General Required	Comprehensive English IIB	1	511400	Second	Lecture Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	REYNOLDS, Stephanie / UTSUNOMIYA, Takako	Kanazawa C: 31.104		TBA

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Critical Thinking	In this course, students will be able to further improve English communication skills while sharing opinions in group discussions, presentations, and in writing. Students will apply critical thinking skills and understand content in various topics related to science, technology, engineering, and society. Additionally, students will learn and apply effective and appropriate communication strategies in discussions, presentations, and writing.
2	Communication	
3	Knowledge	
4	Writing	
5	Presentation	

Course Description and Expectations for Students (10.5pt)

This course will offer discussion, group work, and reflection as types of active learning.
Students will prepare and participate in English discussions using the language skills that are already known.
Students will practice and apply new strategies for effective communication in discussions, presentations, and writing.
Students will write some academic essays/written reports and prepare some academic presentations.

It will be important for students to share their own opinions in relation to information from a variety of sources. Therefore, students will learn how to appropriately reference and cite sources.
Students should be prepared with a binder or folder to keep handouts, writing tools for in-class work, and laptop computers for preparing presentations, researching related information, downloading class materials, and submitting online assignments.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: None (Handouts)
Reference books: Pathways: Reading, Writing, and Critical Thinking, 3rd Edition, Levels 2, 3, and 4
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Intermediate English ability
Basic computer skills

No.	Program Objectives	Target Abilities for Students (9pt)
①	d	Students will be able to share opinions and ideas through discussions in English.
②	h	Students will be able to think critically about various topics related to areas of knowledge.
③	g	Students will be able to write an academic essay/report.
④	c	Students will be able to make academic presentations in English.
⑤	c	Students will be able to apply effective communication strategies in presentations and writing.
⑥	b	Students will be able to reference and cite sources appropriately.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	20	30	30	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	5	0	5	0	25
	Ability to think, reason and create	0	5	10	5	0	5	0	25
	Collaboration and leadership	0	0	0	10	0	5	0	15
	Announcement / Expression / Communication	0	5	10	10	0	0	0	25
	Attitude and motivation for learning	0	5	0	0	0	5	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		Vocabulary, written response, reading/listening comprehension, and/or review assessments based on the content of in-class activities and assignments (20%) Feedback will be given in the following class session.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Reports	①		Some academic essays/written reports (30%) Each assignment will include an outline, first draft, writing conferences, and final draft. Feedback will be given in the following class session.
	②	✓	
	③	✓	
	④		
	⑤	✓	
	⑥	✓	
Presentations	①		Some academic presentations (30%) Each presentation will include an outline, preparation of supplementary materials, delivery of presentation, and self-evaluation/reflection. Feedback will be given in the following class session.
	②	✓	
	③		
	④	✓	
	⑤	✓	
	⑥	✓	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	In-class or assignment handouts for preparation, review, and reflection of discussion activities (20%) Feedback will be given in the following class session.
	②	✓	
	③		
	④		
	⑤	✓	
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Professional-level, academic writing and presentations. Discuss 100% in fluent English.	Comprehensible writing and presentations. Discussions mostly in English.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction/ Topic 1 (1) Students will be introduced to the syllabus and contents of the course. Students will participate in brainstorming and background building communication activities.	Brainstorming as a pre-reading technique, individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
2 /	Topic 1 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
3 /	Topic 1 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 4) Reading	50
4 /	Topic 2 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
5 /	Topic 2 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
6 /	Topic 2 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 7) Reading	50
7 /	Topic 3 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50
8 /	Topic 3 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
9 /	Topic 3 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 10) Reading	50
10 /	Topic 4 (1) Students will review and discuss topics related to the theme.	Individual, pair, and group work; discussion	Review: Complete the worksheet based on the class activities. Reading	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Topic 4 (2) Mini-presentation/discussion Students will review and discuss topics related to the reading or videos	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the worksheet based on the class activities. Reading	50
12 /	Topic 4 (3) Quiz Academic Writing Students will brainstorm, outline, write, review, and revise a written assignment.	Individual, pair, and group work; discussion	Preview: Study for the quiz Review: Complete the written assignment (Due class 13) Reading	50
13 /	Review of Readings and Topics 1-4 Presentation preparation Students will review and discuss topics related to the reading or videos, brainstorm ideas and opinions, and research information for an academic presentation	Individual, pair, and group work; discussion	Preview: Brainstorm Review: Complete outline and supplemental materials Reading	50
14 /	Review of Readings and Topics 1-4 Students will deliver presentations with appropriately cited sources and supplemental materials connected to their topic of research. Students will share peer feedback and reflect on their learning in the course.	Individual, pair, and group work; discussion	Preview: Practice presentation Review: Complete written reflection Reading	50
15 /	Self-Evaluation Students will be given oral and written feedback both overall and individually on their work. Students will also be encouraged to share their feedback about the course. *Presentation Project Returned*	Individual, pair, and group work; discussion		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Engineering Design VA	2	520400	First	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	KUSHIMA, Yoshihiro / FUJISAWA, Takeshi / MEBUSAYA, Tossa*	Kanazawa C		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Expertise	Our goal is to develop students who will have a bird's eye view of engineering and be able to lead projects as leaders in the future. To this end, the fifth grade students aim to improve their knowledge, skills, theoretical thinking, judgment, problem-solving process, technical communication skills, and presentation skills through practical training.
2	Theoretical thinking/Decision making	
3	Problem-solving process	
4	Information gathering and analysis	
5	Presentation	

Course Description and Expectations for Students (10.5pt)

Under the advice of faculty members, students decide on a "theme" and engage in project activities, applying their knowledge in specialized fields such as mechanical engineering, information engineering, and business. In addition to their previous knowledge and experience, and how to collect and share information necessary for the progress of the project, students will acquire new knowledge through research through practical training. Then, activities based on logical thinking will be implemented.
The flow of the project will differ slightly depending on the main theme, but basically, the project will proceed in the following manner." Discover the problem → Understand the current situation → Determine the problem based on problem cause analysis and structural analysis → Set preconditions and achievement conditions for the solution → Determine the solution plan." Students must submit weekly reports. In addition, they must submit a final report at the end of the semester describing the progress of the project. This course will offer discovery learning, problem-solving learning and group discussion in class as a type of active learning.

Relationship between this course and business experiences

Based on the teacher's experiences, including technical/academic research in human interface and visual psychology, etc., and project management, the teacher will provide advice and discussion materials on research and key management factors.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge and experience learned and acquired so far.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a	Students will be able to analyze issues, collect information, and identify problems.
②	h	Students will be able to think logically based on data, facts, and truth.
③	h	Students will be able to connect and apply new knowledge and acquired knowledge.
④	d	Students will be able to explain their analysis and ideas logically, in an easy-to-understand manner.
⑤	a	Students will be able to show an attitude of trying to objectively evaluate one's ability.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	30	40	0	30	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	5	0	10	0	25
	Ability to think, reason and create	0	0	10	5	0	10	0	25
	Collaboration and leadership	0	0	0	10	0	0	0	10
	Announcement / Expression / Communication	0	0	10	20	0	0	0	30
	Attitude and motivation for learning	0	0	0	0	0	10	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Report will include individual work report (the project progress and outcomes). The format of the report will be announced by the instructors. Students must submit the final report at the end of the semester.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①	✓	There will be a presentation at the end of the semester. Students will give oral progress of their projects. The format of the presentation will be announced by instructors, such as slides, poster, and/or any other styles.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	Students must submit weekly reports as the evidence of their projects. The format of the portfolio will be announced by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Design and plan the research project by oneself. Conduct research and development activities smoothly according to the research project plan. Present concrete results that are recognized as academically or technically significant, effective, and practical.	Design and plan the research project with the support of Instructor. Conduct research and development activities in accordance with the research project plan. Present concrete results along with technical innovations.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1-2 /	Project activity / review	Activity / Explanation / Report	Confirm the schedule and objectives. Making weekly report	60
3-4 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
5-6 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
7-8 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
9-10 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
11-12 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
13-14 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
15-16 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
17-18 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
19-20 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21-22 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
23-24 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
25-26 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
27-28 /	Project activity / review	Activity / Explanation / Report	Making weekly report Prepare for the presentation and the report	60
29-30 /	Presentation	Presentation	Prepare for the presentation and the report	60

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Required	Engineering Design VB	2	520500	Second	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	KUSHIMA, Yoshihiro / FUJISAWA, Takeshi / MEBUSAYA, Tossa	Kanazawa C		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Expertise	Our goal is to develop students who will have a bird's eye view of engineering and be able to lead projects as leaders in the future. To this end, the fifth grade students aim to improve their knowledge, skills, theoretical thinking, judgment, problem-solving process, technical communication skills, and presentation skills through practical training.
2	Theoretical thinking/Decision making	
3	Problem-solving process	
4	Information gathering and analysis	
5	Presentation	

Course Description and Expectations for Students (10.5pt)

Under the advice of faculty members, students decide on a "theme" and engage in project activities, applying their knowledge in specialized fields such as mechanical engineering, information engineering, and business. In addition to their previous knowledge and experience, and how to collect and share information necessary for the progress of the project, students will acquire new knowledge through research through practical training. Then, activities based on logical thinking will be implemented.
The flow of the project will differ slightly depending on the main theme, but basically, the project will proceed in the following manner." Discover the problem → Understand the current situation → Determine the problem based on problem cause analysis and structural analysis → Set preconditions and achievement conditions for the solution → Determine the solution plan." Students must submit weekly reports. In addition, they must submit a final report at the end of the semester describing the progress of the project. This course will offer discovery learning, problem-solving learning and group discussion in class as a type of active learning.

Relationship between this course and business experiences

Based on the teacher’s experiences, including technical/academic research in human interface and visual psychology, etc., and project management, the teacher will provide advice and discussion materials on research and key management factors.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge and experience learned and acquired so far.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a	Students will be able to analyze issues, collect information, and identify problems.
②	h	Students will be able to think logically based on data, facts, and truth.
③	h	Students will be able to connect and apply new knowledge and acquired knowledge.
④	d	Students will be able to explain their analysis and ideas logically, in an easy-to-understand manner.
⑤	a	Students will be able to show an attitude of trying to objectively evaluate one's ability.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	40	40	0	20	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	5	0	5	0	20
	Ability to think, reason and create	0	0	20	5	0	5	0	30
	Collaboration and leadership	0	0	0	10	0	0	0	10
	Announcement / Expression / Communication	0	0	10	20	0	0	0	30
	Attitude and motivation for learning	0	0	0	0	0	10	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Report will include individual work report (the project progress and outcomes). The format of the report will be announced by the instructors. Students must submit the final report at the end of the semester.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①	✓	There will be a presentation at the end of the semester. Students will give oral progress of their projects. The format of the presentation will be announced by instructors, such as slides, poster, and/or any other styles.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①	✓	Students must submit weekly reports as the evidence of their projects. The format of the portfolio will be announced by the instructors.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Design and plan the research project by oneself. Conduct research and development activities smoothly according to the research project plan. Present concrete results that are recognized as academically or technically significant, effective, and practical.	Design and plan the research project with the support of Instructor. Conduct research and development activities in accordance with the research project plan. Present concrete results along with technical innovations.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1-2 /	Project activity / review	Activity / Explanation / Report	Confirm the schedule and objectives. Making weekly report	60
3-4 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
5-6 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
7-8 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
9-10 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
11-12 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
13-14 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
15-16 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
17-18 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
19-20 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21-22 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
23-24 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
25-26 /	Project activity / review	Activity / Explanation / Report	Making weekly report	60
27-28 /	Project activity / review	Activity / Explanation / Report	Making weekly report Prepare for the presentation and the report	60
29-30 /	Presentation	Presentation	Prepare for the presentation and the report	60

2026Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Internship II	1	520800	Intensive	Experiment/Practice Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	FUJISAWA, Takeshi	Kanazawa C 31:113		Fri. 15:30 – 17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1 2 3 4 5	Career design Engineering skills and knowledge Skills for research Human skills	Following Internship I, students will receive practical training related to their career choices and future career at companies and universities in and outside of the prefecture. Students will be placed in situations that require more advanced knowledge and skills than Internship I. They will improve their specialized knowledge, learn the significance of engineering, how to be an engineer, manners as a member of society to become an engineer leader who can contribute to society in the future, autonomy, sense of responsibility, and sense of ethics.

Course Description and Expectations for Students (10.5pt)

Students will work on a project under the direction of their advisors, based on their chosen field of study.
Approximately 3 to 5 days of actual work is required to receive credit.

If no evaluation is submitted by the host, no credits will be awarded.

Advice on taking this class
- Be aware that this is an opportunity given to students by the host.
- Follow the directions of advisors and submit all assignments on time.
- Work independently and in groups.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

Academic and personal skills required as a technical college student in each specialized field.

No.	Program Objectives	Target Abilities for Students
①	a, h	Students will be able to complete tasks by applying what they have practiced.
②	e, i	Students will be able to understand their strengths and weaknesses better.
③	b, i	Students will be able to have a deeper understanding of their chosen industry.
④	b, i	Students will be able to develop a better idea of what they would like to pursue in the future.
⑤	b, i	Students will be able to reflect on what they did and set goals for the future.
⑥	c, d	Students will be able to develop attitudes and abilities needed to work productively with others.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	40	40	0	0	20	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	0	0	0	4	14
	Ability to think, reason and create	0	0	15	10	0	0	4	29
	Collaboration and leadership	0	0	0	0	0	0	4	4
	Announcement / Expression / Communication	0	0	0	30	0	0	4	34
	Attitude and motivation for learning	0	0	15	0	0	0	4	19

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	ㄴ	・Write a report on the contents and results of the work experience. Rather than simply describing the process and results, reflect on the overall content of the experience and describe in detail the knowledge and skills that were utilized in each process. ・Based on the results of reflecting on work experience, plan how to use it in future activities and specify action goals to be implemented.
	②		
	③	ㄴ	
	④		
	⑤		
	⑥		
Presentations	①	ㄴ	This evaluation will be made by the students' presentation at internship presentation session.
	②	ㄴ	
	③	ㄴ	
	④	ㄴ	
	⑤	ㄴ	
	⑥	ㄴ	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		Evaluation will be made by the host company as to whether the student can work/study in the field of expertise in accordance with the engineering ethics.
	②	ㄴ	
	③		
	④	ㄴ	
	⑤	ㄴ	
	⑥	ㄴ	

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Understand the significance of the internship and set the purpose of participation in terms of both improving basic skills for working adults and to confirm the level of one's own expertise. Based on their own career development, they are able to decide which a host they would like to participate in and research the relevant industries or study fields. Students will be able to research the relevant field based on their own career development.	Understand the significance of internships and set a purpose for participating. To be able to research the field. To be able to carry out the work/study which the host gives without any problems.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Understand the purpose and the significant aspects of internship education. Prepare the necessary documents and materials for the internship program.	Lecture		
2 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
3 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
4 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
5 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
6 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
7 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
8 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
9 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
10 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
12 /	Working on the internship program. -Follow the policy of the field. - Submit the assigned work results as instructed.	Practical work/study experience Instructed by a designated industry.		
13 /	Preparation for presentation	Making powerpoint slides		
14 /	Preparation for presentation	Making powerpoint slides		
15 /	Final presentation - Present the achievement of the internship program	Preparation		

2026 Syllabus

Instructor with"*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Engineering Mathematics	2	522000	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	KUSHIMA, Yoshihiro	31.117		16:50-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Complex numbers	Students will: (1) Review complex numbers for frequency response (2) Learn Laplace transforms for solving linear differential equations (3) Learn inverse Laplace transforms for solving linear differential equations (4) Learn transfer function for frequency analysis (5) Learn block diagrams
2	Laplace transforms	
3	Inverse Laplace transforms	
4	Transfer functions	
5	Block diagrams	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This course will offer experimental learning in class as a type of active learning.

This is a basic course in control engineering. We will cover the following topics:
1. Complex numbers
2. Laplace transforms
3. Inverse Laplace transforms
4. Transfer functions
5. Block diagrams

Students are expected to understand the meaning of the analysis method for control systems and expected to determine the stability of a control system.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Sufficient mathematical calculation skills.
Basic knowledge of differential and integral calculus.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Be able to Calculate complex numbers.
②	h, i	Be able to use basic Laplace transforms.
③	h, i	Be able to solve linear differential equations with inverse Laplace transforms.
④	h, i	Be able to use transfer functions.
⑤	h, i	Be able to understand block diagrams.
⑥		

Evaluation Criteria

	Evaluation Method / Criteria and Ratio	Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
	Total Evaluation Ratio	40	20	0	0	0	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	0	0	0	0	20	50
	Ability to think, reason and create	10	5	0	0	0	0	10	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	10	5	0	0	0	0	10	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	A written exam is given at the end of the term and the results will account for 40% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①	✓	Several 50-minute quizzes are given to improve comprehension and the results will account for 20% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	To support self-directed learning, assignments will be given as out of class work and the results will account for 40% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Can show physical phenomena as differential equations and represent them as dynamic systems for analyzing physical phenomena. Discriminate what is necessary in characterizing physical phenomena and analyze dynamic systems appropriately.	Be able to represent physical phenomena presented as differential equations as dynamic systems for analysis. Understand the matters that characterize physical phenomena and be able to analyze dynamic systems appropriately.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Overview of System Control Complex numbers Trigonometric Functions	Guidance Lecture and Q&A	Understand the objectives of the course Preview and Review	200
2 /	Laplace Transforms (1)	Lecture and Q&A	Preview and Review lecture content and assignments	200
3 /	Laplace Transforms (2)	Lecture and Q&A	Preview and Review lecture content and assignments	200
4 /	Inverse Laplace Transforms	Lecture and Q&A	Preview and Review lecture content and assignments	200
5 /	Solving differential equations by Laplace transform	Lecture and Q&A	Preview and Review lecture content and assignments	200
6 /	Review for Quiz 1	Review	Prepare for quiz Preview and Review	200
7 /	Quiz 1	Quiz	Preview and Review	200
8 /	Quiz 1 Return Transfer Function (1)	Lecture and Q&A	Preview and Review lecture content and assignments	200
9 /	Transfer Function (2)	Lecture and Q&A	Preview and Review lecture content and assignments	200
10 /	Transfer Function (3)	Lecture and Q&A	Preview and Review lecture content and assignments	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Block Diagram (1)	Lecture and Q&A	Preview and Review lecture content and assignments	200
12 /	Block Diagram (2)	Lecture and Q&A	Preview and Review lecture content and assignments	200
13 /	Review for Quiz 2	Review	Prepare for quiz Preview and Review	200
14 /	Quiz 2	Quiz	Review	200
15 /	Quiz 2 Return Review for Final Exam	Review	Prepare for the final exam	200
16 /	Final Exam	Exam	Review all materials	
17 /	Returning Final Exam Results	Review Self-evaluation		

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Applied Physics I	2	522300	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	HAN, Justin	Kanazawa C 31.119		Make an appointment in class

Course Objectives

	Keywords	Learning Objectives
1	Rigid Body Dynamics	Physics forms the foundation for the study of specialized engineering subjects. Students in this course will study about the various forces acting on planar rigid bodies and how those forces influence the motions of the bodies.
2	FBD and KD	
3	Kinematics	
4	Kinetics	
5	Equations of Motion	

Course Description and Expectations for Students

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.

The progression of this course is as follows:

1. Planar Kinematics
   - Absolute motion
   - Relative motion
2. Planar Kinetics
   - Inertia
   - Equations of Motion

This course will offer experiential learning as a type of active learning.

Required Materials (textbooks, reference books, reserved books)
Textbooks Engineering Mechanics: Dynamics, SI Units 15th ed. (Global Edition), ISBN-13: 978-1292451930
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

An understanding of:

- basic physics concepts
- static forces acting on rigid bodies

No.	Program Objectives	Target Abilities for Students
①	g, h, i	Be able to describe and create equations of motion for particles
②	g, h, i	Be able to explain the absolute and relative motions of rigid bodies.
③	g, h, i	Be able to break down dynamic systems into free body and kinetic diagrams.
④	g, h, i	Be able to explain the effect of forces on the motion of rigid bodies.
⑤	g, h, i	Be able to explain the concept of inertia and its influence on motion.
⑥	g, h, i	Be able to create equations of motion for systems of rigid bodies in motion.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	20	40	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	20	0	0	0	0	50
	Ability to think, reason and create	10	5	10	0	0	0	0	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	10	5	10	0	0	0	0	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①	✓	There will be a final exam at the end of the semester that will test students on the important concepts introduced throughout the semester.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be two 50-minute quizzes that will test students on the concepts introduced in the weeks before the quiz. For these quizzes, students will be allowed to prepare one sheet of notes for reference. Makeup quizzes will not be allowed without a valid excuse.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	There will be homework for every topic introduced. Time will be allotted during class to review the homework assignments, but students will need to spend time outside of class to complete them. Late homework will be accepted after their submission deadline at a -10% late penalty per school day up to a max of 50%. However, any homework that is copied will result in a 0.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
- Able to translate the motion of particles into mathematical equations. - Able to explain the concepts of absolute and relative motions of rigid bodies and apply them to real-world situations. - Able to apply Newton's 2nd Law of Motion to establish detailed models of rigid bodies in motion. - Able to calculate and analyze the effect of forces on rigid bodies - Able to apply inertia into mathematical expressions - Able to set up and apply equations of motion for various real-world situations.	- Able to understand the translational and circular motion of particles - Able to understand the concepts of absolute and relative motions of rigid bodies. - Able to apply Newton's 2nd Law of Motion to create FBD and KD. - Able to explain the effect of forces on rigid bodies - Able to explain the concept of inertia - Able to explain the analyze the equations of motion for systems of rigid bodies

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Guidance and Review of Statics Students learn about the principles of dynamics and review prerequisite knowledge of statics.	Lecture	Review: Complete Assignment	200
2 /	Introduction to Kinematics Students review about the prerequisite knowledge of simple movement of a particle.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
3 /	Introduction to Kinetics Students review the prerequisite knowledge of Free Body Diagrams (FBD) and Newton's 1st Law of Motion.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
4 /	Introduction to Kinetics Students review the prerequisite knowledge of Free Body Diagrams (FBD) and Moments of a Force.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
5 /	Introduction to Dynamics (1) Students learn about Kinetic Diagrams (KD) and Newton's 2nd Law of Motion.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
6 /	Introduction to Dynamics (2) Students learn about Kinetic Diagrams (KD) and Newton's 2nd Law of Motion.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
7 /	Midterm Test	Quiz and Review	Preview: Read Assigned Chapters Review: Complete Assignment	200
8 /	Introduction to Planar Kinematics (1) Students learn about the rotation about a fixed axis of a planar rigid body.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
9 /	Introduction to Planar Kinematics (2) Students learn about relative motion of a planar rigid body.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
10 /	Introduction to Planar Kinematics (3) Students learn about the Instantaneous Center of Zero Velocity.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Introduction to Planar Kinematics (4) Students learn about relative acceleration of rigid bodies.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
12 /	Introduction to Kinetics (1) Students learn about the Mass Moment of Inertia of composite bodies.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
13 /	Introduction to Kinetics (2) Students learn about the effect of forces and moments on a body rotating about a fixed axis.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
14 /	End of Term Test	Quiz and Review	Preview: Read Assigned Chapters Review: Complete Assignment	200
15 /	Review Students review their understanding of the introduced concepts.	Lecture	Preview: Prepare review questions Review: Study for the final exam	200
16 /	Final Exam			
17 /	Returning Final Exam Results			

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Elective	Applied Physics II	2	522400	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	HAN, Justin	Kanazawa C 31.119		Make an appointment in class

Course Objectives

	Keywords	Learning Objectives
1	Work and Energy	Physics forms the foundation for the study of advanced concepts in specialized engineering subjects. Any body in space having an amount of energy experiences vibration. Students in this course will learn to identify and model the vibrational motion of rigid bodies.
2	Rigid Body Dynamics	
3	Degrees of Freedom	
4	Vibration	
5	Damping	

Course Description and Expectations for Students

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.

The progression of this course is as follows:

1. Planar Kinetics – Work and Energy
2. Undamped Free Vibration
3. Undamped Forced Vibration
4. Damped Free Vibration
5. Damped Forced Vibration

This course will offer experiential learning as a type of active learning.

Required Materials (textbooks, reference books, reserved books)

Textbooks: Engineering Mechanics: Dynamics, SI Units 15th ed. (Global Edition), ISBN-13: 978-1292451930

Reference books:

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

An understanding of:

- basic physics concepts
- static forces acting on rigid bodies
- dynamic forces acting on rigid bodies

No.	Program Objectives	Target Abilities for Students
①	g, h, i	Be able to analyze the work and energy of rigid bodies in motion.
②	g, h, i	Be able to explain undamped free vibration
③	g, h, i	Be able to explain undamped forced vibration
④	g, h, i	Be able to explain damped free vibration
⑤	g, h, i	Be able to explain damped forced vibration
⑥	g, h, i	Be able to explain the mathematical models of vibrational systems

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	20	40	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	20	0	0	0	0	50
	Ability to think, reason and create	10	5	10	0	0	0	0	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	10	5	10	0	0	0	0	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①	✓	There will be a final exam at the end of the semester that will test students on the important concepts introduced throughout the semester.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be two 50-minute quizzes that will test students on the concepts introduced in the weeks before the quiz. For these quizzes, students will be allowed to prepare one sheet of notes for reference. Makeup quizzes will not be allowed without a valid excuse.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	There will be homework for every topic introduced. Time will be allotted during class to review the homework assignments, but students will need to spend time outside of class to complete them. Late homework will be accepted after their submission deadline at a -10% late penalty per school day up to a max of 50%. However, any homework that is copied will result in a 0.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
- Able to apply the concepts of work and energy of rigid bodies to real world situations. - Able to create and analyze mathematical models of undamped, free vibrational systems. - Able to create and analyze mathematical models of undamped, forced vibrational systems. - Able to create and analyze mathematical models of damped, free vibrational systems. - Able to create and analyze mathematical models of damped, forced vibrational systems. - Able to explain the effect of masses, forces, and damping on the behavior of vibration systems.	- Able to identify the effect of work and energy on rigid bodies. - Able to identify mathematical models of undamped, free vibration systems. - Able to identify mathematical models of undamped, forced vibration systems. - Able to identify mathematical models of damped, free vibration systems. - Able to identify mathematical models of damped, forced vibration systems. - Able to identify the behaviors of each type of vibration

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Guidance and Review Students learn about the concept of vibration and review the principles of variable forces.	Lecture	Review: Complete Assignment	200
2 /	Introduction to Planar Kinetics (6) Students learn about the work and energy of a rigid body.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
3 /	Introduction to Planar Kinetics (7) Students learn about the work and energy of a rigid body	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
4 /	Introduction to Vibrations Students learn about the basics of vibrations engineering.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
5 /	Introduction to Undamped Free Vibration Students learn about undamped free vibration.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
6 /	Review	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
7 /	Midterm Test	Quiz and Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
8 /	Introduction to Undamped Forced Vibration Students learn about undamped forced vibration.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
9 /	Introduction to Undamped Forced Vibration Students learn about undamped forced vibration.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
10 /	Introduction to Damped Free Vibration Students learn about damped free vibration.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Introduction to Damped Free Vibration Students learn about damped free vibration.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
12 /	Introduction to Damped Forced Vibration Students learn about damped forced vibration.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
13 /	Introduction to Damped Forced Vibration Students learn about damped forced vibration.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
14 /	End of Term Test	Quiz and Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
15 /	Review	Lecture	Preview: Prepare review questions Review: Study for the final exam	200
16 /	Final Exam			
17 /	Returning Final Exam Results			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Mech. Required	Mechanics of Materials I	2	540300	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	EVANS, Davis	31.118-1		Weekdays 16:50-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Load	Students will: (1) Understanding the materials for machine parts. (2) Learn the method of load analysis and free-body-diagram. (3) Understanding the axial, direct shear and torsional loading. (4) Learn the Mohr's circle that represents combined stresses.
2	Free body diagram	
3	Stresses	
4	Tensile and compression	
5	Bending	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 40 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This course will offer multi-step engineering problem work using real world problem statements and material properties in class as a type of active learning.

This is a course on the basics of mechanics of materials. We will cover the following topics:
(1) Characteristics of materials for machine parts
Cast iron, steel, and nonferrous alloy. Tensile strength of materials, Stress-strain diagram.
(2) Methods of load analysis
Drawing the FBD (free-body-diagram)
(3) Static body stresses
Axial loading, direct shear loading, torsional loading, and pure bending loading.
Combined stresses and Mohr's circle.
Thermal stresses.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: Fundamentals of Machine Components Design, 7th Edition, Asia Edition
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Know how to use a scientific calculator.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Be able to explain work, energy and power.
②	h	Be able to explain the characteristics of materials for machine parts.
③	h	Be able to draw the free-body-diagram.
④	h,i	Be able to find magnitude of stresses caused by axial loading, direct shear loading and torsional loading.
⑤	h	Be able to explain the relationship between pure bending loading and stresses in the beam.
⑥	h,i	Be able to draw the Mohr's circle under the condition applied combined stresses.

Evaluation Criteria

	Evaluation Method / Criteria and Ratio	Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
	Total Evaluation Ratio	40	20	40	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	10	0	0	0	0	40
	Ability to think, reason and create	20	10	20	0	0	0	0	50
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	10	0	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	∨	Descriptive tests are given on the content of the lectures: (1) Fundamentals of load analysis (2) Characteristics of materials for machine parts (3) Static body stresses
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Quizzes	①	∨	Descriptive quizzes given on the after of sections: (1) Free-body-diagram (2) Characteristics of materials
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Reports	①	∨	Out-of-class exercises will be assigned weekly. These exercises will be evaluated as the out-of-class learning portion of the course evaluation.
	②	∨	
	③	∨	
	④	∨	
	⑤	∨	
	⑥	∨	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Calculate the magnitude of power, work and energy. (2) Understand the method of drawing FBD clearly and draw it. (3) Understand the characteristics of ferrous and nonferrous alloy for machine parts. (4) Understand diagram of stress and strain, and explain relationship between stress and strain. (5) Understand static body stresses, axial, shear and torsional loading clearly. (6) Understand relationship between pure bending loading and stresses clearly.	(1) Calculate the magnitude of power, work and energy. (2) Understand the method of drawing FBD. (3) Understand the characteristics of ferrous alloy for machine parts. (4) Understand diagram of stress and strain. (5) Understand difference between axial and shear loading. (6) Understand pure bending loading.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction An overview of the subject Basics of mechanics of materials	Lecture and Q&A Self-check	Understanding the course objectives Confirm the course schedule	200
2 /	Work, energy and power	Lecture and Q&A Self-check	Preview: Reading textbook of physics Review: Solving problems on the textbook	40 160
3 /	Introduction of load analysis	Lecture and Q&A Self-check	Preview: Reading textbook of physics Review: Solving problems on the textbook	40 160
4 /	Drawing the FBD (free-body-diagram)	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
5 /	Introduction of materials	Quiz Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
6 /	Characteristics of ferrous materials Cast iron Carbon steel	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
7 /	Characteristics of nonferrous alloy materials Aluminum alloy Copper alloy	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
8 /	Introduction of static body stresses Axial loading Direct shear loading	Quiz Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
9 /	Torsional loading	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
10 /	Basics of pure bending loading	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Relationship between pure bending loading and stresses	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
12 /	Combined stresses Tensile and compressional stresses Shear stresses	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
13 /	Drawing the Mohr’s circle	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
14 /	Thermal stresses	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
15 /	Integrated learning	Lecture and Q&A Self-check	Preview: Review: Confirming the notebook for this course	200
16 /	Final examination	Descriptive test Self-check	Self-evaluation	
17 /	Review	Self-check Review		

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Mech. Required	Mechanics of Materials II	2	540400	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	EVANS, Davis	31.118-1		Friday 16:50-17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Stresses	Students will: (1) Understanding the relationship between stress and strain. (2) Learn the method of determination of deflection of the beam. (3) Understanding failure theory. (4) Learn the characteristics of impact, fatigue and surface damage.
2	Strain	
3	Beam deflection	
4	Column Buckling	
5	Failure theory	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 40 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This course will offer multi-step engineering problem work using real world problem statements and material properties in class as a type of active learning.

This is a course on the application of mechanics of materials. We will cover the following topics:
(1) Relationship between load and deflection
Stress-strain diagram, strain definition, and characteristics of cross section.
(2) Methods of determination of the beam deflection
(3) Failures
Column buckling
Failure theory
Impact, fatigue, surface damages

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Fundamentals of Machine Components Design, 7th Edition, Asia Edition
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Know how to use a scientific calculator.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Be able to explain strain definition.
②	h	Be able to explain the characteristics of cross-section.
③	h,i	Be able to determine the magnitude of deflection of beam.
④	h	Be able to explain column buckling.
⑤	h	Be able to explain failure theory.
⑥	h	Be able to explain fatigue and surface damage.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	20	40	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	10	0	0	0	0	40
	Ability to think, reason and create	20	10	20	0	0	0	0	50
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	10	0	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	∠	Descriptive tests are given on the content of the lectures: (1) Strain definition (2) Characteristics of cross-sectional shape (3) Deflection of the beam under bending moment
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Quizzes	①	∠	Descriptive quizzes given on the after of sections: (1) Deflection of the beam (2) Column buckling
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Reports	①	∠	Out-of-class exercises will be assigned weekly. These exercises will be evaluated as the out-of-class learning portion of the course evaluation.
	②	∠	
	③	∠	
	④	∠	
	⑤	∠	
	⑥	∠	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Understand strain definition and measurement method. (2) Understand elastic stress-strain relationships and three-dimensional Mohr's circles. (3) Understand the beam deflection and determine the magnitude of deflection. (4) Understand the column buckling and determine the magnitude of buckling conditions. (5) Understand classification of failure type and fracture mechanisms clearly.	(1) Understand strain definition and measurement method. (2) Understand basics of elastic stress-strain relationships. (3) Understand basics of the beam deflection. (4) Understand basics of the column buckling. (5) Understand some basic fracture mechanisms.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction An overview of the subject Basics of mechanics of materials	Lecture and Q&A Self-check	Understanding the course objectives Confirm the course schedule	200
2 /	Strain definition Analysis of strain	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	40 160
3 /	Beam deflection (1) Elastic stress-strain relationships and Mohr’s circle	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	40 160
4 /	Beam deflection (2) Characteristics of cross-sectional shapes of the beam	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
5 /	Beam deflection (3) Deflection and spring rate in case of simple beam	Quiz Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
6 /	Beam deflection (4) Determining elastic deflections (1)	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
7 /	Beam deflection (5) Determining elastic deflections (2)	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
8 /	Column buckling (1) Theories	Quiz Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
9 /	Column buckling (2) Determining the magnitude of buckling load	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
10 /	Failure theory (1) Types of failure	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Failure theory (2) Factor of safety Reliability	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
12 /	Impact	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
13 /	Fatigue	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
14 /	Surface damage	Lecture and Q&A Self-check	Preview: Reading textbook Review: Solving problems on the textbook	60 140
15 /	Integrated learning	Lecture and Q&A Self-check	Preview: Review: Confirming the notebook for this course	200
16 /	Final examination	Descriptive test Self-check	Self-evaluation	
17 /	Review	Self-check Review		

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Mech. Req.	Measurement Engineering	2	541100	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	HUSSIEN, Alaa	Kanazawa C 31-124		Friday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Units- Dimensions- Standard deviation	Students will be able to find the units and dimensions of any physical quantity, define terms such as accuracy, precision, mean, median, etc., wring block gauge, set dial gauges to detect run outs, fabricate Roberval balances, use strain gauges to measure the weight of objects, set thermistors and LM35 to measure temperatures, use encoders to measure the speed of a shaft, design and make a photo sensor to measure the displacement in a step of 100μm.
2	Strain gauge-Whetstone bridge	
3	Thermistors-Thermocouple	
4	Rotary encoders-Shaft speed	
5	Photo sensor- Displacement	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes. This course will offer group work and collaboration while they design and fabricate the devices as a type of active learning. First, students study the basic units and dimensions, then go through the definition of some terms such as accuracy, precision, mean, error, etc. Students will learn how to calculate the standard deviation learn about function approximation using least square method. The second part will be project based learning topics. students will do experiments to measure some quantities using existed devices or design and fabricate their own devices to measure other quantities. First, they use block and dial gauge to detect runouts of machines. Second, fabricate a Roberval balance to measure the mass and compare it with the normal equal-arm balance. Second, they understand the structure of the strain gauge sensor and its experimental setup to measure weights of objects then do the experiment. Third, students will learn about many devices such as thermistor, thermostat, thermocouple and LM35. They will do experiments to measure the temperature of water using different sensors interfaced with Arduino microcontroller. Fourth, students study about the rotary encoders and then do an experiment to measure the speed and the direction of rotation of a dc motor shaft. Lastly, students learn about displacement sensors and then make a sensor to measure the displacement of with a resolution of 100μm.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Reference books: "Theory and Design for Mechanical Measurements" *Richard* S. *Figliola*, 6th Ed. ISBN: 978-1-118-88127-9

Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students should master the basics of electric circuits such as Ohm's law and voltage divider rules. Students should know how to use laser cutters, 3-D printers, electric saw, drilling machines, milling machines and aware of the safety regulations of those machines. Also, they should set up and use Arduino microcontroller and create, compile and run a C^{++} code. Students should know well how to use some tools such as Vernier caliper, micrometer, multimeter, power supply, Oscilloscope.

No.	Program Objectives	Target Abilities for Students (9pt)
①	d	Able to find the units and dimensions of any physical quantities and understand many measurements terms
②	d,e	Detect the runouts of machines within a resolution of 1μm using block and dial gauges.
③	d,b,e	Understand the design features of Roberval balance and fabricate it-Measure the weights by strain gauges.
④	d,b,e	Set up experiments to measure the temperature using a thermistor and LM35 interfaced with Arduino μC.
⑤	d,b,e	Set up experiments to measure the speed and rotation direction of a dc motor shaft using a rotary encoder.
⑥	d,b,e	Make a photo sensor by using a photo diode and an LED and measure the displacement of a shutter.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		30	20	20	0	30	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	10	10	10	0	0	0	0	30
	Ability to think, reason and create	10	10	5	0	10	0	0	35
	Collaboration and leadership	0	0	0	0	10	0	0	10
	Announcement / Expression / Communication	0	0	0	0	5	0	0	5
	Attitude and motivation for learning	10	0	5	0	5	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	There will be one exam, the final exam which will cover materials studied in the whole semester. It is worth 30% of your final grade. It is crucial that you study all your notes, worksheets before the exam.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	After the 8th class, there will be a mid-term test. It will cover the material studied in the previous 8 classes. It is worth 20% of the final grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Every class the students are given a worksheet contains questions and problems to be solved out of the class. The worksheet of each class should be submitted at the beginning of the next class. The grading criteria will be based on content acquisition (10%) and quality of work through showing clear steps on how students get the answers (10%). This 20% of the total score is delegated for the out of the class tasks during the 200 min. assigned for it
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	The work will be done either individually or in groups. The grading criteria is explained in the work rubric and will be based on the following: 1-Design and /or implementation: How did each student or group could conceive the best design and how they could set up the experiment or fabricate the device? (10%) 2-Operation: How reliable is the product or how good are the results and how could they find and figure out any problem arises? (10%) 3-Report: each student should write a report to describe the work and show the results. This report should be submitted after the completion of each project. It worth 10% of the total score as an out of the class task which can be done during the 200 min assigned for it.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
1-Students are able to conceive the best design and experiment set up to measure different quantities. 2-Measure the weight, temperature, speed, displacement, and analyze the results. 3-Create and execute C++ codes and set up Arduino µc to be used for measuring the temperature. 4-Use the technology such CAD software, laser cutter and 3-D printer to make the parts of the products. 5-Determine and figure out any problem arises during the experiment.	1-Students are able to make a design and an experiment set up to measure different quantities. 2-Measure the weight, temperature, speed, displacement, and ask for help to evaluate the results. 3-able to set up Arduino µc and write the C++ code then execute it to display the results. 4-Use some technology such as laser cutters and 3-D printers.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course guidance Introduction to measurement The units of physical quantities Dimensional analysis of physical quantities	Course outlines and class style. A lecture demonstrates the topic	Read the course syllabus and review the notes of the lecture. Do the assignments.	200
2 /	Measurements terms definitions. Measurement error and error propagation.	A lecture demonstrates the topic.	Review materials of last class. Do the assignments. Prepare for the next class.	200
3 /	Standard deviation Z- score	A lecture demonstrates the topic.	Review materials of last class. Do the assignments. Prepare for the next class.	200
4 /	Function approximation. Taylor series-Least square method.	A lecture demonstrates the topic.	Review materials of last class. Do the assignments. Prepare for the next class.	200
5 /	Mass measurement (1). Equal-arm balance- Roberval balance.	A lecture demonstrates the topic. Demonstration of the equal-arm balance Solving a worksheet.	Review materials of last class. Do the assignments. Prepare for the next class.	200
6 /	Mass measurement (2) Roberval balance design and implementation Area Measurement using Plainmeter	Hands-on session for implementation.	Review materials of last class. Make the report. Prepare for the next class.	200
7 /	Force measurement (1) Introduction to sensors (strain gauge sensor).	A lecture demonstrates the topic.	Review materials of last class. Do the assignments. Prepare for the next class.	200
8 /	Force Measurement (2) An experiment of measuring the weight of an object.	Hands-on session.	Review materials of last class. Make the report. Study for the mid-term test.	200
9 /	Mid-term test Length measurement.	Test on the contents of class #1- class #8 A lecture demonstrates the topic.	Review materials of all classes. Do the assignments. Prepare for the next class.	200
10 /	Temperature measurement (1) Introduction to temperature sensors (Thermostat-Thermistor-Thermocouples)	A lecture demonstrates the topic.	Review materials of last class. Do the assignments. Prepare for the next class.	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Temperature measurement (2) An experiment of measuring the temperature of some water using different sensors	Hands-on session.	Review materials of last class. Make the report Prepare for the next class.	200
12 /	Displacement measurement (1) Introduction to displacement sensors.	A lecture demonstrates the topic.	Review materials of last class. Do the assignments. Prepare for the next class.	200
13 /	Displacement measurement (2) An experiment to measure the displacement of a shutter using a photo diode.	Hands-on session	Review materials of last class. Make the report Prepare for the next class.	200
14 /	Speed measurement (1) Introduction to rotary encoders. Absolute encoder.	A lecture demonstrates the topic.	Review materials of last class. Do the assignments. Prepare for the next class.	200
15 /	Speed measurement (2) An experiment of measuring the speed of a dc motor shaft using a rotary encoder.	Hands-on session	Review materials of last class. Make the report. Study for the final exam.	200
16 /	Final Exam	Exam on the contents of classes #1 to class #15		
17 /	Final Exam Return. Self-check.	Return the exams results.		

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Mech. Required	Control Engineering	2	540800	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	KUSHIMA, Yoshihiro	31.117		16:50-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Transient response	Students will: (1) Learn to analyze transient response to an impulse or step input. (2) Learn frequency response analysis by using vector locus and Bode plots. (3) Acquire the capability to determine the stability of a system using the Hurwitz stability criterion.
2	Vector locus	
3	Bode plot	
4	Stability criterion	
5	PID control	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This course will offer experimental learning in class as a type of active learning.

This is a basic course in control engineering. We will cover the following topics:
1. Transient response analysis using Laplace transforms.
2. Frequency response analysis using vector locus and Bode plots.
3. Determining stability of a system by Hurwitz stability criterion.
4. Experiments on PID control using actual equipment.

Students are expected to understand the meaning of the analysis method for control systems and expected to determine the stability of a control system.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Sufficient mathematical calculation skills.
Basic knowledge of differential and integral calculus.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h, i	Obtain impulse response and step response.
②	h, i	Understand the characteristics of vector locus for first-, second-, and third-order systems.
③	h, i	Describe Bode plots.
④	h, i	Determine the stability of a system.
⑤	h, i	Understand the PID control through the experiment.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		40	20	0	0	0	0	40	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	10	0	0	0	0	20	50
	Ability to think, reason and create	10	5	0	0	0	0	10	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	10	5	0	0	0	0	10	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①	✓	A written exam is given at the end of the term and the results will account for 40% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①	✓	Several 50-minute quizzes are given to improve comprehension and the results will account for 20% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	To support self-directed learning, assignments will be given as out-of-class work and the results will account for 40% of the overall grade.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Obtain impulse response and step response for second-order and higher-order systems (2) Describe the vector locus for second-order and higher-order systems (3) Describe Bode plots for second-order and higher-order systems (4) Determine the stability of second-order and higher-order systems using the Hurwitz stability criterion	(1) Obtain impulse response and step response for a first-order system (2) Describe the vector locus for first-order and/or second-order systems (3) Describe Bode plots for first-order and/or second-order systems (4) Determine the stability of a second-order system using the Hurwitz stability criterion

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Course introduction Impulse response Step response	Guidance Lecture and Q&A	Understand the objectives of the course Preview and Review	200
2 /	Step response of a first-order system	Lecture and Q&A	Preview and Review lecture content and assignments	200
3 /	Step response of a second-order system	Lecture and Q&A	Preview and Review lecture content and assignments	200
4 /	Transfer function and frequency response	Lecture and Q&A	Preview and Review lecture content and assignments	200
5 /	Vector locus	Lecture and Q&A	Preview and Review lecture content and assignments	200
6 /	Review for Quiz 1	Review	Prepare for quiz Preview and Review	200
7 /	Quiz 1	Quiz	Preview and Review	200
8 /	Quiz 1 Return Bode plot	Lecture and Q&A	Preview and Review lecture content and assignments	200
9 /	Bode plot	Lecture and Q&A	Preview and Review lecture content and assignments	200
10 /	Stability of control systems	Lecture and Q&A	Preview and Review lecture content and assignments	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Hurwitz stability criterion	Lecture and Q&A	Preview and Review lecture content and assignments	200
12 /	Arduino MATLAB/Simulink Exercises(1)	Lecture and Q&A	Preview and Review lecture content and assignments	200
13 /	Arduino MATLAB/Simulink Exercises(2) Review for Quiz 2	Lecture and Q&A Review	Prepare for quiz Preview and Review	200
14 /	Quiz 2	Quiz	Review	200
15 /	Quiz 2 Return Review for Final Exam	Review	Prepare for the final exam	200
16 /	Final Exam	Exam	Review all materials	
17 /	Returning Final Exam Results	Review Self-evaluation		

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Mech. Elective	Materials Engineering	2	541000	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	HAN, Justin	Kanazawa C 31.119		Make an appointment in class

Course Objectives

	Keywords	Learning Objectives
1	Engineering Materials	Materials Engineering refers to the criteria and decisions behind the selection of the materials used in the design of mechanical parts. Students will learn about the chemical makeup of and its influence on the mechanical properties of each class of material. In addition, students will learn about basic fabrication and evaluation methods. Lastly, students will learn to consider the influence of each material in regard to modern society.
2	Crystal Structure	
3	Fracture	
4	Fabrication and Processing	
5	Metal, Ceramic, Polymer, Composite	

Course Description and Expectations for Students

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.

The progression of the course is as follows'

1. Overview of the 4 Basic Classifications of Materials used in Engineering and Industry
2. Introduction to Fracture Mechanisms
3. Introduction to common Fabrication and Processing Methods
4. Economic, Environmental, and Societal Issues in Materials Engineering

The majority of this course will be focused on processing and understanding ideas and concepts. Therefore, success in this class will depend on the students' ability to analyze information and draw conclusions.

This course will offer discovery learning and experiential learning in class as types of active learning.

Required Materials (textbooks, reference books, reserved books)

Textbooks: Fundamentals of Materials Science and Engineering: An Integrated Approach, International Adaptation, 6th Edition ISBN: 978-1119820543

Reference books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

Knowledge of basic chemistry concepts (Periodic Table of Elements, Molecular Bonds)

No.	Program Objectives	Target Abilities for Students
①	h	Be able to categorize materials based on properties
②	h	Be able to analyze and determine mode of fracture for each class of material
③	h	Be able to select appropriate materials according to application
④	a, d	Be able to select appropriate fabrication and processing methods according to design requirements
⑤	b, h	Be able to connect concepts to applications in modern industry and society
⑥	a, g, i	Be able to extrapolate potential application for materials based on their properties

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		35	30	35	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	25	20	15	0	0	0	0	60
	Ability to think, reason and create	10	10	10	0	0	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	0	10	0	0	0	0	10

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①	✓	There will be a final exam at the end of the semester that will test students on important vocabulary and terminology as well as the concepts regarding the materials that the students learned about throughout the semester.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Quizzes	①	✓	There will be a short quiz every 2 weeks at the beginning of class about the contents of the previous two classes. For these quizzes, students are allowed to use their own homework that they have completed as reference material for the quiz. Students are not allowed to use their textbook, the internet, cellphones, class notes, or anyone else's notes. Makeup quizzes will not be given without a valid excuse.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	There will be homework every week based on the concepts taught in class. Homework will be collected alongside the quizzes every two weeks. It is important that students understand what is being asked in each problem and their individual answer to those problems as they will be their reference materials for the quizzes. Furthermore, the contents of the homework will be connected to the following week's topics. Due to this, homework must be completed in a timely manner. Late homework will be accepted after their submission deadline at a -10% late penalty per school day up to a max of -50%. However, any homework that is copied will result in a 0.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
- Able to explain the properties attributed to the basic material types and subtypes. - Able to explain the cause of fracture and propose methods for prevention - Able to develop prospective applications of materials with valid supporting arguments - Able to propose fabrication methods based on desired specifications, budget, and environmental effects - Able to propose materials for use in real-world applications based on desired specifications - Able to explain the reason for the application of a material	- Able to identify general properties of the basic material types - Able to identify the mode of fracture of materials - Able to give a simple reason for using a material in an application - Able to identify the method of fabrication of material parts - Able to identify the type of material used in real-world applications - Able to identify the reason for the application of a material

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Guidance Students learn about the history of materials in engineering and about the 4 classes of materials used in modern industry.	Lecture	Review: (1) Read and understand the rules and regulations that are being applied to the course. (2) Read the relevant chapters.	200
2 /	Crystal Structure (1) Students learn about the differences in the crystal structure of each classification of material.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
3 /	Crystal Structure (2) Students learn about the differences in the crystal structure of each classification of material.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
4 /	Crystal Structure (3) Students learn about Phase Diagrams for metals and ceramics.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
5 /	Crystal Structure (4) Students learn about how the crystal structure of each class of material affects their physical properties.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
6 /	Material Evaluation Methods Students learn about how the properties of materials are evaluated.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
7 /	Fracture Mechanisms (1) Students learn about the modes of fracture for each class of material.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
8 /	Fracture Mechanisms (2) Students learn about the factors that can affect the mode of fracture for each material.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
9 /	Types and Application of Materials Students learn about the different types and applications for each class of materials.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
10 /	Fabrication and Processing (1) Students learn about common fabrication methods for metal materials.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Fabrication and Processing (2) Students learn about common fabrication and processing methods for ceramic materials.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
12 /	Fabrication and Processing (3) Students learn about common fabrication and processing methods for polymer materials.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
13 /	Fabrication and Processing (4) Students learn about common fabrication and processing methods for composite materials.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
14 /	Economic, Environmental, and Societal Issues in Materials Engineering (1) Students learn about the influence of materials on modern society.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
15 /	Economic, Environmental, and Societal Issues in Materials Engineering (2) Students learn about the influence of materials on modern society.	Lecture	Preview: Read Assigned Chapters Review: Complete Assignment	200
16 /	Final Exam			
17 /	Final Exam Return			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Mech. Elective	Thermal Engineering	2	540700	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	NAGANUMA, Kaname	44-203		Make an appointment in class

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Carnot Cycle	The goals of this course are to; (1) understand basic knowledge about the irreversibility in the nature. (2) learn how to convert energy and obtain work from heat. acquire design skills for energy conservation, effective utilization of energy resources, and energy conservation in mechanical engineering.
2	The Second Law of Thermodynamics	
3	Entropy, Exergy	
4	Real Gas	
5	Thermal Cycles	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.

This course follows Thermodynamics. Thermodynamics mainly dealt with quantitative energy conservation by explaining thermal equilibrium and the 1st law of thermodynamics. Based on the knowledge of Thermodynamics, this class conducts the necessary skills and knowledge of thermal engineering needed to design actual thermal equipment. The class explains a qualitative evaluation of energy and effective utilization of energy resources based on the 2nd law of thermodynamics, the basic concepts of heat engines, and knowledge of vapor properties as an example of real gas. Significantly, this class covers the following topics:

(1) Thermal efficiency and Carnot cycle, (2) The 2nd law of thermodynamics, (3) Entropy, Exergy,
(4) Thermal characteristics of real gas, (5) Gas cycles

Students are expected to understand the meaning of terms and formulas. Students are expected to solve the exercises by yourself. Students should be aware of the instructor's explanation in class because the schedules of quizzes, tests, and reports may change as the class progresses. Students should not be absent from the class, as the handouts may not be received. Detailed schedules and course contents are explained in the first class.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks: Thermodynamics, English-Japanese Bilingual Textbook Series of Fundamental Engineering, Masataka Arai and Tomohiko Furuhata, Morikita Publishing.

Reference books: Technical Thermodynamics for Engineers -Basic and Applications-, Achim Schmidt, Springer.

Reserved books: N/A

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Enough skill of mathematics (especially differential / integral calculations)
How to use a calculator

No.	Program Objectives	Target Abilities for Students (9pt)
①	g, h, i	Be able to explain the Carnot cycle and apply the knowledge to problems
②	g, h, i	Be able to explain the 2nd law of thermodynamics
③	g, h, i	Be able to explain entropy and exergy and apply the knowledge to problems
④	g, h, i	Be able to explain the characteristics of a real gas with phase change and apply the skills to problems
⑤	g, h, i	Be able to explain gas cycles and apply the knowledge to problems about the design of thermal equipment
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	70	30	0	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	25	0	0	0	0	0	25
	Ability to think, reason and create	0	35	10	0	0	0	0	45
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	0	0	0	10
	Attitude and motivation for learning	0	10	10	0	0	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Tests are conducted several times during class to confirm learning of the course content.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①	✓	Several reports need to be prepared as homework. The content of the reports includes previews and reviews of class topics.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
(1) Explain the 2nd law of thermodynamics. Also, use this understanding to solve advanced problems related to thermal issues. (2) Explain Carnot cycle. Also, use this understanding to solve advanced problems related to thermal issues. (3) Explain a real gas and its characteristics. Also, use this understanding to solve advanced problems related to thermal issues. (4) Explain the various gas and vapor cycles with P-V and T-S diagrams. Also, evaluate the performance of thermal systems.	(1) Explain the 2nd law of thermodynamics. Also, use this understanding to solve basic problems related to thermal issues. (2) Explain Carnot cycle. Also, use this understanding to solve basic problems related to thermal issues. (3) Explain a real gas and its characteristics. Also, use this understanding to solve basic problems related to thermal issues. (4) Explain the various gas and vapor cycles with P-V and T-S diagrams. Also, evaluate the performance of thermal systems.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Introduction - Guidance for the course - Differences of Thermodynamics and Thermal Engineering Lecture: The 2nd law of Thermodynamics (1): - Concept of cycle - Thermal efficiency, Coefficient of performance (COP)	Lecture Self-check	Review the contents of Thermodynamics and prepare chpt. 12.1 and 12.3 on the textbook. Review	100 100
2 /	Lecture: The 2nd law of Thermodynamics (2): - Reversible and irreversible processes - Characteristics of Carnot cycle - Expression of the 2nd law of thermodynamics - Clausius' integral	Lecture Exercise Self-check	Prepare chpt. 9, 12.4, 13.1 - 13.4 on the textbook. Review	100 100
3 /	Lecture: The 2nd law of Thermodynamics (3): - Definition of Entropy - T-S diagram - Equations for entropy change	Lecture Exercise Self-check	Prepare chpt. 6, 7.1 – 2 on the textbook. Review	100 100
4 /	Lecture: The 2nd law of Thermodynamics (4): - Entropy change of ideal gas - Entropy change of liquids and solids	Lecture Exercise Self-check	Prepare chpt. 8 on the textbook. Review	100 100
5 /	Lecture: The 2nd law of Thermodynamics (5): - Exergy - Free energy Review of the 2nd law of Thermodynamics	Lecture Exercise Self-check	Prepare chpt. 6.4 and 13.6 on the textbook. Review	100 100
6 /	Test (1) : The 2nd law of thermodynamics	Test Self-check	Review the previous contents of the 2nd law of thermodynamics. Review	150 50
7 /	Lecture: Characteristics of real gas (1) - Difference of ideal gas and real gas - Phase change	Lecture Exercise Self-check	Prepare chpt. 3.1 and prepare chpt. 15.1 on the textbook. Review	100 100
8 /	Lecture: Characteristics of real gas (2) - van der Waal's equation of state - Wet saturated vapor	Lecture Exercise Self-check	Prepare chpt. 15.2 – 15.3 on the textbook. Review	100 100
9 /	Lecture: Characteristics of real gas (3) - Thermodynamic state change of water vapor - Example of calculation of characteristics of vapor Review of the characteristics of real gas	Lecture Exercise Self-check	Prepare chpt. 15.4 on the textbook. Review	100 100
10 /	Test (2) : Characteristics of real gas	Test Lecture Self-check	Review the previous contents of the characteristic of real gas. Review	150 50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Lecture: Gas cycles and their characteristics (1) - Internal combustion engine - Constant volume cycle	Lecture Exercise Self-check	Prepare chpt. 14.2 - 14.3 on the textbook. Review	100 100
12 /	Lecture: Gas cycles and their characteristics (2) - Constant pressure cycle - Sabathe cycle	Lecture Exercise Self-check	Prepare chpt. 14.4 - 14.5 on the textbook. Review	100 100
13 /	Lecture: Gas cycles and their characteristics (3) - Brayton cycle Review of the gas cycles	Lecture Exercise Self-check	Prepare chpt. 14.6 on the textbook. Review	100 100
14 /	Review (1) Whole quiz	Quiz Lecture Self-check	Review the previous contents Review the quiz	120 80
15 /	Review (2) Review of the whole contents of thermal engineering	Review Lecture Self-check	Review the previous contents	100 100

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Mech. Required	Programming A	2	531400	First	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	FUJISAWA, Takeshi	KC 31-113-2		Thu 9:00-17:00

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Data Type	The use of computers is a vital component of modern society. Continuing into the future, programs will continue to be developed to reduce various burdens in society. Understanding how those programs operate will allow engineers to operate and work more effectively. In this course, students will learn the basics of programming structures through the use of Python and how they apply to mechanical engineering.
2	Input/Output	
3	Conditional branch and Itration	
4	Function	
5	Python	

Course Description and Expectations for Students (10.5pt)

This course will offer experiential learning in class as a type of active learning.
This extensive 15-weeks course is meticulously designed to guide students through the fundamentals of Python programming to its advanced applications in various domains. The course begins with an introduction to Python, covering its setup, syntax, and basic programming concepts. As weeks progress, students will delve into more complex topics such as data structures, file handling, object-oriented programming.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic knowledge of computers

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Students will be able to apply existing knowledge about programming to learn a new programming language.
②	a,h	Students will be able to code a program with conditional branches and loops in Python.
③	a,h	Students will be able to code a program with data structures such as lists and dictionaries in Python.
④	a,h	Students will be able to code a program with Functions in Python..
⑤	a,h	Students will be able to code a program with Library in Python.
⑥	a,h,i	Students will be able to apply programming skills in the development of a simple data processing application.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	25	0	0	25	0	50	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	10	0	0	10	0	10	30
	Ability to think, reason and create	0	10	0	0	10	0	10	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	0	5	0	0	5	0	30	40

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	Check whether the students have acquired basic knowledge and skills about each unit they have studied. A quiz will be given to measure knowledge retention, focusing on the Tiny Quiz questions from the past.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Reports	①		.
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students will be evaluated about the knowledge and skills about creating a python program. Evaluation will be based on evaluation task and final project deliverables. Evaluation tasks account for 10% of the total evaluation and the final project accounts for 20% of the total evaluation。
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	Homework and exercises will be assigned as necessary to support self-study. Evaluation will be based on the content and submission of the assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can understand the basic grammar of Python. Students can write a little complicated Python code with conditional branches, lists, dictionaries, functions and libraries. Students can explain, implement and analyze the simple data processing or classification.	Students can understand the basic grammar of Python. Students can write a simple Python code with conditional branches, lists, dictionaries, functions and libraries. Students are able to explain the simple flow of data processing or classification.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1	Overview of Python and environment setup Features of Python, its usage, etc. Building an environment	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
2	Variable Basics Contents: Variable definitions, naming conventions	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
3	Data Types (1): Integers and Floats Contents: Characteristics of `int` and `float`, basic operations	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
4	Data Types (2): Strings and Booleans Contents: Basics of `str` (including string concatenation) and `bool	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
5	Data type conversion Contents: Type conversion with `int()`, `str()`, etc., `type()` function	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
6	Input and output (1) Contents: Basics of `input()` and `print()`, string formatting (f-string)	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
7	Input and output (2) Contents: options for `print()` (sep, end), multi-line input	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
8	Conditional Split (1): Basics of if statement Contents: Syntax of `if` and `else`, comparison operators	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
9	Conditional Split (2): Multiple Conditions Contents: `elif`, logical operators (and, or, not)	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
10	Exercise: Conditional Split Practice Contents: Problem solving using conditional branching	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11	Loop (1): Basics of the for statement Contents: `for` and `range()`, iterating over strings and lists	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
12	Loop (2): Basics of while statement Contents: Syntax of `while`, `break` and `continue	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
13	Exercise: Practice Looping Contents: Problem solving using loops	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
14	Lists (1): Basic Operations Contents: Creating lists, indexing, slicing	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
15	List (2): Methods and Its application Contents: `append()`, `remove()`, `sort()`, etc.	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
16	evaluation task Content: Comprehensive evaluation of	Assignment Self-learning	Review the past 15 class slides and exercises.	30
17	Functions (1): Basics and definitions Contents: Function definition, arguments	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
18	Functions (2): Its application and scope Contents: Default arguments, local/global variables	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
19	Exercises: Practice with Functions Contents: Problem solving using functions	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
20	Dictionaries (1): Basic Operations Contents: Creation of dictionaries, key/value operations	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21	Dictionary (2): Methods and Its applications Contents: `keys()`, `values()`, `get()`, etc.	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
22	Tuples and Sets Contents: Tuple invariance, set de-duplication	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
23	String Manipulation Applications Contents: `split()`, `join()`, regular expressions	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
24	File I/O and CSV (1) Contents: Reading and writing files, `with` statement	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
25	File I/O and CSV (2) Contents: Reading CSV, data processing	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
26	Modules and Libraries Contents: Introduction to `math`, `random`, and external libraries	Lecture and Exercise	Read the lecture slides given and proceed with exercises.	20
27	Final project (1): Theme selection and design Contents: Definition of requirements and basic design of the program	Exercise	Read the lecture slides given and proceed with exercises.	20
28	Final project (2): Implementation Contents: Start coding, implement basic functionality	Exercise	Review the specifications and design documents you have created.	20
29	Final Project (3): Wrap-up Contents: Submission of deliverables, feedback, reflection	Exercise	Reflect on your own activities in the Final Project and identify learning challenges。	20
30	Quiz Content: Quiz to synthesize what you have learned so far	Quiz	Review the questions you got wrong in the quiz.	20

2026 Syllabus

Instructor with "＊" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Mech. Elective	Programming B	2	531500	Second	Exercises Class

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	HAN, Justin	31.126		Make an appointment in class

Course Objectives

	Keywords	Learning Objectives
1	Numerical Analysis	Numerical analysis is commonly used to quantify real world phenomenon and create a mathematical model. Through the use of programs, engineers are able to expedite the creation of the model and reduce the probability of human error being incorporated in the model. Students in this course will learn how to use apply Python in order to perform simple numerical calculations.
2	Numerical Calculation Method	
3	Symbolic Computation	
4	Python	
5		

Course Description and Expectations for Students

This course will offer problem-based learning and discovery learning in class as types of active learning.
This course introduces the basics of applying Python to perform numerical analysis.

The progression of the course is as follows:

1. Application of NumPy arrays
2. Symbolic Calculation using SymPy
3. Plotting and Visualization using matplotlib
4. Regression, interpolation, and optimization using SciPy

Students are expected to bring their laptops to every class. In addition, topics are introduced and will build upon previous topics. Therefore, it is vital that assignments are completed on time.

Required Materials (textbooks, reference books, reserved books)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites)

- Basic knowledge of Python programming and matrix mathematics

No.	Program Objectives	Target Abilities for Students
①	g, h, i	Be able to use python to find numerical solutions to mathematical problems
②	g, h, i	Be able to use symbolic computation to find symbolic solutions to mathematical problems.
③	g, h, i	Be able to use python to create visual plots of data
④	g, h, i	Be able to use python to model systems of equations
⑤	g, h, i	Be able to use python to perform regression on experimental data
⑥	g, h, i	Be able to use python to perform interpolation on experimental data

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	40	0	60	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	10	0	25	0	0	35
	Ability to think, reason and create	0	0	10	0	20	0	0	30
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	5	0	0	15
	Attitude and motivation for learning	0	0	10	0	10	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	With the introduction of each new topic, there will be programming practices that we will work through during class together. Students are expected to document their understanding of the content.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	After the introductory exercises are completed, there will be specific problems provided. Time will be given during class. However, if these problems are not completed within the allotted time, students are expected to complete them outside of class. In addition, there will be a final comprehensive assignment where students will need to demonstrate their understanding of python numerical analysis.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
- Able to apply Python numerical analysis methods to solve real world problems. - Able to apply Python numerical analysis methods to create models of original experimental data	- Able to use Python to solve mathematical equations. - Able to use Python to create graphical representations of data.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	Guidance and Review Students learn about numerical analysis and review their understanding of Python.	Lecture	Review the concepts introduced in class.	50
2 /	Review Students review their understanding of Python.	Lecture	Review the concepts introduced in class.	50
3 /	Introduction to Numerical Analysis with Python Students learn how to perform basic mathematical calculations using Python.	Lecture	Review the concepts introduced in class.	50
4 /	Introduction to Numerical Analysis with Python Students learn how to perform basic mathematical calculations using Python.	Exercise	Complete the provided assignment.	50
5 /	Introduction to NumPy (1) Students learn about the basic applications of NumPy arrays.	Lecture	Review the concepts introduced in class.	50
6 /	Introduction to NumPy (2) Students learn about the basic applications of NumPy arrays.	Exercise	Complete the provided assignment.	50
7 /	Introduction to NumPy (3) Students learn about the basic applications of NumPy arrays.	Exercise	Complete the provided assignment.	50
8 /	Introduction to NumPy (4) Students learn about the basic applications of NumPy arrays.	Lecture	Review the concepts introduced in class.	50
9 /	Introduction to NumPy (5) Students learn about the basic applications of NumPy arrays.	Exercise	Complete the provided assignment.	50
10 /	Introduction to NumPy (6) Students learn about the basic applications of NumPy arrays.	Exercise	Complete the provided assignment.	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Introduction to SymPy (1) Students learn about the basic applications of SymPy symbols.	Lecture	Review the concepts introduced in class.	50
12 /	Introduction to SymPy (2) Students learn about the basic applications of SymPy symbols.	Exercise	Complete the provided assignment.	50
13 /	Introduction to SymPy (3) Students learn about the basic applications of SymPy symbols.	Exercise	Complete the provided assignment.	50
14 /	Introduction to SymPy (4) Students learn about the basic applications of SymPy symbols.	Lecture	Review the concepts introduced in class.	50
15 /	Introduction to SymPy (5) Students learn about the basic applications of SymPy symbols.	Exercise	Complete the provided assignment.	50
16 /	Introduction to SymPy (6) Students learn about the basic applications of SymPy symbols.	Exercise	Complete the provided assignment.	50
17 /	Plotting and Visualization (1) Students learn how to create data plots using matplotlib.	Lecture	Review the concepts introduced in class.	50
18 /	Plotting and Visualization (2) Students learn how to create data plots using matplotlib.	Exercise	Complete the provided assignment.	50
19 /	Importing and Exporting Data Files (1) Students learn how to import and export data files using Python.	Lecture	Review the concepts introduced in class.	50
20 /	Importing and Exporting Data Files (2) Students learn how to import and export data files using Python.	Exercise	Complete the provided assignment.	50

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
21 /	Introduction to Regression (1) Students learn how to perform regression analysis using NumPy.	Lecture	Review the concepts introduced in class.	50
22 /	Introduction to Regression (2) Students learn how to perform regression analysis using NumPy.	Exercise	Complete the provided assignment.	50
23 /	Introduction to Regression (3) Students learn how to perform regression analysis using NumPy.	Exercise	Complete the provided assignment.	50
24 /	Introduction to Interpolation (1) Students learn how to perform interpolation analysis using NumPy.	Lecture	Review the concepts introduced in class.	50
25 /	Introduction to Interpolation (2) Students learn how to perform interpolation analysis using NumPy.	Exercise	Complete the provided assignment.	50
26 /	Introduction to Interpolation (3) Students learn how to perform interpolation analysis using NumPy.	Exercise	Complete the provided assignment.	50
27 /	Comprehensive Assignment Students learn how to apply their knowledge of Python numerical analysis methods to complete a designated task.	Exercise	Complete the provided assignment.	50
28 /	Comprehensive Assignment Students learn how to apply their knowledge of Python numerical analysis methods to complete a designated task.	Exercise	Complete the provided assignment.	50
29 /	Comprehensive Assignment Students learn how to apply their knowledge of Python numerical analysis methods to complete a designated task.	Exercise	Complete the provided assignment.	50
30 /	Comprehensive Assignment Students learn how to apply their knowledge of Python numerical analysis methods to complete a designated task.	Exercise	Complete the provided assignment.	50

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Info. Required	Information Mathematics III	2	550300	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	FUJISHIMA, Satoshi	Kanazawa C 31.116		Thu. 16:30 - 17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Scientific Calculation	Machine learning algorithms are very important techniques in data science and data mining, and it is necessary to use different algorithms according to the purpose and build an appropriate machine learning model. In this course, students will learn typical algorithms of machine learning through hand calculation and implementation in Python.
2	Numerical Analysis	
3	Machine Learning	
4	Classification	
5	Regression	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.

This course will offer students the opportunity to explain their answers to assignments and answer questions to deepen their understanding in class as a type of active learning.

This course introduces machine learning techniques, such as linear regression analysis, k-NN, Naive Bayes and Decision Tree. In addition, this course also introduces validation methods and correctness to evaluate the performance of machine learning models. Students will gain a deeper understanding of machine learning techniques through manual calculations and program implementation in Python.
- Have your laptop ready before class every time.
- Be sure to prepare sufficiently for class and the incoming topics in advance.
- Submit assignments on time.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

No.	Program Objectives	Target Abilities for Students (9pt)
①	a,h,i	Students will be able to understand basics of scientific calculation methods and write simple programs using any of them.
②	a,i	Students will be able to explain the flow of machine learning process.
③	a,h,i	Students will be able to understand basics of classification methods and write simple programs using any of them.
④	a,h,i	Students will be able to understand basics of linear regression and write simple programs using any of them.
⑤	a,h,i	Students will be able to consider appropriate machine learning algorithms for each actual problem.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	0	50	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	15	0	20	0	0	35
	Ability to think, reason and create	0	0	15	0	20	0	0	35
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	5	0	0	15
	Attitude and motivation for learning	0	0	10	0	5	0	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Reports are worksheet exercises and written assignments for final project. The reports should be submitted by the due date designated by the instructors. All "Reports" assigned during class also serve as out-of-class learning assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Works are programming exercise assignments assigned during class. The Python source code should be submitted by the due date designated by the instructors. All "Works" assigned during class also serve as out-of-class learning assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to understand machine learning techniques and select an appropriate algorithm of them according to their purpose. Students are able to implement a program to build a machine learning model for data analysis (data mining).	Students are able to understand and explain simple flow of machine learning process. Students will be able to consider appropriate machine learning algorithms for each actual problem. Students are able to explain the simple flow of data processing or classification.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance, Python Programming Environment, Machine Learning Outline Regression Analysis (1)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
2 /	Regression Analysis (2) Students will learn about simple regression analysis by manual calculation and Python coding.	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
3 /	Regression Analysis (3) Students will learn about Python coding for simple regression analysis.	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
4 /	Regression Analysis (4) Students will learn about Python coding for simple regression analysis.	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
5 /	k-Nearest Neighbor (1) Students will learn about k-NN by manual calculation and Python coding.	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
6 /	k-Nearest Neighbor (2) Students will learn about k-NN by manual calculation and Python coding.	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
7 /	k-Nearest Neighbor (3) Scaling Students will learn about Scaling methods and apply them to the k-NN with Python coding.	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
8 /	Naive Bayes (1) Students will learn about Naive Bayes by hand calculation and Python coding.	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
9 /	Naive Bayes (2) Students will learn about Python coding for Naive Bayes.	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
10 /	Decision Tree (1) Students will learn about Decision Tree by hand calculation and Python coding.	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Decision Tree (2) Students will learn about Python coding for Decision Tree.	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
12 /	Validation Students will learn about Cross Validation and Python coding.	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
13 /	Correctness (1) Students will learn about Correctness of models and Python coding.	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
14 /	Correctness (2) Students will learn about Correctness of models and Python coding.	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
15 /	Correctness (3) Students will learn about Correctness of models and Python coding.	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Info. Required * Practical	Database	2	550800	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	* FUJISAWA, Takeshi	Kanazawa C 31:113		Fri. 15:30 – 17:30

Course Objectives

Keywords		Learning Objectives
1	Relational Database	In today's advanced information society, the amount of data handled by information processing systems is enormous, and the growth of data volume is accelerating. The need for data scientists is increasing every year. This course provides an overview of databases, mainly relational databases, and how to write and operate SQL.
2	SQL	
3	Database normalization	
4	Relational Algebra	
5	Transaction	

Course Description and Expectations for Students

This will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This course will offer Problem-solving and experiential learning in class as a type of active learning.

Learn the basics of data models and database management systems, focusing on relational databases. Students will learn the basics of data models and database management systems, focusing on relational databases. Assignments will be given to improve students' understanding and grasp of the content of the course. In the curriculum, this course aims to develop software development skills using databases. In the curriculum, this course aims to cultivate the ability to develop software using databases, and students should take this course with the mastery of SQL as a programming language in mind.

Relevance of practical experience to class subjects

Faculty members with practical experience in software development at major information companies and IT-related Internet venture companies will practice database design and database programming. In the programming exercises, they use database engines that are actually used in the real world, so that students can acquire practical and practical programming know-how based on their work experience.

Required Materials (textbooks, reference books, reserved books)
Textbooks: The Manga Guide to Databases (No Starch Press) ISBN 978-1-59327-190-9
Reference books: None
Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites)

Students should have the skills to install a relational database management system. In the first class, we will practice how to install the relational database management system and how to build the environment. Be sure to bring your textbook and notebook PC to each class.

No.	Program Objectives	Target Abilities for Students
①	i,h	Understand what the given SELECT statement is querying.
②	i,h	Can design a database and create tables.
③	i,h	Can transform from first normal form to third normal form
④	i,h	Can explain the difference between second normal form and third normal form
⑤	h	Can write programs that manipulate SQL.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		55	0	0	0	30	0	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	20	0	0	0	15	0	5	40
	Ability to think, reason and create	20	0	0	0	0	0	5	25
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	15	0	0	0	15	0	5	35

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①	✓	Check whether the students have acquired basic knowledge and skills about each unit they have studied.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		Students will be evaluated about the knowledge and skills about creating a program to operate a database.
	②		
	③		
	④		
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	An assignment will be given to support self-study, and its validity will be assessed as the result of self-study done 30 times in 50 minutes.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
In addition to the standard achievement levels, the student should be able to (5) Can write complex SQL statements, including joins and subqueries (6) Can design a database that is correctly implemented up to the third normalization. (7) Can write programs to manipulate databases.	(1) Can explain what a relational data model is. (2) Can write SQL for a given relational algebra. (3) Represent the real world using the entity-relationship model, and translate the representation into a relational database schema. (4) Explain in detail the normalization procedure

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	What is a database? Able to explain why a database is necessary.	Lecture	Read textbook and Assignment	200
2 /	What is a relational database? Able to explain what relational database is.	Lecture	Read textbook and Assignment	200
3 /	Relational Algebra Able to perform relational algebra operations.	Lecture	Read textbook and Assignment	200
4 /	Let's design a database Able to draw E-R model diagrams. Able to normalize non-normal form data to first normal form.	Lecture	Read textbook and Assignment	200
5 /	2nd Normal Form Able to normalize 1st normal form to 2nd one	Lecture	Read textbook and Assignment	200
6 /	3rd Normal Form Able to normalize 2nd normal form to 3rd one	Lecture Quiz	Read textbook and Assignment	200
7 /	SQL① Basic Of SQL	Lecture	Read textbook and Assignment	200
8 /	SQL② Able to make basic select SQL statement Able to create tables Able to insert, update or delete data rows	Lecture	Read textbook and Assignment	200
9 /	SQL③ Able to group data and extract data by using complex extraction conditions of SQL.	Lecture	Read textbook and Assignment	200
10 /	SQL④ Able to make complex SQL statement and join tables, Able to make SQL with subquery	Lecture Quiz	Read textbook and Assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	Let’s operate a database / Transaction. Able to explain ACID Able to perform SQL operations using transactions	Lecture	Read textbook and Assignment	200
12 /	Let’s operate a database / Transaction. why deadlock happens. When Disaster Strikes Indexes	Lecture Quiz	Read textbook and Assignment	200
13 /	DB programming ① Basic of a DB programming	Lecture	Read textbook and Assignment	200
14 /	DB programming ② Create a program to perform CRUD operations	Self-Study	Assignment of DB programming	200
15 /	DB programming ③ Create a program to perform CRUD operations	Self-Study	Assignment of DB programming	200
16 /	Final exam			
17 /	Review of final exam and assignment results Self-check Submit assignments			

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Info. Required	Software Engineering Lab	2	551100	First	Exercises Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	SONGER, Robert	Kanazawa C: 31.115		Wed. 16:00 – 17:00

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Software Engineering	Software Engineering is a practice-oriented discipline. This course provides students with hands-on experiences for efficiently developing object-oriented software products using software engineering techniques. In addition, students will have an opportunity to develop the necessary teamwork skills including leadership, collaboration, sharing responsibilities through roles, and continuous learning in a team-based computer graphics software project.
2	Computer Graphics	
3	Rendering	
4	Software Frameworks	
5	Team Development	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes. This course will offer regular programming exercises and a team project in class for active learning.

Students will have an opportunity to practice the software engineering techniques they learned in previous years and apply them to the domain of computer graphics. The course begins with teaching the basics of computer graphics (CG) through hands-on exercises that build a CG framework with Python and OpenGL. The students will then use their computer graphics frameworks to create a software application in a team development project

The class contents rely heavily on reading contents assigned every week, so it is important to **check the weekly reading assignments**. The teacher may apply a late penalty to your assignments if you are disruptive or do not participate in class activities.

NOTE: The textbook below is available for free at taylorfrancis.com and will also be available on the course home page.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks: "Developing Graphics Frameworks with Python and OpenGL" (CRC Press) ISBN 978-1-003-18137-8
Reference books: None
Reserved books: None

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Students must be familiar with Object-Oriented Programming concepts and be able to set up a development environment for the Python programming language. They should also have a basic understanding of the software development lifecycle from conception to delivery, including the various activities involved in each step.

No.	Program Objectives	Target Abilities for Students (9pt)
①	h	Explain the steps of a typical computer graphics rendering pipeline
②	h, i	Understand the mathematical theory behind geometric transformations
③	a, h	Create a 3-dimensional scene using a computer graphics framework
④	b, g	Apply software engineering practices to the steps of a development project
⑤	c, d	Plan and execute a software development project as a team
⑥	e, f	Write code with the intention for others to use it

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	10	30	0	30	30	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	0	5	0	0	20
	Ability to think, reason and create	0	5	10	0	15	10	0	40
	Collaboration and leadership	0	0	0	0	0	10	0	10
	Announcement / Expression / Communication	0	0	10	0	0	5	0	15
	Attitude and motivation for learning	0	0	0	0	10	5	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There are two quizzes during the semester. Quizzes are short tests with simple answer type questions such as multiple-choice and fill-in-the-blanks. They allow the students to confirm their comprehension of recently covered content.
	②	✓	
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Reports are general assignments including handouts, written reports, and documents created during various in-class activities. Reports will be evaluated based on the accuracy of student responses in most cases; otherwise, they will be evaluated based on the amount of effort students put into their creation. In general, if a student submits one of these assignments late, **they will lose 20% of its maximum value towards their grade**.
	②	✓	
	③	✓	
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Works are programming exercises assigned during class from the textbook or from the teacher. They give students a chance to apply what they learned to making a small program with an explicit purpose. In general, if a student submits one of these assignments late, **they will lose 20% of its maximum value towards their grade**.
	②	✓	
	③	✓	
	④		
	⑤		
	⑥		
Portfolios	①		The team development project at the end of the semester will count towards student portfolios. It will be graded based on completeness and demonstrated skill of its outcomes, including documents related to planning and managing the project.
	②		
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
① Describe the steps of a computer graphics pipeline ② Explain transformations in terms of matrices and vectors ③ Create a 3D scene with a computer graphics framework ④ Apply software engineering to a development project ⑤ Plan the necessary steps for completing a project ⑥ Write code with comments that is easy to read and maintain	① Identify the steps of a computer graphics pipeline ② Identify transformations in terms of matrices and vectors ③ Apply functions to produce elements of a 3D scene ④ Explain techniques used in a development project ⑤ Follow the necessary steps for completing a project ⑥ Explain a program with comments in the source code

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance and Intro to Computer Graphics Get an overview of the course and the fundamentals of computer graphics rendering pipelines.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200
2 /	CG Application Lifecycle Set up base components of a CG framework to link shaders and create a basic GPU program.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200
3 /	Shapes and Colors Use single buffering and double buffering with a vertex shader to draw shapes and interpolate between color vertices.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200
4 /	Animation and Interactivity Create moving shapes with integrated keyboard inputs.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200
5 /	Vectors and Matrices Review the mathematical concepts of vectors, matrices, and their transformations.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200
6 /	Geometric Transformations Derive the matrix formulas for 2D and 3D geometric transformations.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200
7 /	Enter The Matrix Create a Matrix class and use it to demonstrate translation and rotation transformations.	Lecture Discussion Exercises Quiz	The teacher will announce assignments in class.	200
8 /	The Scene Graph Overview the scene graph and build the structure for a framework that can render 3D scenes.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200
9 /	3D Scenes with Geometry and Material Objects Create classes to represent geometric shapes and their rendering properties, then render a 3D scene by putting together the pieces of the scene graph framework.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200
10 /	Polygons, Planes, Spheres, and Cylinders Build a library of geometries for use in constructing complicated 3D scenes.	Lecture Discussion Exercises	The teacher will announce assignments in class.	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Team Development Project (1) Choose a project theme as a team and plan its development.	Team Project	The teacher will announce assignments in class.	200
12 /	Team Development Project (2) Follow through on the team plan and execute the development.	Team Project	The teacher will announce assignments in class.	200
13 /	Team Development Project (3) Follow through on the team plan and execute the development.	Team Project	The teacher will announce assignments in class.	200
14 /	Team Development Project (4) Follow through on the team plan and execute the development.	Team Project	The teacher will announce assignments in class.	200
15 /	Team Development Project (5) Follow through on the team plan and execute the development.	Team Project	The teacher will announce assignments in class.	200

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Info. Elective	Media Informatics	2	551300	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	OGAWA, Hayato	KC 31-115		Make an appointment in class

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	New Media	This course introduces Media Informatics, covering how digital media (text, images, audio, video) is created, processed, compressed, stored, and delivered. Students study media history and "new media," then connect these ideas to modern platforms such as telecom networks, mobile/AR, social media, AI/ML, cloud, IoT, and streaming, with a focus on codecs and compression under real-world constraints.
2	Compression	
3	Visual Codec	
4	Audio Codec	
5	Image compression	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.
This course will offer experiential learning in class as a type of active learning
In this Media Information class students will be introduced to Media history to current methods of interaction with media and importance effect of Media in the world. With information on the computer science aspect of distributing media with consideration to systems and hardware limitations.
Advice on taking this course:
- Have laptops or notebooks ready before class starts.
- Be sure to prepare sufficiently for class and the incoming topics in advance.
- Submit assignments on time.

Required Materials (textbooks, reference books, reserved books) (10.5pt)
Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Knowledge and experience learned and acquired so far in AI fundamentals, Programming class, Calculus classes.

No.	Program Objectives	Target Abilities for Students (9pt)
①	a,h	Students will be able to explain media evolution and "new media" and describe how media shapes society and communication.
②	a,h	Students will be able to key innovations in the history of Media.
③	a,h	Students will be able to implement correct formatting for image compression needs depending on hardware.
④	a,h	Students will be able to know the difference between different types of video compression formats.
⑤	a,h,i	Students will be able to know the way current audio media is consumed.
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	50	0	50	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	0	20	0	0	40
	Ability to think, reason and create	0	0	0	0	10	0	0	10
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	0	0	0	10
	Attitude and motivation for learning	0	0	20	0	20	0	0	40

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	In class activity exercises will be done on key topics. Students will involve a lot of hands-on exercises starting with programming and establishing a connection to microcontroller peripherals boards.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Students will be evaluated on their acquisition of knowledge with class review questions for homework.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students can accurately explain core media informatics concepts (media pipeline, telecommunications basics, and platform delivery models) and justify technical decisions using evidence (e.g., bitrate/quality/latency constraints). Students can compare image, audio, and video codecs and compression methods, select suitable formats for a given device/network scenario, and communicate their analysis clearly in reports. They complete a media-focused project that demonstrates correct understanding of compression tradeoffs and system limitations, with well-organized documentation and appropriate citations.	By the end of the course, students can describe the basic history and current forms of media, outline the typical workflow of digital media delivery, and explain the purpose of compression and codecs. With guidance, they can choose reasonable media formats/settings for common situations (mobile, web, limited bandwidth) and summarize results in short reports. They participate in exercises, submit assignments on time, and complete a basic media-focused project that meets the minimum requirements.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Introduction to Media - What is Media - What is New Media	Lecture	Read the given lecture slides.	200
2 /	Telecommunications and mass media	Lecture Exercise	Read and answer questions reviewing the lecture	200
3 /	Data and processing	Lecture Exercise	Read and answer questions reviewing the lecture	200
4 /	Input output	Lecture Exercise	Read and answer questions reviewing the lecture	200
5 /	Smart phones Augmented reality	Lecture Exercise	Read and answer questions reviewing the lecture	200
6 /	Google	Lecture Exercise	Read and answer questions reviewing the lecture	200
7 /	AI and ML Meta and social Media News	Lecture Exercise	Read and answer questions reviewing the lecture	200
8 /	Startups + unicorn	Lecture Exercise	Read and answer questions reviewing the lecture	200
9 /	Cloud services and Amazon Big data	Lecture Exercise	Read and answer questions reviewing the lecture	200
10 /	Future IoT - Voice - Smart home	Lecture Exercise	Read and answer questions reviewing the lecture	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Informatics of Images	Lecture Exercise	Read and answer questions reviewing the lecture	200
12 /	Image compression	Lecture Exercise In class activity	Read and answer questions reviewing the lecture	200
13 /	Informatics Video	Lecture Exercise	Read and answer questions reviewing the lecture	200
14 /	Video compression	Lecture Exercise In class activity	Read and answer questions reviewing the lecture	200
15 /	Audio visualization and compression	Lecture Exercise In class activity	Read and answer questions reviewing the lecture	200

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Info. Elective	Operating System	2	551200	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	FUJISAWA, Takeshi / SONGER, Robert	Kanazawa C 31.113		Friday 16:30-17:30

Course Objectives

Keywords		Learning Objectives
1	UNIX	Operating system (OS) is the system program that controls a computer system. OS provides an efficient interface for various programs to run on the computer. Nowadays, OS is familiar to computer users, however, the structure is black boxed. In this course, students will learn about the basic functions of the OS, such as process management, memory management, file management, etc., and obtain basic knowledge for creating programs that utilize OS.
2	Process Management	
3	File System	
4	Shell	
5	System Call Programming	

Course Description and Expectations for Students

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes.
This course will offer Research and experiential learning in class as a type of active learning.

Learn about the basic components of an operating system and how to use them and gain an understanding of the elements and technologies necessary to realize an operating system. In this course, students will learn about the basic components of an operating system and how to use them. Specifically, the following topics will be covered.

1. Overview of Operating Systems
2. Process Management
3. File System
4. Shell (command interpreter)
5. UNIX System Programming

Required Materials (textbooks, reference books, reserved books)
Textbooks: None
Reference books: None
Reserved books "The UNIX programming environment" (Prentice Hall) ISBN 978-0-139-37681

Knowledge/Skills Needed to Take This Course (Prerequisites)

1. Basic hardware configuration and mechanism of computer systems.
2. Basic programming procedures.

No.	Program Objectives	Target Abilities for Students
①	e	To be able to work using basic UNIX commands
②	e	To be able to explain the basic functions of an operating system.
③	e	To be able to explain the differences between process and program.
④	e	To be able to explain the file system
⑤	e	To be able to write program codes using basic UNIX system calls
⑥		

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		55	0	0	0	30	0	15	100
Comprehensive Strength Criteria	Ability to capture knowledge	25	0	0	0	10	0	5	40
	Ability to think, reason and create	20	0	0	0	10	0	5	35
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	0	0	0	0	0	0
	Attitude and motivation for learning	10	0	0	0	10	0	5	25

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points
Exams	①	✓	Check how much of basic knowledge and skills the students have acquired over the whole classes.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①		
	②		
	③		
	④		
	⑤		
	⑥		
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①		Develop programming skills in C through the task of deciphering the source code of programs written in C. Students will deepen their understanding of the functions provided by the operating system through system call programming in the C language.
	②		
	③		
	④		
	⑤	✓	
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①	✓	An assignment will be given to support self-study, and its validity will be assessed as the result of self-study done 30 times in 50 minutes.
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement	Description of Standard Achievement
Explain the nature of operating systems and process management. Understand the differences between processes and program. Write a program codes using basic UNIX system calls.	Explain the concepts and structure of the operating system, including processes and file systems.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
1 /	How an Operating System Works UNIX for Beginners Getting started Files and common commands	Lecture	Research about OS in advance	200
2 /	The File System (1) The basis of files	Lecture Exercises	Read handout and Assignment	200
3 /	The File System (2) Directories and filenames Permissions	Lecture Exercises	Read handout and Assignment	200
4 /	Standard input/output and process what is redirect and pipe? what is process?	Lecture Exercises Quiz	Read handout and Assignment	200
5 /	Basic commands (1)	Lecture Exercises	Read handout and Assignment	200
6 /	Basic commands (2)	Lecture Exercises	Read handout and Assignment	200
7 /	Basic commands (3)	Lecture Exercises Quiz	Read handout and Assignment	200
8 /	Using the Shell (1) Creating new commands Command arguments and parameters	Lecture Exercises	Read handout and Assignment	200
9 /	Using the Shell (2) Program output as arguments Shell variables Looping in shell programs	Lecture Exercises Quiz	Read handout and Assignment	200
10 /	C language Tutorial of C language	Lecture Exercises	Complete the assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content	Method	Assignments (Preview and Review)	Time (Minutes)
11 /	System Call Programming (1) Process	Lecture Exercises	Complete the assignment	200
12 /	System Call Programming (2) File input / output File System	Lecture Exercises	Complete the assignment	200
13 /	System Call Programming (3) Networking	Lecture Exercises	Complete the assignment	200
14 /	System Call Programming (4) Memory management Comprehensive Assignment	Lecture Exercises Self-Study	Complete the assignment	200
15 /	Wrap up Submit the assignment	Lecture Self-Study	Complete and submit the assignment	200
16	Final Exam			
17	Review of final exam results Self-check			

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Info. Elective	Network Systems Lab	2	551400	Second	Exercises Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	FUJISHIMA, Satoshi	Kanazawa C 31.116		Thu. 16:30 - 17:30

Course Objectives

	Keywords (10.5pt)	Learning Objectives (10.5pt)
1	Computer networks	This course introduces the knowledge and theory of TCP/IP protocols supporting the current Internet, and imparts various related communication technologies to students taking this course. Through this, students will gain an understanding of computer networks such as LAN and WAN to acquire basic skills related to network operations.
2	Protocols	
3	OSI reference model	
4	TCP/IP	
5	Internet	

Course Description and Expectations for Students (10.5pt)

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minuite self-study times for 15 50-minute classes.

Students will systematically learn the basic knowledge and theories related to computer networks as shown below.

1. Basic mechanisms of computer networks
2. OSI reference model and TCP/IP
3. Physical layer and datalink layer
4. Network layer and transport layer
5. Routing protocol and application layer

As part of the active learning approach, students will explain their answers to each assignment in class to deepen their understanding.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:
Reference books:
Reserved books:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

Basic knowledge of computers

No.	Program Objectives	Target Abilities for Students (9pt)
①	h,i	Students will be able to explain the basic mechanisms of computer networks.
②	h,i	Students will be able to explain the functions of each layer in the OSI reference model.
③	h,i	Students will be able to explain the functions of each layer in TCP/IP protocols.
④	h,i	Students will be able to explain the basic mechanisms of the Internet.
⑤	h,i	Students will be able to perform network diagnostics using basic network commands.
⑥	h,i	Students will be able to perform network diagnostics using basic network analyzation tools.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	10	40	0	50	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	5	10	0	20	0	0	35
	Ability to think, reason and create	0	0	15	0	20	0	0	35
	Collaboration and leadership	0	0	0	0	0	0	0	0
	Announcement / Expression / Communication	0	0	10	0	5	0	0	15
	Attitude and motivation for learning	0	5	5	0	5	0	0	15

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	✓	There will be several quizzes to check the understanding of basic knowledge and theories related to computer networks.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Reports	①	✓	Reports are worksheet assignments assigned during class. The reports should be submitted by the due date designated by the instructors. All “Reports” assigned during class also serve as out-of-class learning assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Presentations	①		
	②		
	③		
	④		
	⑤		
	⑥		
Works	①	✓	Works are Packet Tracer exercise assignments assigned during class. The Works should be submitted by the due date designated by the instructors. All “Works” assigned during class also serve as out-of-class learning assignments.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥	✓	
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
Students are able to explain the following items systematically related to computer networks: 1. Basic information and communication systems 2. OSI reference model and TCP/IP model 3. Physical layer and datalink layer 4. Network layer and transport layer 5. Routing protocol and application layer Students are able to use appropriate network commands and tools for network maintenance and management.	Students are able to explain the basic contents of the following items related to computer networks: 1. Basic information and communication systems 2. OSI reference model and TCP/IP model 3. Physical layer and datalink layer 4. Network layer and transport layer 5. Routing protocol and application layer Students are able to use appropriate network commands and tools for basic network diagnostics

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance Fundamentals of Networking	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
2 /	Basic Switch & End Device Configuration	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
3 /	Basic Switch & End Device Configuration (2)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
4 /	Protocols & Models	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
5 /	Wired & Wireless LAN	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
6 /	Data Link Layer & Ethernet Switching	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
7 /	Network Layer	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
8 /	Address Resolution	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
9 /	Basic Router Configuration	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
10 /	IPv4 Addressing	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	VLSM Addressing Quiz (1)	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
12 /	VLSM Addressing (2) Quiz (2)	Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
13 /	Transport Layer	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
14 /	Application Layer	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200
15 /	Network Security	Lecture and Exercise	(Preview) Read the given lecture slides (Review, Assignment) Work on an assignment	200

2026 Syllabus

Instructor with "*" means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Info. Required	Business Accounting	2	551600	First	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	STEVENSON, Ian	Hakusanroku C.: 101.201		Monday 16:30-17:30

Course Objectives

Keywords (10.5pt)		Learning Objectives (10.5pt)
1	Accounting procedure & principles	This course is for developing business, finance and accounting abilities in students. The goal is to learn accounting and the financial statements which review, report and analyze the business resultsto the stakeholders of the company, as well as the ability to understandthe actual management situation of the company through publicly available accounting information, such as statements, quarterly reports, etc..
2	Business simulation	
3	Financial statements	
4	Depreciation	
5	Management indicators	

Course Description and Expectations for Students (10.5pt)

This course will provide total time-credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes

This course will offer group work and discussion, problem solving, discovery and experiential learning as types of active learning.

This course introduces basic business and accounting principles to students. Students will practice and use these principles through a series of activities designed to strengthen and deepen student understanding of the material.

Required Materials (textbooks, reference books, reserved books) (10.5pt)

Textbooks:

Knowledge/Skills Needed to Take This Course (Prerequisites) (10.5pt)

An interest in international business, business management principles and their application.

No.	Program Objectives	Target Abilities for Students (9pt)
①	b,i	Students will be able to understand assets, liabilities, capital, income, and expenses, and list specific item names.
②	b,i	Students will be able to understand bookkeeping procedures (journaling, posting, closing, preparing financial statements).
③	b,i	Students will be able to create a balance sheet and give an overview of the information that it displays.
④	b,i	Students will be able to create a profit and loss statement and give an overview of the information that it displays.
⑤	b,i	Students will be able to read and understand financial reports.
⑥	b,i	Students will be able to understand and explain basic accounting principles.

Evaluation Criteria

Criteria and Ratio \ Evaluation Method		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	30	40	30	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	6	8	6	0	0	0	20
	Ability to think, reason and create	0	6	8	6	0	0	0	20
	Collaboration and leadership	0	6	8	6	0	0	0	20
	Announcement / Expression / Communication	0	6	8	6	0	0	0	20
	Attitude and motivation for learning	0	6	8	6	0	0	0	20

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①	レ	Students will be evaluated on a quiz / mid-term test.
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
Reports	①	レ	Students will be evaluated on their assignments for each unit.
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
Presentations	①	レ	Students will be evaluated on a final presentation.
	②	レ	
	③	レ	
	④	レ	
	⑤	レ	
	⑥	レ	
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
• Understand that accounting information is useful for making decisions for business owners and stakeholders. • Understand how accounting documents are created, what the data in those documents mean and complete the exercises. Be able to analyze financial statements and understand the business situation and problems of a company.	• Understand that accounting information is useful for making decisions for business owners and stakeholders. • Understand how accounting documents are created, what the data in those documents mean and complete the exercises. Be able to create financial statements.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Guidance About accounting / Business Simulation 1	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
2 /	Business Simulation 2 Financial Statements - Balance Sheet 1	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
3 /	Financial Statements - Balance Sheet 2	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
4 /	Financial Statements – Income Statement 1	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
5 /	Financial Statements – Income Statement 2	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
6 /	Financial Statements – Cash Flow Statement 1	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
7 /	Financial Statements – Cash Flow Statement 2	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
8 /	Review for Quiz / Mid-term	Lecture Q&A Exercises	Review the handouts Finish the assignments Prepare for Quiz	200
9 /	Quiz / Mid-term	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
10 /	Return & Review Quiz / Mid-term 10 K Reports 1	Lecture Q&A Exercises	Review the handouts Finish the assignments	200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	10 K Reports 2	Lecture Q&A Exercises	Review the handouts Finish the assignments	200
12 /	Presentation - Preparation & Practice 1	Lecture Q&A Exercises	Review the handouts Finish the assignments Prepare / Practice for Final Presentation	200
13 /	Presentation - Preparation & Practice 2	Lecture Q&A Exercises	Review the handouts Finish the assignments Prepare / Practice for Final Presentation	200
14 /	Presentation - Preparation & Practice 3	Lecture Q&A Exercises	Review the handouts Finish the assignments Prepare / Practice for Final Presentation	200
15 /	Final Presentation	Lecture Q&A Exercises	Review the handouts Finish the assignments Prepare / Practice for Final Presentation	200

2026 Syllabus

Instructor with "＊"means an instructor with company experience

Field	Course Name	Credits	Course Code	Semester	Class Style
Dept. S Specialized Info. Elective * Practical	Advanced Topics in Business	2	551700	Second	Lecture Total

Target Grade	Instructor	Office	E-mail Address	Office Hours
5	* MEBUSAYA, Tossa MEBUSAYA, Rattiya	Kanazawa C: 31.114		Make an appointment in class

Course Objectives

	Keywords	Learning Objectives
1	Management	Explain basic terms and concepts such as management, strategy, marketing, customer, value, business, core competence, etc. and the relationship between the words. Basics for corporate activities, business management, and business strategies to be explained as the basic knowledge and tools such as useful technologies in engineering.
2	Strategy	
3	Market and customers	
4		
5		

Course Description and Expectations for Students

This course will provide total-time credits. 45 50-minute study times are worth one credit, and students need to have 30 50-minute self-study times for 15 50-minute classes. This course will offer problem-solving learning, investigative learning, and group discussion in class as a type of active learning. This course is a basic course for achieving success in management and business, which are the learning and educational goals. A wide range of knowledge and skills are used for business management and decision making, learning through example analysis, quizzes, and case study discussions. In particular, customers, stakeholders, competitive advantage would be understood as basic terms and concepts. This course will also be using BMC and Lean canvas as a guideline for students to understand the major key components of running business, and to aware of their impact to the business success and failure.

Relationship between this course and business experiences

Based on the teacher's experience in Startups and management in various industries, the teacher will provide discussion materials, case studies, lesson learned, and the key factors in business success and failure.

Required Materials (textbooks, reference books, reserved books)

None

Knowledge/Skills Needed to Take this Course (Prerequisites)

To understand corporate activity, corporate organization, management, strategy and marketing in corporate activities, is the basic objectives of this course. Please continually update on the necessity to collect, analyze and understand social examples and information of economic activities here and there. In this lecture, what to do if the student is a business owner? Since you will learn the basics of the countermeasures and you will have a sense of management of some business during active participation and discussion in this lecture.

No.	Program Objectives	Target Abilities for Students
①	a,b,c,d,e,f,g,h,i	Understand the company, its purpose, and organization.
②	a,b,c,d,e,f,g,h,i	Understand the basic knowledge of Management.
③	a,b,c,d,e,f,g,h,i	Understand the basic knowledge of Strategy.
④	a,b,c,d,e,f,g,h,i	Understand the basic knowledge of Market and customers.
⑤	a,b,c,d,e,f,g,h,i	Explain the framework necessary for applying the management strategy and organization.
⑥		

Evaluation Criteria

Evaluation Method / Criteria and Ratio		Exams	Quizzes	Reports	Presentations	Works	Portfolios	Others	Total
Total Evaluation Ratio		0	0	70	30	0	0	0	100
Comprehensive Strength Criteria	Ability to capture knowledge	0	0	20	10	0	0	0	30
	Ability to think, reason and create	0	0	20	10	0	0	0	30
	Collaboration and leadership	0	0	15	5	0	0	0	20
	Announcement / Expression / Communication	0	0	15	5	0	0	0	20
	Attitude and motivation for learning	0	0	0	0	0	0	0	0

* The numerical breakdown shown by Comprehensive Strength Criteria is an approximate guideline for class management.

Evaluation Method

Evaluation Method	Target Ability		Evaluation Methods and Important Points (10.5pt)
Exams	①		
	②		
	③		
	④		
	⑤		
	⑥		
Quizzes	①		
	②		
	③		
	④		
	⑤		
	⑥		
Reports	①	✓	Tasks, essays, final reports, etc. Guidelines and scopes are given, but the contents and composition can be freely set by students. Reports reflect class lessons and the business chosen by students. To support students' self-study, assignments will be given as both in- and out-of-class work, and the results will account for 70% of the overall evaluation
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Presentations	①	✓	Presentations, oral presentations, presentation materials, performance, etc.
	②	✓	
	③	✓	
	④	✓	
	⑤	✓	
	⑥		
Works	①		
	②		
	③		
	④		
	⑤		
	⑥		
Portfolios	①		
	②		
	③		
	④		
	⑤		
	⑥		
Others	①		
	②		
	③		
	④		
	⑤		
	⑥		

Specific Achievement Criteria

Description of Ideal Achievement (10.5pt)	Description of Standard Achievement (10.5pt)
1. Explain the company, its purpose, and organization. 2. Explain the basic knowledge of Management. 3. Explain the basic knowledge of Strategy. 4. Explain the basic knowledge of Business model. 5. Implement the framework necessary for applying the management strategy and organization.	1. Understand the company, its purpose, and organization. 2. Understand the basic knowledge of Management. 3. Understand the basic knowledge of Strategy. 4. Understand the basic knowledge of Business model. 5. Understand the items necessary for thinking about management strategy and organization.

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
1 /	Orientation	Lecture with ppt. material, Discussion		200
2 /	Lectures and discussions on corporate activities and organizations. An introduction to Business plan, Business model canvas, and Lean canvas	Lecture with ppt. material, Discussion	Report 01: Pick a business and study its background and fundamentals	200
3 /	Lectures on Business plan, Business model canvas, and Lean canvas: Problem and Users.	Lecture with ppt. material, Discussion	Report 02: Analysis of business opportunity and its potential customer.	200
4 /	Lecture and Discussion on Market/User and Competitors	Lecture with ppt. material, Discussion		200
5 /	Lecture and Discussion on Business Analytic tools	Lecture with ppt. material, Discussion	Report 03: Analysis of business market and its competitors.	200
6 /	Lecture and discussion on Business Expense and Income	Lecture with ppt. material, Discussion	Report 04: Analysis of business expenses and startup cost.	200
7 /	Lecture and discussion on Business Key elements (Resources, Activities, Partners)	Lecture with ppt. material, Discussion		200
8 /	Lecture and discussion on Revenue model and Timeline, growth projection	Lecture with ppt. material, Discussion	Report 05: Analysis of business revenue model.	200
9 /	Lecture and discussion on Investment and funding options	Lecture with ppt. material, Discussion	Report 06: Analysis of business budget, funding, and timeline	200
10 /	Lecture and discussion on Business formalities, trademark, Copyright	Lecture with ppt. material, Discussion		200

Course Schedule

* In the "Time" column of the Assignments, the standard time required for the specified assignment is provided. For total-time credit courses, please take the time corresponding to each class for review and preview. (For example, in the case of a 2-credit course, please try to take 200 minutes per week.) Please follow the teacher's guidance for details.

Class No. Date	Class Content (10pt)	Method (10pt)	Assignments (10pt) (Preview and Review)	Time (Minutes)
11 /	Lecture and activities on designing your business identity. Business case study discussion.	Lecture with ppt. material, Discussion	Report 07: Business identity design	200
12 /	Case study - discussion	Lecture with ppt. material, Discussion		200
13 /	Case study and discussion: Doing business in AI era	Lecture with ppt. material, Discussion		200
14 /	Lecture and activities on Pitching technique, Business plan structure, finalize	Lecture with ppt. material, Discussion	Preparation: Review class materials and handouts. Prepare for presentation.	200
15 /	Final review and final Presentation	Presentation and lecture		200

令和８年度　学習支援計画書

「担当教員名」欄の＊＝実務経験のある教員

授業科目区分	科　目　名	単 位	科目コード	開講時期	授 業 形 態
国際理工学科 専門 選択	課題学修	2	591200	－	－ ／認定

対象学年	担当教員名	居室	電子メールＩＤ	オフィスアワー
5	－	－		

授 業 科 目 の 学 習 教 育 目 標

キーワード		学習教育目標
1	高度専門知識の習得	学生が資格取得やコンテスト、地域連携活動などを通じて、将来のキャリアに直結する実践的な知識・技術を主体的に習得することを目的とする。
2	自主的・継続的学習	
3	キャリア設計	
4	自己評価	
5		

授業の概要および学習上の助言

課題学修として認定の対象となる資格・コンテスト・プロジェクト活動については学生便覧2026 pp. 94 別表１～３に記載されたものに限定する。
申請時には申請書に合格通知書・免状などの原本とコピー（コンテスト・プロジェクトの場合は関係資料）を添えて提出し、クラス担任の確認印を受けること。
担当教員や指導教員に事前相談し、適切な資格を選定することを推奨する。
第4学年3月末までに課題学修の条件を満たし、第5学年4月に単位の認定を申請すること。ただし、第4学年に単位認定申請がされた資格は除く。
または、第5学年4月以降11月末までに課題学修の条件を満たし、同年度12月の所定期日までに申請すること。ただし、それ以前に単位認定申請がされた資格は除く。

【教科書および参考書・リザーブドブック】
教科書：なし
参考書：各資格試験の公式テキスト・問題集
ﾘｻﾞｰﾌﾞﾄﾞﾌﾞｯｸ：

履修に必要な予備知識や技能

各資格試験の受験要件、コンテスト・プロジェクト活動の参加要件、および関連する知識・技能

No.	教育目標(DP) (記号表記)	学生が達成すべき行動目標
①	i	取得資格及びコンテスト・プロジェクト活動に関連する専門的知識・技術を体系的に理解できる。
②	i	卒業を見据えた長期的な学修計画を自ら立て、実行できる
③	i	資格取得の経験を進路選択や将来設計に結びつけることができる
④	i	学修の成果と課題を整理し、次のステップに向けた目標を設定できる
⑤		
⑥		

達　成　度　評　価

評価方法 指標と評価割合		試　験	クイズ 小テスト	レポート	成果発表 口頭・実技	作 品	ポートフォリオ	その他	合 計
総合評価割合		0	0	0	0	0	0	100	100
総合力指標	知識を取り込む力	0	0	0	0	0	0	100	100
	思考・推論・創造する力	0	0	0	0	0	0	0	0
	コラボレーションとリーダーシップ	0	0	0	0	0	0	0	0
	発表・表現・伝達する力	0	0	0	0	0	0	0	0
	学習に取組む姿勢・意欲	0	0	0	0	0	0	0	0

※総合力指標で示す数値内訳は、授業運営上のおおよその目安を示したものです。

評価の要点

評 価 方 法	行動目標		評 価 の 実 施 方 法 と 注 意 点
試 験	①		
	②		
	③		
	④		
	⑤		
	⑥		
クイズ 小テスト	①		
	②		
	③		
	④		
	⑤		
	⑥		
レポート	①		
	②		
	③		
	④		
	⑤		
	⑥		
成果発表 （口頭・実技）	①		
	②		
	③		
	④		
	⑤		
	⑥		
作 品	①		
	②		
	③		
	④		
	⑤		
	⑥		
ポートフォリオ	①		
	②		
	③		
	④		
	⑤		
	⑥		
その他	①	✓	別表に定める資格の取得（合格）及びコンテスト・プロジェクト活動の成果をもって評価する
	②	✓	
	③	✓	
	④	✓	
	⑤		
	⑥		

具体的な達成の目安

理想的な達成レベルの目安	標準的な達成レベルの目安
合格した資格試験・コンテスト・プロジェクト活動を通じて得た知識・経験を実社会で応用できる。	目標の成果を得る。