Akashi College	Electrical and Computer Engineering	Year	2023

Department Goals

Course Category		Course Title	Course Code	Credit Type	Credits	Class Hours per Week																Instructor	Division in Learning
						1st Year				2nd Year				3rd Year				4th Year				5th Year			
						1st		2nd		1st		2nd		1st		2nd		1st		2nd		1st		2nd	
						1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
General	Compulsory	Japanese I-1	5101	School Credit	1	2																				TANGE Atsuko	
General	Compulsory	Japanese I-2	5102	School Credit	1			2																		TANGE Atsuko	
General	Compulsory	History-1	5103	School Credit	1	2																				ARAKAWA Hironori	
General	Compulsory	History-2	5104	School Credit	1			2																		ARAKAWA Hironori	
General	Compulsory	Mathematics Ⅰ A-1	5105	School Credit	2	4																				TAKATA Isao	
General	Compulsory	Mathematics Ⅰ A-2	5106	School Credit	2			4																		TAKATA Isao	
General	Compulsory	Mathematics Ⅰ B-1	5107	School Credit	1	2																				OMODA Yasuhiro	
General	Compulsory	Mathematics Ⅰ B-2	5108	School Credit	1			2																		OMODA Yasuhiro	
General	Compulsory	Science Ⅰ-1	5109	School Credit	1	2																				TAKEUCHI Masahiro	
General	Compulsory	Science Ⅰ-2	5110	School Credit	1			2																		TAKEUCHI Masahiro	
General	Compulsory	Physical Education I-1	5111	School Credit	1	2																				GOTOH Takayuki,KOBAYASHI Yuki	
General	Compulsory	Physical Education I-2	5112	School Credit	1			2																		GOTOH Takayuki,ISHIDA Masami	
General	Compulsory	English I A-1	5113	School Credit	1	2																				AKIMOTO Hiromi	
General	Compulsory	English I A-2	5114	School Credit	1			2																		AKIMOTO Hiromi	

General	Compulsory	English I B-1	5115	School Credit	1	2	KITAGAWA Chiho	
General	Compulsory	English I B-2	5116	School Credit	1	2	KITAGAWA Chiho	
General	Compulsory	Introduction to Active Learning	5117	School Credit	1	2	TAKEDA Naho, HIRANO Masatsugu, MIZUNO Yuki	
General	Compulsory	Introduction to Data Science	5118	School Credit	1	2	TSUCHIDA Takayuki,NOMURA Hayato	
General	Compulsory	Exercise in Data Science	5119	School Credit	1	2	TSUCHIDA Takayuki,NOMURA Hayato,ENOMOTO Ryuji	
General	Elective	Music-1	5120	School Credit	1	2	IZUMI Yuka	
General	Elective	Music-2	5121	School Credit	1	2	IZUMI Yuka	
General	Elective	Art-1	5122	School Credit	1	2	OHNO Ryohei	
General	Elective	Art-2	5123	School Credit	1	2	OHNO Ryohei	
General	Compulsory	Japanese Ⅰ-1	5124	School Credit	3	6	KUBOTA Ikumi	
General	Compulsory	Japanese Ⅰ-2	5125	School Credit	2	4	KUBOTA Ikumi	
General	Compulsory	Japanese Culture and Society	5126	School Credit	1	2	KUBOTA Ikumi	
Specialized	Compulsory	Literacy for Disaster Risk Reduction	5127	School Credit	1	2	MOTOZUKA Tomoki,YEGANE GHEZELLOO	
Specialized	Compulsory	Electric Circuits I	5128	Academic Credit	2	2	OHMUKAI Masato	
Specialized	Compulsory	Computer Programming I	5129	Academic Credit	2	2	HIRANO Masatsugu	

Specialized	Compulsory	Computer Literacy A	5130	School Credit	1	2																				NAKAI Yuichi	
Specialized	Compulsory	Computer Literacy B	5131	School Credit	1			2																		NAKAI Yuichi	
Specialized	Compulsory	Fundamental Experiments of Electrical＆Computer Engineering	5132	School Credit	1	2																				KAJIMURA Yoshihiro,HIROTA Atsushi	
Specialized	Compulsory	Fundamentals of Engineering	5133	School Credit	1			2																		KUBOTA Ikumi	
General	Compulsory	Japanese II-1	6201	School Credit	1					2																TANGE Atsuko	
General	Compulsory	Japanese II-2	6202	School Credit	1							2														TANGE Atsuko	
General	Compulsory	Introduction to Global Studies	6203	School Credit	1							2															
General	Compulsory	Public	6204	School Credit	1					2																	
General	Compulsory	Mathematics Ⅱ A-1	6205	School Credit	2					4																MATSUMIYA Atusi,	
General	Compulsory	Mathematics Ⅱ A-2	6206	School Credit	2							4														MATSUMIYA Atusi,OMODA Yasuhiro	
General	Compulsory	Mathematics Ⅱ B-1	6207	School Credit	1					2																TAKATA Isao	
General	Compulsory	Mathematics Ⅱ B-2	6208	School Credit	1							2														TAKATA Isao	
General	Compulsory	Science Ⅱ A-1	6209	School Credit	1					2																TAKEUCHI Masahiro	
General	Compulsory	Science Ⅱ A-2	6210	School Credit	1							2														TAKEUCHI Masahiro,	
General	Compulsory	Science Ⅱ B-1	6211	School Credit	1					2																SAKURAI Yasuhiro	
General	Compulsory	Science Ⅱ B-2	6212	School Credit	1							2														SAKURAI Yasuhiro	

General	Compulsory	Physical Education II-1	6213	School Credit	1	2	GOTOH Takayuki,MAEDA Tadanori	
General	Compulsory	Physical Education II-2	6214	School Credit	1	2	GOTOH Takayuki,MAEDA Tadanori	
General	Compulsory	English II A-1	6215	School Credit	1	2	HERBERT John C.	
General	Compulsory	English II A-2	6216	School Credit	1	2	INOUE Hidetoshi	
General	Compulsory	English II B-1	6217	School Credit	1	2	KITAGAWA Chiho	
General	Compulsory	English II B-2	6218	School Credit	1	2	KITAGAWA Chiho	
General	Compulsory	Ｃｏ＋ｗｏｒｋ Ⅰ A	6219	School Credit	1	2	All faculty	
General	Compulsory	Ｃｏ＋ｗｏｒｋ Ⅰ B	6220	School Credit	1	2	All faculty	
General	Elective	ICT Qualification I	6221	School Credit	1	1 1	TAKEUCHI Masahiro	
General	Elective	Mathematics Certification I	6222	School Credit	1	1 1	OMODA Yasuhiro	
General	Compulsory	Japanese Ⅱ-1	6223	School Credit	2	4	KUBOTA Ikumi	
General	Compulsory	Japanese Ⅱ-2	6224	School Credit	1	2	KUBOTA Ikumi	
General	Compulsory	Japanese Practice I	6225	School Credit	1	2	KUBOTA Ikumi	
Specialized	Compulsory	Electric Circuits Ⅱ A	6226	Academic Credit	2	2	KAJIMURA Yoshihiro	
Specialized	Compulsory	Electric Circuits Ⅱ B	6227	Academic Credit	2	2	KAJIMURA Yoshihiro	
Specialized	Compulsory	Computer Programming Ⅱ A	6228	Academic Credit	2	2	TSUCHIDA Takayuki	
Specialized	Compulsory	Computer Programming Ⅱ B	6229	Academic Credit	2	2	HIRANO Masatsugu	

Specialized	Compulsory	Electrical and Electronic Measurement A	6230	School Credit	1	2	HOSOKAWA Atsuishi	
Specialized	Compulsory	Electrical and Electronic Measurement B	6231	School Credit	1	2	HOSOKAWA Atsuishi	
Specialized	Compulsory	Microcomputer	6232	Academic Credit	2	2	NOMURA Hayato	
Specialized	Compulsory	Experiments of Electrical and Computer Engineering I	6233	School Credit	2	4	KAJIMURA Yoshihiro,SUYAMA Taikei,HOSOKAWA Atsuishi,	

Akashi College	Year	2023	Course Title	Japanese I-1

Course Information

Course Code	5101	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	中島国彦 他『精選現代の国語』『精選言語文化』（明治書院）、『新訂総合国語便覧』（第一学習社）		
Instructor	TANGE Atsuko		

Course Objectives

1)論理的な文章（論説や評論）の構成や展開を的確にとらえ、要約できる。
2)文学的な文章（小説や随筆）に描かれた人物やものの見方を表現に即して読み取り、自分の意見を述べることができる。
3)整理した情報をもとに、主張が効果的に伝わるように論理の構成や展開を工夫した報告を行ったり、文章を作成することができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	構成と展開を説明でき、大意を捉えて要約ができる。	構成が説明でき、要約できる。	要旨は分かるが、構成を捉えられない。
評価項目2	人物形象から主題を捉え、批判的に考察できる。	登場人物の整理ができ、主題が捉えられる。	人物造型の違いは把握できるが、主題が捉えられない。
評価項目3	明確な意見・結論を論理的・実証的文章として構成・展開できる。	明確な意見とそれを表す段落構成を作成できる。	結論・意見を設け、段落分けできるが論理性・実証性に乏しい。

Assigned Department Objectives

Teaching Method

Outline	小説や評論、古典文学など、様々な文章を読むことを通し、豊かな感性と論理的思考力を養い、的確な読解力と表現力を獲得する。
Style	講義形式を基本とする。随時、小テストや課題を課す。
Notice	国語は理科系科目も含めすべての教科の基礎であることを念頭に、予習・復習を怠らず積極的に授業に取り組むこと。 評価の対象としない欠席条件(割合) 1/3以上の欠課

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	授業ガイダンス、「「ふと」と「思わず」」の読解	授業の進行・準備物について理解することができる
		2nd	「「ふと」と「思わず」」の読解	表現に即して内容を適切に理解することができる
		3rd	「「ふと」と「思わず」」の読解	内容を理解した上で、自分の意見を述べることができる
		4th	「羅生門」の読解	表現に即して内容を理解することができる
		5th	「羅生門」の読解	表現に即して登場人物の人物像を読み取ることができる
		6th	「羅生門」の読解	登場人物たちのやり取りを適切に理解し、物語の展開を読み取ることができる
		7th	「羅生門」の読解	主題を理解し、作品に対する自分の意見を述べることができる
		8th	「羅生門」の読解	作品の特徴を文学史的位置を含めて理解できる
	2nd Quarter	9th	「宇治拾遺物語」の読解	文学史の上から理解できる。適切に音読し、文意を理解できる
		10th	「宇治拾遺物語」の読解	適切に解釈し、教科書の設問に答えることができる
		11th	「伊勢物語」の読解	文学史の上から理解できる。適切に音読し、文意を理解できる
		12th	「伊勢物語」の読解	適切に解釈し、教科書の設問に答えることができる
		13th	「美意識は資源である」の読解	適切に音読でき、本文の構成と展開を説明できる
		14th	「美意識は資源である」の読解	作品内容に対して批判的意見をあげることができる
		15th	「美意識は資源である」の読解	作品内容に対して批判的意見をあげることができる
		16th	期末試験	

Evaluation Method and Weight (%)

	試験	小テスト	態度	その他	Total
Subtotal	80	10	10	0	100
基礎的能力	80	10	10	0	100
専門的能力	0	0	0	0	0
分野横断的能力	0	0	0	0	0

Akashi College	Year	2023	Course Title	Japanese I-2

Course Information

Course Code	5102	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	中島国彦 他『精選現代の国語』『精選言語文化』（明治書院）、『新訂総合国語便覧』（第一学習社）		
Instructor	TANGE Atsuko		

Course Objectives

1)論理的な文章（論説や評論）の構成や展開を的確にとらえ、要約できる。
2)文学的な文章（小説や随筆）に描かれた人物やものの見方を表現に即して読み取り、自分の意見を述べることができる。
3)整理した情報をもとに、主張が効果的に伝わるように論理の構成や展開を工夫した報告を行ったり、文章を作成することができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	構成と展開を説明でき、大意を捉えて要約ができる。	構成が説明でき、要約できる。	要旨は分かるが、構成を捉えられない。
評価項目2	人物形象から主題を捉え、批判的に考察できる。	登場人物の整理ができ、主題が捉えられる。	人物造型の違いは把握できるが、主題が捉えられない。
評価項目3	明確な意見・結論を論理的・実証的文章として構成・展開できる。	明確な意見とそれを表す段落構成を作成できる。	結論・意見を設け、段落分けできるが論理性・実証性に乏しい。

Assigned Department Objectives

Teaching Method

Outline	小説や評論、古典文学など、様々な文章を読むことを通し、豊かな感性と論理的思考力を養い、的確な読解力と表現力を獲得する。
Style	講義形式を基本とする。随時、小テストや課題を課す。
Notice	国語は理科系科目も含めすべての教科の基礎であることを念頭に、予習・復習を怠らず積極的に授業に取り組むこと。 評価の対象としない欠席条件(割合) 1/3以上の欠課

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	授業ガイダンス、「働くことの意味」の読解	論説文について、適切に音読し、表現に即して構成を理解することができる
		2nd	「働くことの意味」の読解	論説文について、論理的展開と論証を理解し、説明することができる
		3rd	「働くことの意味」の読解	論説文について、論理的展開と論証を理解し、説明することができる
		4th	「平家物語」の読解	文学史上の評価、古文の文法について理解し、作品の様式が理解できる
		5th	「平家物語」の読解	文学史上の評価、古文の文法について理解し、作品の様式が理解できる
		6th	「平家物語」の読解	人物造型を把握し、作者の主題意識を理解することができる
		7th	「平家物語」の読解	読み本系・語り本系の違いを念頭に、場面の特徴を理解することができる
		8th	「平家物語」の読解	史的位置をとらえ、作品評価としての意見をあげることができる
	4th Quarter	9th	「世界中がハンバーガー」の読解	適切に音読し、表現に即して構成を理解することができる
		10th	「世界中がハンバーガー」の読解	論理的展開と論証を理解し、説明することができる
		11th	「世界中がハンバーガー」の読解	教科書の設問に答え、主題を理解することができる
		12th	「蛇足」の読解	漢文の基本的読解法を理解し、適切に音読できる
		13th	「蛇足」の読解・「唐詩」の読解	内容を理解し、文化的影響をとらえることができる
		14th	「唐詩」の読解	漢詩のきまりを理解した上で個々の作品を鑑賞することができる
		15th	「唐詩」の読解	漢詩のきまりを理解した上で個々の作品を鑑賞し、作品評価することができる
		16th	期末試験	

Evaluation Method and Weight (%)

	試験	小テスト	態度	その他	Total
Subtotal	80	10	10	0	100
基礎的能力	80	10	10	0	100
専門的能力	0	0	0	0	0
分野横断的能力	0	0	0	0	0

Akashi College	Year	2023	Course Title	Mathematics Ⅰ A-1

Course Information

Course Code	5105	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 2
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	4
Textbook and/or Teaching Materials	Fundamental Mathematics (Dai Nihon Tosho)		
Instructor	TAKATA Isao		

Course Objectives

1) To understand numbers and equations, and be able to calculate them.
2) To understand Equation and inequality, and be able to solve them.
3) To understand and functions and graphs, and be able to use them.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
1) Numbers and equations	Can understand numbers and equations, and be able to calculate them.	Can understand numbers and equations.	Can not understand numbers and equations.
2) Equation and inequality	Can understand Equation and inequality, and be able to solve them.	Can understand Equation and inequality.	Can not understand Equation and inequality.
3)Functions and graphs	Can understand and functions and graphs, and be able to use them.	Can understand and functions and graphs.	Can nt understand and functions and graphs.

Assigned Department Objectives

Teaching Method

Outline	The objective is to develop basic mathematical formulas and logical thinking skills and acquire the fundamentals of mathematics necessary in college.
Style	Students are asked to prepare for the class with video clips according to the syllabus. Students will be asked to study in groups during class to check their level of understanding. Bilingual classes may be offered.
Notice	Review your work before class. Do not leave anything you do not understand unanswered, but ask questions. Study independently by using problem collections. CBT will be given in one of the weeks. Students who miss 1/3 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Numbers and equations	Class Preparation. Also, can calculate addition, subtraction, and multiplication of integer expressions.
		2nd	Numbers and equations	Can use exponential laws and expansion formulas. Also, can perform simple factorizations.
		3rd	Numbers and equations	Can compute divisors of integers. Also, can factor higher order polynomials using the factor theorem.
		4th	Numbers and equations	Can divide fractional expressions. Also, can calculate addition, multiplication, and division of fractional expressions.
		5th	Numbers and equations	Can understand the meaning of real and absolute numbers. Also, can understand the phases of complex numbers and compute their addition, subtraction, multiplication, and division.
		6th	Equations and inequalities	Can understand the correspondence between complex numbers and the complex plane. Also, can solve quadratic equations by using solution formulas.
		7th	Equations and inequalities	The CBT test will be used to check for retention. Also, can understand the relationship between solutions and coefficients and can factor any quadratic equation.
		8th	Equations and inequalities	Can solve linear equations. Also, can solve fractional equations and irrational equations.
	2nd Quarter	9th	Equations and inequalities	Can understand identities and partial fractional decomposition. Also, can prove various equations.
		10th	Equations and inequalities	Can solve first order inequalities. Also, can solve quadratic inequalities.
		11th	Equations and inequalities	Can prove inequalities. Also, can understand sets and compute sets.
		12th	Equations and inequalities	Can determine the number of sets. Also, can determine the truth or falsity of a proposition.

		13th	Functions and graphs	Can state the inverse, reverse, and contrapositive of a proposition. Also, can draw graphs of quadratic functions.
		14th	Functions and graphs	The CBT test will be used to check for retention. Also, can find quadratic functions.
		15th	Functions and graphs	Review of the total. Also, can understand the relationship between quadratic functions and quadratic inequalities.
		16th	Exam	Confirmation of the studies.

Evaluation Method and Weight (%)

	Examination	Comprehension Test	Review Test	Assignments	Attendance points	Total
Subtotal	25	20	25	15	15	100
Basic Proficiency	25	20	25	15	15	100
Specialized Proficiency	0	0	0	0	0	0
Cross Area Proficiency	0	0	0	0	0	0

Akashi College	Year	2023	Course Title	Mathematics Ⅰ A-2

Course Information

Course Code	5106	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 2
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	4
Textbook and/or Teaching Materials	Fundamental Mathematics (Dai Nihon Tosho)		
Instructor	TAKATA Isao		

Course Objectives

1) To understand and functions and graphs, and be able to use them.
2) To understand exponential and logarithmic functions, and be able to use them.
3) To understand the principles of the number of possible outcomes and probability, and be able to calculate them.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can understand and functions and graphs, and be able to use them.	Can understand and functions and graphs.	Can nt understand and functions and graphs.
Achievement 2	Can understand exponential and logarithmic functions, and be able to use them.	Can understand exponential and logarithmic functions.	Can not understand exponential and logarithmic functions.
Achievement 3	Can understand the principles of the number of possible outcomes and probability, and be able to calculate them.	Can understand the principles of the number of possible outcomes and probability.	Can not understand the principles of the number of possible outcomes and probability.

Assigned Department Objectives

Teaching Method

Outline	The objective is to develop basic mathematical formulas and logical thinking skills and acquire the fundamentals of mathematics necessary in college.
Style	Students are asked to prepare for the class with video clips according to the syllabus. Students will be asked to study in groups during class to check their level of understanding. Bilingual classes may be offered.
Notice	Review your work before class. Do not leave anything you do not understand unanswered, but ask questions. Study independently by using problem collections. CBT will be given in one of the weeks. Students who miss 1/3 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Functions and graphs	Answers to the first semester final exam and a summer homework test will be given. Also, can understand the relationship between quadratic functions and quadratic inequalities.
		2nd	Functions and graphs	Can move graphs symmetrically and scale them. Also, can draw graphs of power functions and distinguish between even and odd functions.
		3rd	Functions and graphs	Can draw graphs of fractional functions. Also, can solve inequalities using graphs of fractional functions.
		4th	Functions and graphs	Can draw graphs of irrational functions. Also, can draw graphs of inverse functions.
		5th	Exponential and logarithmic functions	Can find the power roots. In addition, a CBT test will be administered to check for learning retention.
		6th	Exponential and logarithmic functions	Can understand the extension of the exponential law. Also, can draw graphs of exponential functions.
		7th	Exponential and logarithmic functions	Can solve equations and inequalities for exponential functions. Also can understand logarithms and can perform simple calculations.
		8th	Exponential and logarithmic functions	Can use the transformation formulas for the base. Also, can draw graphs of logarithmic functions.
	4th Quarter	9th	Exponential and logarithmic functions	Can solve equations and inequalities of logarithmic functions. Also, can use ordinary logarithms.
		10th	Number of cases	Can understand the law of product and the law of sums, and can find simple cases. Also, a CBT test will be given to check the level of retention of learning.
		11th	Number of cases	Can find the values of various permutations.

		12th	Number of cases	Can obtain the circular permutations. Also, can obtain simple combinations.
		13th	Number of cases	Can obtain the various combinations. Also, can obtain overlapping permutations.
		14th	Number of cases	Can understand and use the binomial theorem. Also, CBT (Headquarters) will be conducted.
		15th	Basics of probability	Can compute simple probabilities. Also can understand and calculate conditional probabilities.
		16th	Exam	Confirmation of the studies

Evaluation Method and Weight (%)

	Examination	Comprehension Test	Review Teat	Assignments	Attendance points	Total
Subtotal	25	20	25	15	15	100
Basic Proficiency	25	20	25	15	15	100
Specialized Proficiency	0	0	0	0	0	0
Cross Area Proficiency	0	0	0	0	0	0

Akashi College	Year	2023	Course Title	Physical Education I-1

Course Information

Course Code	5111	Course Category	General / Compulsory
Class Format	講義・実技	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	GOTOH Takayuki,KOBAYASHI Yuki		

Course Objectives

・ Participate in classes to improve students' own health and physical strength. Also, have some level of self-discipline.
・ Can take action to conduct sports safely. Also, recognizes the significance of collaborating and cooperating with the team and can take the necessary action to do so.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Actively participate in classes to improve their health and physical strength. Have a high level of self-discipline.	Participate in classes to improve their health and physical strength. Have some level of self-discipline.	Reluctant to participate in classes, or improve their own health and physical strength. Do not have a high level of self-discipline.
Achievement 2	Actively participate in various sport practices and games, and are very competitive. Also have a great influence on games, etc.	Can actively participate in various sport practices and games. And also have the skills for them.	Do not participate in various sport practices and games.
Achievement 3	Understand the role of a leader well, and can help increase teamwork.	Understand and can play or take on the role of a leader.	Do not understand the role of a leader. Also, never play that role.

Assigned Department Objectives

Teaching Method

Outline	The goal of this course is for students to learn more about the fun and depth of sports so that they can build the habit of playing sports on a daily basis. This class requires an active and proactive attitude to participate. Students will split into groups and leaders will take the lead to plan, review, and implement the course content. Students can choose from: Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis
Style	Students are encouraged to actively participate in games and practice and to discover the fun of sports. First, they should learn the rules and how to play games, etc., and try to learn basic skills. In addition, they are expected to develop more advanced technologies and improve teamwork through games and game-style practice. Students and instructors should work together to create a safe and welcoming class.
Notice	・ Wear school-designated training wear, athletic shoes, or other designated clothing. If students fail to wear them, points will be deducted from their grade. ・ Do not wear or bring accessories, watches, or any other unnecessary items. These are also eligible for grade deduction. ・ Tardiness will be excused for the first 20 minutes. Students can participate in the class after 20 minutes, but their attendance will be marked as absent. ・ If it is discovered that a student left class early without being excused (ditching class), their attendance for that class will be marked as absent, and their grade for previous classes will suffer a deduction equal to an absence. ・Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Guidance	Understand the purposes and objectives of this course. Reacknowledge that warm-ups are necessary to safely exercise.
		2nd	Guidance	Understand the purposes and objectives of this course. Reacknowledge that warm-ups are necessary to safely exercise.
		3rd	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		4th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		5th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		6th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		7th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		8th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
	2nd Quarter	9th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Split into teams in each sport and select a leader.

		10th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		11th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		12th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		13th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		14th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		15th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		16th	No final exam	

Evaluation Method and Weight (%)

	Approach to a class	Practical skill	Leadership	Total
Subtotal	75	15	10	100
Basic Proficiency	75	0	0	75
Specialized Proficiency	0	0	0	0
Cross Area Proficiency	0	15	10	25

Akashi College	Year	2023	Course Title	Physical Education I-2

Course Information

Course Code	5112	Course Category	General / Compulsory
Class Format	講義・実技	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	GOTOH Takayuki,ISHIDA Masami		

Course Objectives

・ Participate in classes to improve students' own health and physical strength. Also, have some level of self-discipline.
・ Can take action to conduct sports safely. Also, recognizes the significance of collaborating and cooperating with the team and can take the necessary action to do so.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Actively participate in classes to improve their health and physical strength. Have a high level of self-discipline.	Participate in classes to improve their health and physical strength. Have some level of self-discipline.	Reluctant to participate in classes, or improve their own health and physical strength. Do not have a high level of self-discipline.
Achievement 2	Actively participate in various sport practices and games, and are very competitive. Also have a great influence on games, etc.	Can actively participate in various sport practices and games. And also have the skills for them.	Do not participate in various sport practices and games.
Achievement 3	Understand the role of a leader well, and can help increase teamwork.	Understand and can play or take on the role of a leader.	Do not understand the role of a leader. Also, never play that role.

Assigned Department Objectives

Teaching Method

Outline	The goal of this course is for students to learn more about the fun and depth of sports so that they can build the habit of playing sports on a daily basis. This class requires an active and proactive attitude to participate. Students will split into groups and leaders will take the lead to plan, review, and implement the course content. Students can choose from: Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis
Style	Students are encouraged to actively participate in games and practice and to discover the fun of sports. First, they should learn the rules and how to play games, etc., and try to learn basic skills. In addition, they are expected to develop more advanced technologies and improve teamwork through games and game-style practice. Students and instructors should work together to create a safe and welcoming class.
Notice	・ Wear school-designated training wear, athletic shoes, or other designated clothing. If students fail to wear them, points will be deducted from their grade. ・ Do not wear or bring accessories, watches, or any other unnecessary items. These are also eligible for grade deduction. ・ Tardiness will be excused for the first 20 minutes. Students can participate in the class after 20 minutes, but their attendance will be marked as absent. ・ If it is discovered that a student left class early without being excused (ditching class), their attendance for that class will be marked as absent, and their grade for previous classes will suffer a deduction equal to an absence. ・Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Split into teams in each sport and select a leader.
		2nd	Health (joint class with Hyogo University Department of Nursing)	Reflect on their own health and take the opportunity to reconsider their future lifestyles.
		3rd	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		4th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		5th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		6th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		7th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		8th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
	4th Quarter	9th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Split into teams in each sport and select a leader.
		10th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.

		11th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		12th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		13th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		14th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		15th	Baseball, softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		16th	No final exam	

Evaluation Method and Weight (%)

	Approach to a class	Practical skill	Leadership	Total
Subtotal	75	15	10	100
Basic Proficiency	75	0	0	75
Specialized Proficiency	0	0	0	0
Cross Area Proficiency	0	15	10	25

Akashi College	Year	2023	Course Title	English I A-1

Course Information

Course Code	5113	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	New Rays English Communication I / New Rays WORKBOOK		
Instructor	AKIMOTO Hiromi		

Course Objectives

1) To review the vocabulary learned at junior high school, acquire new vocabulary following the high school learning guidelines, and use it appropriately.
2) To review the grammar learned at junior high school, and learn to use grammar rules appropriately, according to the high school study guidelines.
3) To review sentences structures learned in junior high school, and learn to use sentence structures and operate them appropriately, following the high school learning guidelines.
4) Can read sentences written in English, understand the text outline, read and extract necessary information.
5) To acquire English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	The student has well acquired new vocabulary following the high school learning guidelines and use it appropriately.	The student has acquired new vocabulary following the high school learning guidelines and use it appropriately.	The student has not acquired new vocabulary following the high school learning guidelines and use it appropriately.
Achievement 2	The student has well learned to use grammar rules appropriately, according to the high school study guidelines.	The student has learned to use grammar rules appropriately, according to the high school study guidelines.	The student has not learned to use grammar rules appropriately, according to the high school study guidelines.
Achievement 3	The student has well learned to use sentence structures and operate them appropriately, following the high school learning guidelines.	The student has learned to use sentence structures and operate them appropriately, following the high school learning guidelines.	The student has not learned to use sentence structures and operate them appropriately, following the high school learning guidelines.
Achievement 4	The student can well read sentences written in English, understand the text outline, read and extract necessary information.	The student can read sentences written in English, understand the text outline, read and extract necessary information.	The student can not read sentences written in English, understand the text outline, read and extract necessary information.
Achievement 5	The student has well acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.	The student has acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.	The student has not acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Assigned Department Objectives

Teaching Method

Outline	Based on the junior high school learned content, to understand the basic structure of English sentences and acquire reading skills. To acquire the ability to listen and express simple English sentences. To perform word tests and strengthen vocabulary knowledge.
Style	Attend the classes, prepare for the classes studying the relevant sections of the workbook. Handout will be provided in the first week. Go over the handout and understand it in detail.
Notice	Use quizzes to increase student vocabulary and develop listening ability. Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Course guidance (Course progress method, learning method, etc.)	Understand course content and assignments.
		2nd	Chapter 1 Part 1/2	Based on the content learned in junior high school understand English language basic structure.
		3rd	Chapter 1 Part 2/3	Based on the content learned in junior high school understand English language basic structure.
		4th	Chapter 1 Part 4 Language and Culture Workshop	Understanding the cross-cultural communication through authentic materials.
		5th	Chapter 2 Part 1/2	Based on the content learned in junior high school understand English language basic structure.
		6th	Chapter 2 Part 2/3	Based on the content learned in junior high school understand English language basic structure.
		7th	Chapter 2 Part 4 Language and Culture Workshop	Understanding the cross-cultural communication through authentic materials.
		8th	Chapter 3 Part 1/2	Learn the vocabulary and grammar rules set as lesson tasks.

	2nd Quarter	9th	Chapter 3 Part 2/3	Learn the vocabulary and grammar rules set as lesson tasks.
		10th	Chapter 3 Part 4 Language and Culture Workshop	Learn the vocabulary and grammar rules set as lesson tasks.
		11th	Chapter 4 Part 1/2	Learn the vocabulary and grammar rules set as lesson tasks.
		12th	Chapter 4 Part 2/3	Learn the vocabulary and grammar rules set as lesson tasks.
		13th	Chapter 4 Part 4	Learn the vocabulary and grammar rules set as lesson tasks.
		14th	Review	Understanding the weak points on the content learned so far and preparing for the exam.
		15th	Q & A	Understanding the weak points on the content learned so far and preparing for the exam.
		16th	Final exam	Test the student understanding of the content learned so far.

Evaluation Method and Weight (%)

	Examination	Assignments	Quizes	Behavior	Portfolio	Other	Total
Subtotal	50	10	40	0	0	0	100
Basic Proficiency	0	10	40	0	0	0	50
Specialized Proficiency	0	0	0	0	0	0	0
Cross Area Proficiency	50	0	0	0	0	0	50

Akashi College	Year	2023	Course Title	English I A-2

Course Information

Course Code	5114	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	New Rays English Communication I / New Rays WORKBOOK		
Instructor	AKIMOTO Hiromi		

Course Objectives

1) To review the vocabulary learned at junior high school, acquire new vocabulary following the high school learning guidelines, and use it appropriately.
2) To review the grammar learned at junior high school, and learn to use grammar rules appropriately, according to the high school study guidelines.
3) To review sentences structures learned in junior high school, and learn to use sentence structures and operate them appropriately, following the high school learning guidelines.
4) Can read sentences written in English, understand the text outline, read and extract necessary information.
5) To acquire English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	The student has well acquired new vocabulary following the high school learning guidelines and use it appropriately.	The student has acquired new vocabulary following the high school learning guidelines and use it appropriately.	The student has not acquired new vocabulary following the high school learning guidelines and use it appropriately.
Achievement 2	The student has well learned to use grammar rules appropriately, according to the high school study guidelines.	The student has learned to use grammar rules appropriately, according to the high school study guidelines.	The student has not learned to use grammar rules appropriately, according to the high school study guidelines.
Achievement 3	The student has well learned to use sentence structures and operate them appropriately, following the high school learning guidelines.	The student has learned to use sentence structures and operate them appropriately, following the high school learning guidelines.	The student has not learned to use sentence structures and operate them appropriately, following the high school learning guidelines.
Achievement 4	The student can well read sentences written in English, understand the text outline, read and extract necessary information.	The student can read sentences written in English, understand the text outline, read and extract necessary information.	The student can not read sentences written in English, understand the text outline, read and extract necessary information.
Achievement 5	The student has well acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.	The student has acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.	The student has not acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Assigned Department Objectives

Teaching Method

Outline	Based on the junior high school learned content, to understand the basic structure of English sentences and acquire reading skills. To acquire the ability to listen and express simple English sentences. To perform word tests and strengthen vocabulary knowledge.
Style	Attend the classes, prepare for the classes studying the relevant sections of the workbook. Handout will be provided in the first week. Go over the handout and understand it in detail.
Notice	Use quizzes to increase student vocabulary and develop listening ability. Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Go over the previous lessons	To overcome weak points
		2nd	Chapter 5 Part 1/2	Learn the vocabulary and grammar rules set as lesson tasks.
		3rd	Chapter 5 Part 2/3	Learn the vocabulary and grammar rules set as lesson tasks.
		4th	Chapter 5 Part 4 Language and Culture Workshop	Understanding the cross-cultural communication through authentic materials.
		5th	Chapter 6 Part 1/2	Learn the vocabulary and grammar rules set as lesson tasks.
		6th	Chapter 6 Part 2/3	Learn the vocabulary and grammar rules set as lesson tasks.
		7th	Chapter 6 Part 4 Language and Culture Workshop	Understanding the cross-cultural communication through authentic materials.
		8th	Chapter 7 Part 1/2	Understanding the cross-cultural communication through authentic materials.
	4th Quarter	9th	Chapter 7 Part 2/3	Learn the vocabulary and grammar rules set as lesson tasks.

		10th	Chapter 7 Part 4 Language and Culture Workshop	Learn the vocabulary and grammar rules set as lesson tasks.
		11th	Chapter 8 Part 1/2	Learn the vocabulary and grammar rules set as lesson tasks.
		12th	Chapter 8 Part 2/3	Learn the vocabulary and grammar rules set as lesson tasks.
		13th	Chapter 8 Part 4	Learn the vocabulary and grammar rules set as lesson tasks.
		14th	Review	Understanding the weak points on the content learned so far and preparing for the exam.
		15th	Q & A	Understanding the weak points on the content learned so far and preparing for the exam.
		16th	Final exam	Test the student understanding of the content learned so far.

Evaluation Method and Weight (%)

	Examination	Assignments	Quizes	Behavior	Portfolio	Other	Total
Subtotal	50	10	40	0	0	0	100
Basic Proficiency	0	10	40	0	0	0	50
Specialized Proficiency	0	0	0	0	0	0	0
Cross Area Proficiency	50	0	0	0	0	0	50

Akashi College	Year	2023	Course Title	English I B-1

Course Information

Course Code	5115	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	(1) 総合英語 Evergreen（参考書、教科書、Workbook） (2) データベース 5th Edition (3) ネクステージ		
Instructor	KITAGAWA Chiho		

Course Objectives

1) To review the vocabulary learned at junior high school, acquire new vocabulary following the high school learning guidelines, and use it appropriately.
2) To review the grammar learned at junior high school, and learn to use grammar rules appropriately, according to the high school study guidelines.
3) To review sentences structures learned in junior high school, and learn to use sentence structures and operate them appropriately, following the high school learning guidelines.
4) To acquire English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	The student has well acquired new vocabulary following the high school learning guidelines and use it appropriately.	The student has acquired new vocabulary following the high school learning guidelines and use it appropriately.	The student has not acquired new vocabulary following the high school learning guidelines and use it appropriately.
Achievement 2	The student has well learned to use grammar rules appropriately, according to the high school study guidelines.	The student has learned to use grammar rules appropriately, according to the high school study guidelines.	The student has not learned to use grammar rules appropriately, according to the high school study guidelines.
Achievement 3	The student has well learned to use sentence structures and operate them appropriately, following the high school learning guidelines.	The student has learned to use sentence structures and operate them appropriately, following the high school learning guidelines.	The student has not learned to use sentence structures and operate them appropriately, following the high school learning guidelines.
Achievement 4	The student has well acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.	The student has acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener	The student has not acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Assigned Department Objectives

Teaching Method

Outline	Based on the junior high school learned content, to understand the basic structure of English sentences. To acquire the ability to listen and express simple English sentences. To perform word tests and strengthen vocabulary knowledge.
Style	Attend the classes, prepare for the classes studying the relevant sections of the workbook.
Notice	Use quizzes to increase student vocabulary and develop listening ability. Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☐ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Course summary explanation	Understand the class schedule
		2nd	Lesson 1 & 2	Learn the vocabulary and grammar rules set as lesson tasks.
		3rd	Lesson 3 & 4	Learn the vocabulary and grammar rules set as lesson tasks.
		4th	Lesson 5 & 6	Learn the vocabulary and grammar rules set as lesson tasks.
		5th	Review	Understanding the weak points on the content learned so far.
		6th	Review	Understanding the weak points on the content learned so far.
		7th	Lesson 7 & 8	Learn the vocabulary and grammar rules set as lesson tasks.
		8th	Lesson 9 &10	Learn the vocabulary and grammar rules set as lesson tasks.
	2nd Quarter	9th	Lesson 11 & 12	Learn the vocabulary and grammar rules set as lesson tasks.
		10th	Review	Understanding the weak points on the content learned so far.
		11th	Lesson 13 & 14	Learn the vocabulary and grammar rules set as lesson tasks.
		12th	Lesson 15 & 16	Learn the vocabulary and grammar rules set as lesson tasks.

		13th	Lesson 17 & 18	Learn the vocabulary and grammar rules set as lesson tasks.
		14th	Lesson 19 & 20	Learn the vocabulary and grammar rules set as lesson tasks.
		15th	Review	Understanding the weak points on the content learned so far and preparing for the exam.
		16th	End term exam	Test the student understanding of the content learned so far.

Evaluation Method and Weight (%)

	Examination	Short Tests	Others	Total
Subtotal	60	0	40	100
Basic Proficiency	60	0	40	100
Specialized Proficiency	0	0	0	0
Cross Area Proficiency	0	0	0	0

Akashi College	Year	2023	Course Title	English I B-2

Course Information

Course Code	5116	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	(1) 総合英語 Evergreen（参考書、教科書、Workbook） (2) データベース 5th Edition (3) ネクステージ		
Instructor	KITAGAWA Chiho		

Course Objectives

1) To review the vocabulary learned at junior high school, acquire new vocabulary following the high school learning guidelines, and use it appropriately.
2) To review the grammar learned at junior high school, and learn to use grammar rules appropriately, according to the high school study guidelines.
3) To review sentences structures learned in junior high school, and learn to use sentence structures and operate them appropriately, following the high school learning guidelines.
4) To acquire English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	The student has well acquired new vocabulary following the high school learning guidelines and use it appropriately.	The student has acquired new vocabulary following the high school learning guidelines and use it appropriately.	The student has not acquired new vocabulary following the high school learning guidelines and use it appropriately.
Achievement 2	The student has well learned to use grammar rules appropriately, according to the high school study guidelines.	The student has learned to use grammar rules appropriately, according to the high school study guidelines.	The student has not learned to use grammar rules appropriately, according to the high school study guidelines.
Achievement 3	The student has well learned to use sentence structures and operate them appropriately, following the high school learning guidelines.	The student has learned to use sentence structures and operate them appropriately, following the high school learning guidelines.	The student has not learned to use sentence structures and operate them appropriately, following the high school learning guidelines.
Achievement 4	The student has well acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.	The student has acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener	The student has not acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Assigned Department Objectives

Teaching Method

Outline	Based on the junior high school learned content, to understand the basic structure of English sentences. To acquire the ability to listen and express simple English sentences. To perform word tests and strengthen vocabulary knowledge.
Style	Attend the classes, prepare for the classes studying the relevant sections of the workbook.
Notice	Use quizzes to increase student vocabulary and develop listening ability. Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☐ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Course summary explanation	Understand the class schedule
		2nd	Lesson 21 & 22	Learn the vocabulary and grammar rules set as lesson tasks.
		3rd	Lesson 23 & 24	Learn the vocabulary and grammar rules set as lesson tasks.
		4th	Lesson 25 & 26	Learn the vocabulary and grammar rules set as lesson tasks.
		5th	Review	Understanding the weak points on the content learned so far.
		6th	Lesson 27 & 28	Learn the vocabulary and grammar rules set as lesson tasks.
		7th	Lesson 29 & 30	Learn the vocabulary and grammar rules set as lesson tasks.
		8th	Lesson 31 & 32	Learn the vocabulary and grammar rules set as lesson tasks.
	4th Quarter	9th	Lesson 33 & 34	Learn the vocabulary and grammar rules set as lesson tasks.
		10th	Review	Understanding the weak points on the content learned so far.
		11th	Lesson 35 & 36	Learn the vocabulary and grammar rules set as lesson tasks.
		12th	Lesson 37 & 38	Learn the vocabulary and grammar rules set as lesson tasks.

		13th	Lesson 39 & 40	Learn the vocabulary and grammar rules set as lesson tasks.
		14th	Lesson 41 & 42	Learn the vocabulary and grammar rules set as lesson tasks.
		15th	Review	Understanding the weak points on the content learned so far and preparing for the exam.
		16th	End term exam	Test the student understanding of the content learned so far.

Evaluation Method and Weight (%)

	Examination	Short Tests	Others	Total
Subtotal	60	0	40	100
Basic Proficiency	60	0	40	100
Specialized Proficiency	0	0	0	0
Cross Area Proficiency	0	0	0	0

Akashi College	Year	2023	Course Title	Introduction to Active Learning

Course Information

Course Code	5117	Course Category	General / Compulsory
Class Format	Seminar	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	授業内で適宜資料を配布する。		
Instructor	TAKEDA Naho,HIRANO Masatsugu,MIZUNO Yuki		

Course Objectives

自らの興味・関心を把握し、さらに他者と共有する。自ら調べ、共に考え行動し、ふりかえる能動的な学びを体験し、基盤となるマインド、知識や技能を取得していく。
互いに学びあう関係性づくりの考え方を知り、個人の興味関心とともにチームでの問題解決に取り組み、最適解を目指す学びを体験する。
以上の科目の目的をふまえ、以下の３点を到達目標とする。
1) 他者とコミュニケーションを取ろうとすることができる。
2) 他者の話を聴こうとすることができる。
3) 自分自身を振り返ろうとすることができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	他者とコミュニケーションを取ることができる。	他者とコミュニケーションを取ろうとすることができる。	他者とコミュニケーションを取ろうとすることができない。
評価項目2	他者の話を聴くことができる。	他者の話を聴こうとすることができる。	他者の話を聴こうとすることができない。
評価項目3	自分自身を振り返ることができる。	自分自身を振り返ろうとすることができる。	自分自身を振り返ろうとすることができない。

Assigned Department Objectives

Teaching Method

Outline	高等教育機関である高専では「自ら課題を設定し、それにふさわしい解を見つけ出す」ことが求められます。この授業では、自他を知り、学びあう関係性をあたため、チームでの問題解決に取り組み、「答え」をつくるという一連の流れにより、高専での学びにおける基礎的な力を身につけることを目的としています。
Style	個人ワークやグループワークを通じて、さまざまな探求の方法を学びます。成績評価は、講義内でのグループワーク、個人ワークの成果物で判断します。また、評価ポイントしては、それぞれの成果物の中で、相手に伝わる表現力、自分の出した答えまでの筋道を整理する論理的思考力、相手のフィードバックを受け取ってから自分の考えを内省する内省力などを評価します。 授業計画に示す４名の担当教員が、分担して講義を担当します。 連絡員：武田 字浦
Notice	合格の対象としない欠席条件(割合)：1/4以上の欠課。 学生同士の議論等を中心に参加型学習の手法によって展開します。自らの考えを声に出し、他者の声に丁寧に耳を傾けることで学びが豊かになるため、学びの場を共につくる過程に積極的に参与してください。

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	オリエンテーション（全員）	授業の概要と目的を理解する。
		2nd	自己紹介＆お互いを知ろう（武田、荒木）	共に授業を受ける仲間について知る。
		3rd	科学的な文章表現（武田）	根拠となる論文を適切に引用して、序論・本論・結論からなる文章を作成して自身の主張を示すことができる。
		4th	問題定義の基礎（武田）	現状と目標の明文化により問題を定義した上で、発想法を用いて問題の解決策を提案することができる。
		5th	問題定義の応用（荒木）	問題定義の技術や発想法を活用し、他者へのヒアリング内容をもとに問題の定義や解決策について検討する。
		6th	コミュニケーション①（荒木）	対話的なコミュニケーションに必要な傾聴と質問の技術について理解し、実践する。
		7th	コミュニケーション②（安藤）	さまざまな問題・課題を論じるために必要なディスカッションの手法について理解し、実践する。
		8th	チームワーク①（平野）	仲間との学び合いを実践する。
	2nd Quarter	9th	チームワーク②（平野）	チームでの問題解決を実践する。
		10th	答えのない問い 社会編①（荒木）	複雑性や不確実性の高い社会の中で対象を分析するための様々な手法を理解する。
		11th	答えのない問い 社会編②（荒木）	複雑性や不確実性の高い社会の中で価値を創造するための考え方を理解する。
		12th	答えのない問い 科学編①（安藤）	科学技術と社会の関係を踏まえて、専門分野間の共通点・相違点を知り、異分野協働の重要性を理解する。
		13th	答えのない問い 科学編②（安藤）	科学技術と社会の関係を踏まえて、立てた問いや導いた答えを伝えるための手法を理解する。
		14th	まとめ①（武田）	この授業での学びについて振り返り、これからの学び方について他者に話すことができる。

		15th	まとめ②（武田）	この授業での学びについて振り返り、これからの学び方について他者に提案することができる。
		16th		

Evaluation Method and Weight (%)

	レポート	発表・フィードバック	授業中課題	Total
Subtotal	40	20	40	100
基礎的能力	20	10	20	50
分野横断的能力	20	10	20	50

Akashi College	Year	2023	Course Title	Music-1

Course Information

Course Code	5120	Course Category	General / Elective
Class Format	Skill	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	Music I Tutti+(Kyoiku-Shuppan, Co.). Various sheet music and other printouts will also be distributed in class.		
Instructor	IZUMI Yuka		

Course Objectives

1. Acquire and practice the basics of vocalization and chorus.
2. Master the basics of chord names.
3. Learn the basics of the recorder flute and practice them.
4. Plan and practice musical performance.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	The student acquired and practiced the basics of vocalization and chorus well.	The student acquired and practiced the basics of vocalization and chorus.	The student did not acquire or practice the basics of vocalization and chorus.
Achievement 2	The student mastered the basics of chord names well.	The student mastered the basics of chord names.	The student did not master the basics of chord names.
Achievement 3	The student acquired the basics of the recorder flute and practiced them well.	The student acquired basics of the recorder flute and practiced them.	The student did not acquire the basics of the recorder flute or practice them.
Achievement 4	The student could plan and practice musical performances well.	The student could plan and practice basic musical performances.	The student could not plan or practice musical performances.

Assigned Department Objectives

Teaching Method

Outline	To know the joy of expressing yourself through music. Experience not only disposable music, but also genuine “music” that has survived times regardless of its eastern or western origins.
Style	Pratical classes of music expression.
Notice	Some texts and songs are difficult to play. The student will not earn a sense of accomplishment without careful and serious practice. Also, since this course deals with “sound”, refrain from unnecessary private talk. Prepare recorder flutes (all) and pianica flutes (for those who have them). Students who miss 1/4 or more of classes will not be eligible for evaluation. Practical experience: The instructor is an experienced vocalist. She has co-starred in recitals and orchestras in Japan and overseas, and can use her experience to teach students with specific and up-to-date information on music.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Parting, grouping, stretching, vocalization practice, singing a simple two-voice song	To be able to sing a simple two-voice song.
		2nd	Etude I for Choral	To sing simple songs with piano accompaniment.
		3rd	Etude II for Choral	To sing simple songs with piano accompaniment.
		4th	Chord name Basics I	Understand the simplest 3 chords.
		5th	Etude III for Choral	Can sing 2-voice or 3-voice J/POP.
		6th	Etude IV for Choral	Can get the correct pitch even in a few people group.
		7th	Etude V for Choral	Harmony can be echoed beautifully, even in a few people group.
		8th	Chord name Basics II	Chord name practice and quizzes, group presentation practice.
	2nd Quarter	9th	Etude VI for Choral	Final practice for the group presentation.
		10th	Etude VII for Choral	The group will present and be able to transmit something to other people, beyond self-satisfaction.
		11th	Recorder Flute Basics I	Rediscover the charm of the recorder flute!
		12th	Recorder Flute Basics II	Play a simple ensemble.
		13th	Planning and practice for practical skill test I	To plan a free music performance in the students' expertise field.
		14th	Planning and practice for practical skill test II	To plan a free music performance in the students' expertise field.
		15th	Practical test and "Class presentation"	Practical test and "Class presentation"
		16th	No end term exam	

Evaluation Method and Weight (%)

	Attendance	Behavior	Pratical Test	Vocal/Flute	Chord Test	Other	Total
Subtotal	10	15	35	20	20	0	100
Basic Proficiency	10	8	25	20	20	0	83
Specialized Proficiency	0	0	0	0	0	0	0
Cross Area Proficiency	0	7	10	0	0	0	17

Akashi College	Year	2023	Course Title	Music-2

Course Information

Course Code	5121	Course Category	General / Elective
Class Format	Skill	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	①歌いやすい合唱曲の楽譜 ②コードネームに関するプリント ③音楽 I Tutti+(教育出版)		
Instructor	IZUMI Yuka		

Course Objectives

1. 発声と合唱の基礎を習得し、実践できる。
2. コードネームの基礎を習得している。
3. リコーダーの基礎を習得し、実践できる。
4. 音楽的なパフォーマンスについて企画・実践できる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	発声と合唱の基礎を十分に習得し、自在に実践できる。	発声と合唱の基礎を習得し、実践できる。	発声と合唱の基礎を習得・実践ができない。
評価項目2	コードネームの基礎を十分に習得している。	コードネームの基礎を習得している。	コードネームの基礎を習得できない。
評価項目3	リコーダーの基礎を十分に習得し、自在に実践できる。	リコーダーの基礎を習得し、実践できる。	リコーダーの基礎を習得・実践できない。
評価項目4	音楽的なパフォーマンスについて的確に企画・実践できる。	音楽的なパフォーマンスについて企画・実践できる。	音楽的なパフォーマンスについて企画・実践できない。

Assigned Department Objectives

Teaching Method

Outline	音楽を通して自分自身を表現する喜びを知る。ちまたに溢れる使い捨ての音楽だけでなく、時代を経ても生き残る本物の「音楽」を洋の東西を問わず体験する。
Style	授業は主として音楽表現の実技形式で進める。 連絡員：ハーバート ジョン
Notice	テキストや楽曲はレベルの高いものもあります。丁寧かつ真剣に練習しなければ達成感を得ることができません。また「音」を扱う科目なので不要な私語は慎むこと。リコーダー(全員)・ピアニカ(もしあれば)を用意すること。 評価の対象としない欠席条件(割合) 1/4以上の欠課。 実務経験：声楽家として国内外でのリサイタルやオーケストラとの共演があり、その経験を活かして、学生に音楽上の具体的かつ最新の情報でもって指導できる。

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	ア・カペラに挑戦 I	まず8小節程度の短い4声部の曲で美しいハーモニーを実感しながら歌う。
		2nd	ア・カペラに挑戦 II	ア・カペラの選択曲からグループに適したものを選びグループで練習する。
		3rd	ア・カペラに挑戦 III	練習＆チェックを繰り返して、自分たちの進歩を実感する。
		4th	ア・カペラに挑戦 IV	グループ発表会で演奏することだけでなく、他の人の演奏を集中して聴く喜びを味わう。
		5th	コードネームの基礎 III	前期に学習した3和音に加えてセブンスコード・分数コードを覚える。
		6th	コードネームの基礎 IV	原則を覚えたコードを練習問題を繰り返すことで実際の曲の中でも読み取れるようにする。
		7th	コードネームの基礎 V 様式感の異なる楽曲を聞き比べる音楽鑑賞。	コードネームは第6週の復習。 ただ単に知識を詰め込むだけでなく、自分の感性を大切にする。
		8th	コードネームの基礎 VI	小テストで知識の確認。
	4th Quarter	9th	歌う喜び I	最新の現代人気作曲家による合唱曲に挑戦する。クラスの男女構成によってアレンジを変えることもある。
		10th	歌う喜び II	できるだけ良い発声と響きでもって、曲の細部ま。
		11th	歌う喜び III	各自が良い響きを意識し、丁寧かつダイナミックな表現で全員で歌う喜びを実感する。
		12th	実技テストのための企画・練習 I	実技テストのための企画ができる。アカペラアンサンブル・ギターソロ・ピアノソロ等。
		13th	実技テストのための企画・練習 II	限られた時間と設備の中で企画・練習ができる。
		14th	実技テストのための企画・練習 III	練習を積み仕上げる。
		15th	実技テスト兼「クラス発表会」一年の総まとめ	実技テスト兼「クラス発表会」一年の総まとめ
		16th	期末試験実施せず	

Evaluation Method and Weight (%)

	出席状況	平常点	実技テスト	歌またはリコーダー小テスト	コードネーム小テスト	Total
Subtotal	10	15	35	20	20	100
基礎的能力	10	8	25	20	20	83
専門的能力	0	0	0	0	0	0
分野横断的能力	0	7	10	0	0	17

Akashi College	Year	2023	Course Title	Art-1

Course Information

Course Code	5122	Course Category	General / Elective
Class Format	Skill	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	Art 1 (Mitsumura Tosho Publishing). Various printouts will also be distributed in class.		
Instructor	OHNO Ryohei		

Course Objectives

1. Can express things in several art forms.
2. Can appreciate works of art and comment on them in groups.
3. Understand the relationship between real life and art.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can express things freely in several art forms.	Can express things in several art forms.	Cannot express things in several art forms.
Achievement 2	Can accurately appreciate works of art and comment on them in groups.	Can appreciate works of art and comment on them in a group.	Cannot appreciate works of art and comment on them in a group.
Achievement 3	Can fully understand the relationship between real life and art.	Can understand the relationship between real life and art.	Can not understand the relationship between real life and art.

Assigned Department Objectives

Teaching Method

Outline	By expressing things in different art forms including 2-dimmensional portraying (sketching), 3-dimmensional works (clay works), color (color materials), ideas (images), students refine their sensitivity and learn how art is related to real life.
Style	Classes are mainly conducted through practical lessons on how to express things in different art forms. Liaison: John C. Herbert
Notice	This subject is taught by a teacher who has been practicing town development for many years through his art work and writing activities as a contemporary art writer. Applying his experiences to practical lessons, he questions what art really means. This course requires individuals to take their own initiative. Students are required to create art with a motivated attitude. A F6-size sketchbook is used in classes. Do not forget things like tools. Tidying and cleaning up the classroom after lessons are mandatory. Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Explaining the class content, tools, appreciation of works of art, assignments for the next class	
		2nd	Sketching 1	To draw Sketch 1.
		3rd	Sketching 2	To draw Sketch 2.
		4th	Sketching 3	To draw Sketch 3.
		5th	Sketching 4	To draw Sketch 4.
		6th	Sketching 5	To draw Sketch 5.
		7th	Sketching 6	To draw Sketch 6.
		8th	Abstract expression using color materials (image of nature 1)	To express things in an abstract art form using color materials.
	2nd Quarter	9th	Abstract expression using color materials (image of nature 2)	To express things in an abstract art form using color materials.
		10th	Abstract expression using color materials (image of nature 3)	To express things in an abstract art form using color materials.
		11th	Abstract expression using color materials (image of nature 4)	To express things in an abstract art form using color materials.
		12th	Group work / explaining the assignment for the next class	To comment on works expressed in an abstract form in a group.
		13th	Figure (replicating skeletal frame 1)	To draw replicating skeletal frame of figure.
		14th	Figure (croquis drawing 1)	To draw croquis.
		15th	Figure (croquis drawing 2)	To draw croquis.
		16th	No final exam	

Evaluation Method and Weight (%)

	Practical skill production	Attendance・Behavior	Total
Subtotal	80	20	100
Basic Proficiency	80	20	100

Specialized Proficiency	0	0	0
Cross Area Proficiency	0	0	0

Akashi College	Year	2023	Course Title	Art-2

Course Information

Course Code	5123	Course Category	General / Elective
Class Format	Skill	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	Art 1 (Mitsumura Tosho Publishing). Various printouts will also be distributed in class.		
Instructor	OHNO Ryohei		

Course Objectives

1. Can express things in several art forms.
2. Can appreciate works of art and comment on them in groups.
3. Understand the relationship between real life and art.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can express things freely in several art forms.	Can express things in several art forms.	Cannot express things in several art forms.
Achievement 2	Can accurately appreciate works of art and comment on them in groups.	Can appreciate works of art and comment on them in a group.	Cannot appreciate works of art or comment on them in a group.
Achievement 3	Can fully understand the relationship between real life and art.	Can understand the relationship between real life and art.	Can not understand the relationship between real life and art.

Assigned Department Objectives

Teaching Method

Outline	By expressing things in different art forms including 2-dimmensional portraying (sketching), 3-dimmensional works (clay works), color (color materials), ideas (images), students refine their sensitivity and learn how art is related to real life.
Style	Classes are mainly conducted through practical lessons on how to express things in different art forms. Liaison: John Herbert
Notice	This subject is taught by a teacher who has been practicing town development for many years through his art work and writing activities as a contemporary art writer. Applying his experiences to practical lessons, he questions what art really means. This course requires individuals to take their own initiative. Students are required to create art with a motivated attitude. A F6-size sketchbook is used in classes. Do not forget things like tools. Tidying and cleaning up the classroom after lessons are mandatory. Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Group work / explaining the assignment for the next class 4	To comment on replicated drawings and croquis drawings in a group.
		2nd	Fieldwork 1 (outdoor sketching, and memorable landscapes and things)	To sketch outdoors.
		3rd	Fieldwork 2 (outdoor sketching and memorable landscapes and things)	To sketch outdoors.
		4th	Fieldwork 3 (outdoor sketching, and memorable landscapes and things)	To sketch outdoors.
		5th	Group work / explaining the assignment for the next class 5	To comment on outdoor sketches in a group.
		6th	Design (creating a character 1)	To design a character.
		7th	Design (creating a character 2)	To design a character.
		8th	Design (creating a character 3)	To design a character.
	4th Quarter	9th	Environmental art 1 (art work that emerges into urban landscape / the relationship between art and society)	To appreciate environmental art.
		10th	Environmental art 2 (art work that emerges into urban landscape / the relationship between art and society)	To appreciate environmental art.
		11th	Environmental art 3 (art work that emerges into urban landscape / the relationship between art and society)	To appreciate environmental art.
		12th	Expressing ideas 1 (image training)	To express ideas.
		13th	Expressing ideas 2 (image training)	To express ideas.
		14th	Expressing ideas 3 (image training)	To express ideas.
		15th	General review of art	To understand the content of general review.
		16th	No final exam	

Evaluation Method and Weight (%)

	Practical skill production	Attendance・Behavior	Total
Subtotal	80	20	100
Basic Proficiency	80	20	100
Specialized Proficiency	0	0	0
Cross Area Proficiency	0	0	0

Akashi College	Year	2023	Course Title	Electric Circuits I

Course Information

Course Code	5128	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	Academic Credit: 2
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	教科書：金原粲:電気回路改訂版、実教出版		
Instructor	OHMUKAI Masato		

Course Objectives

[1] To understand the relationships among charge, current and potential, and to be able to explain and calculate them.
[2] To be able to write circuit equations, to solve them, and to perform calculations using specific numerical values.
[3] To understand the relationship between Thevenin's theorem and Norton's theorem, to be able to explain it, and to be able to perform equivalent circuit creation and calculations of circuits.

Rubric

	Excellent	Good	Insufficient
1	The student can understand the relationships among charge, current and potential, and to be able to explain and calculate them.	The student can understand the relationships among charge, current and potential, and to be able to explain them.	The student can not understand the relationships among charge, current and potential, and are not be able to explain them.
2	The student is able to write circuit equations, to solve them, and to perform calculations using specific numerical values.	The student is able to write circuit equations.	The student is not able to write circuit equations.
3	The student is able to understand the relationship between Thevenin's theorem and Norton's theorem, to be able to explain it, and to be able to perform equivalent circuit creation and calculations of circuits.	The student is able to understand the relationship between Thevenin's theorem and Norton's theorem, and is able to explain it.	The student is not able to understand the relationship between Thevenin's theorem and Norton's theorem.

Assigned Department Objectives

Teaching Method

Outline	The students will master DC circuits based on the knowledge of electricity learned at junior high school. In this course, the target is to be able to calculate the electric current, voltage, power etc. in circuits. DC circuits are not only the foundation of AC circuits to be learned in the future, but also the basis of electric / electronic circuits and an important theme.
Style	In this course, the lectures and exercises will be conducted using supplementary materials and texts. To master electrical circuit, it is essential that the students solve problems, solving problems leads to a better understanding. Therefore, before the end of class, quizzes and task reports will be conducted to ensure students knowledge acquirement.
Notice	The content of this course is of 90 hours, and it includes self-learning time. The students should strictly respect the deadline of the assignments. (up to 5 absences are excused)

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	What are electrical circuits: Ohm's law, serial connection and parallel connection of resistors.	Understand Ohm's law and calculate voltage, current, etc. And to calculate combined resistance.
		2nd	What are electrical circuits: Applied exercises of how to determine division ratio, division ratio, combined resistance.	To use a split ratio and a partial pressure ratio. Learn how to determine advanced synthetic resistance.
		3rd	Power supply and electric power: Voltage source and current source, and power supply circuit considering internal resistance	To understand the concepts of a voltage source, current source and internal power supply, and to be able to perform interconversion between a voltage source equivalent circuit and current source equivalent circuit.
		4th	Power supply and electric power: Electric power, electric energy and maximum electric power	To be able to calculate the electric power consumed by the load in a circuit and the maximum electric power that can be supplied to the load.
		5th	Circuit equation: Kirchhoff's law, loop current method	To understand Kirchhoff's law, and to be able to establish the loop current method.
		6th	Circuit equation: Node voltage method	To solve equations using the node voltage method.
		7th	Review	Eliminate doubts.
		8th	Mid-term Exam	To solve correctly more than 60% of the exam.
	4th Quarter	9th	Various circuits: Bridge circuit	To understand the equilibrium condition of the Wheatstone bridge and to be able to calculate resistance values and current value by various calculation methods.

		10th	Various circuits: Y connection and Δ connection	To be able to derive the formulas of Δ-Y conversion and the inverse conversion.
		11th	Various circuits: Superposition principle (Part 1)	To understand the superposition principle of voltage sources and to be able to calculate a current from the equivalent circuit.
		12th	Various circuits: Thevenin’s theorem	To understand Thevenin’s theorem and to be able to calculate a current from the equivalent circuit.
		13th	Various circuits: Norton’s theorem	To understand Norton’s theorem and other circuit theorems.
		14th	Practice	To get technical skills for problems
		15th	Review	Eliminate doubts.
		16th	End-term Exam	To solve correctly more than 60% of the exam.

Evaluation Method and Weight (%)

	Test	Assignments	etc	Total
Subtotal	70	0	30	100
Basic Skills	0	0	0	0
Specialized Skills	70	0	30	100

Akashi College	Year	2023	Course Title	Computer Programming I

Course Information

Course Code	5129	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	Academic Credit: 2
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	HIRANO Masatsugu		

Course Objectives

[1] Can perform basic Linux operations.
[2] Can write programs that contain conditional branches in C.
[3] Can write programs that contain iterations in C.
[4] Can write programs that contain arrays in C.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can perform basic Linux operations accurately.	Can perform basic Linux operations.	Cannot perform basic Linux operations.
Achievement 2	Can write programs that contain complex conditional branches in C.	Can write programs that contain conditional branches in C.	Cannot write programs that contain conditional branches in C.
Achievement 3	Can write programs that contain iterations in C in multiple ways.	Can write programs that contain iterations in C.	Cannot write programs that contain iterations in C
	Can write programs that use arrays and two-dimensional arrays in C.	Can write programs that use arrays in C.	Cannot write programs that use arrays in C.

Assigned Department Objectives

Teaching Method

Outline	The course will provide lectures and exercises on programming in C to establish a foundation for problem solving and programming skills.
Style	The first week will be in the classroom, and the from second week, the class will be in the Information Basics Lab. In the Information Basics Lab,, the class will alternate between explanations about the content you will learn for the week and doing programming exercises. Students are required to complete ten programming assignments.
Notice	This course's content will amount to 90 hours of study in total. These hours include learning time guaranteed in classes and the standard self-study time required for pre-study / review, and completing assignment reports. In addition to the lecture hours, students should visit the Information Basics Lab frequently and learn with the attitude, "practice makes perfect." Students who have submitted fewer than six programming assignments will not be eligible for a passing grade. Students who miss 1/3 or more of classes will not be eligible for a passing grade.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Basic knowledge of programming and information processing	Can list the components of a computer. Can use binary digits (integer and decimal), complement on 2, and 32-bit floating point numbers
		2nd	Linux, Emacs, compile, and run	Can perform basic Linux operations. Can write, compile, and run programs in C.
		3rd	Variables, types, outputs, inputs, basic operations	Can use variables, arithmetic operators, and simple assignment operators. Can use the basic types accordingly. Can write programs that contain data inputs and outputs.
		4th	Characters, hexadecimal numbers, exponents, loss of trailing digits	Can use characters, hexadecimal numbers, and exponents. Can explain what the loss of trailing digits mean.
		5th	Operators, logical operations, casts	Can use assignment operators. Can perform logical operations and casts.
		6th	Structured programming, conditional branches 1 of 2	Can explain what the structure theorem is. Can write if statements.
		7th	Conditional branches 2 of 2	Can write switch statements.
		8th	Midterm exam	
	4th Quarter	9th	Midterm exam comments, iteration 1 of 3	Understand where you made mistakes on the midterm exam. Can write do statements.
		10th	Iteration 2 of 3	Can write while and for statements.
		11th	Iteration 3 of 3	Can write nested iterative statements.
		12th	Arrays	Can explain sets and columns. Can scan, initialize, and copy arrays.
		13th	Algorithms and flowcharts	Can explain algorithms. Can write flowcharts.

		14th	Matrices and a two-dimensional arrays 1 of 2	Can add and subtract in matrices. Can add and subtract matrices using two-dimensional arrays.
		15th	Matrices and two-dimensional arrays 2 of 2	Can multiply matrices. Can multiply matrices using two-dimensional arrays.
		16th	Final exam	

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	70	30	0	0	0	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	70	30	0	0	0	0	100
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2023	Course Title	Computer Literacy A

Course Information

Course Code	5130	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	NAKAI Yuichi		

Course Objectives

(1) Understand basic knowledge of computer hardware and software.
(2) Understand basic knowledge of Markdown.
(3) Can input letters by touch typing.
(4) Understand how to use the Internet at school, and can act while keeping in mind the various rules in an information society.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can accurately explain the basic aspects of computer hardware and software.	Can explain the basic aspects of computer hardware and software.	Cannot explain the basic aspects of computer hardware and software.
Achievement 2	Can create complex documents using basic knowledge of Markdown.	Can create simple documents using basic knowledge of Markdown.	Cannot create simple documents using basic knowledge of Markdown.
Achievement 3	Can touch type at a sufficient speed.	Can touch type.	Cannot touch type.
Achievement 4	Can discuss with others about what they can do to make a better information society. Can think about problems that may arise in an information society, and handle them when they arise.	Can put the things they can do to make a better information society into action. Can communicate their ideas about problems that may arise in an information society, and how to handle them when they arise.	Do not understand what they can do to make a better information society. Do not understand problems that may arise in an information society, and how to handle them when they arise.

Assigned Department Objectives

Teaching Method

Outline	Students will learn about computer software and basic knowledge of software and hardware, and acquire basic computer usage skills.
Style	Following the classroom lectures, students will have a lab.
Notice	Labs will make up a large proportion of the class, so students will be required on their own to make an effort by using their breaktime, etc. to catch up on their work. Students are also expected to think and act by themselves. Students will be required to acquire touch typing skills. All assignments must be submitted. Students who miss 1/3 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☐ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Computer basics (Hardware)	Can explain an overview of a computer hardware configuration.
		2nd	Computer basics (Hardware)	Can explain an overview of a computer hardware configuration.
		3rd	Computer basics (Software)	Can explain the roles and types of operating systems, and explain features of key OSs.
		4th	Computer basics (Software)	Can explain the types of application software.
		5th	Using the network	Can use the e-learning system, etc. at school. Understand how to use the Internet at school, and can act while keeping in mind the various rules in an information society.
		6th	Installation of Linux	Can explain how to start and shutdown of Linux operation system.
		7th	Configuration of Linux	Can make some personalization of Linux desktop environment.
		8th	Configuration of Linux	Can make some personalization of Linux desktop environment.
	2nd Quarter	9th	Introduction to Markdown	Can explain the concept and idea of Markdown.
		10th	Introduction to Markdown	Can explain Markdown key tags.
		11th	Introduction to Markdown	Can create simple documents using Markdown.
		12th	Introduction to Markdown	Can convert Markdown documents to various forms.
		13th	Formulas	Can explain commands to create mathematical formulas, which is a LaTeX function.
		14th	Formulas	Can create simple formulas using LaTeX functions.

		15th	Formulas	Can create complicated formulas using LaTeX functions.
		16th	Final exam	

Evaluation Method and Weight (%)

	Examination	Presentation	Touch Typing	Behavior	Portfolio	Other	Total
Subtotal	70	20	10	0	0	0	100
Basic Proficiency	70	20	10	0	0	0	100
Specialized Proficiency	0	0	0	0	0	0	0
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2023	Course Title	Computer Literacy B

Course Information

Course Code	5131	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	NAKAI Yuichi		

Course Objectives

(1) Understand basic knowledge of computer hardware and software.
(2) Understand basic knowledge of Markdown.
(3) Understand image formats used on computers.
(4) Understand how to create graphs on computers.
(5) Understand how to create documents on computers.
(6) Can input letters by touch typing.
(7) Understand how to use the Internet at school, and can act while keeping in mind the various rules in an information society.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can accurately explain the basic aspects of computer hardware and software.	Can explain the basic aspects of computer hardware and software.	Cannot explain the basic aspects of computer hardware and software.
Achievement 2	Can create complex documents using basic knowledge of Markdown.	Can create simple documents using basic knowledge of Markdown.	Cannot create simple documents using basic knowledge of Markdown.
Achievement 3	Can accurately explain image formats used on computers.	Can explain image formats used on computers.	Cannot explain image formats used on computers.
	Can create graphs accurately on computers.	Can create graphs on computers.	Cannot create graphs on computers.
	Understand how to create documents on computers, and can accurately create documents with charts.	Understand how to create documents on computers, and can create documents with charts.	Do not understand how to create documents on computers, and cannot create documents with charts.
	Can touch type at a sufficient speed.	Can touch type.	Cannot touch type.
	Can discuss with others about what they can do to make a better information society. Can think about problems that may arise in an information society, and handle them when they arise.	Can put the things they can do to make a better information society into action. Can communicate their ideas about problems that may arise in an information society, and how to handle them when they arise.	Do not understand what they can do to make a better information society. Do not understand problems that may arise in an information society, and how to handle them when they arise.

Assigned Department Objectives

Teaching Method

Outline	Students will learn about computer software and basic knowledge of software and hardware, and acquire basic computer usage skills.
Style	Following the classroom lectures, students will have a lab.
Notice	Labs will make up a large proportion of the class, so students will be required on their own to make an effort by using their breaktime, etc. to catch up on their work. Students are also expected to think and act by themselves. Students will be required to acquire touch typing skills. All assignments must be submitted. Students who miss 1/3 or more of classes will not be eligible for a passing grade.

Characteristics of Class / Division in Learning

☐ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Creating charts using a drawing software	Can perform the basic operation of a drawing software.
		2nd	Creating charts using a drawing software	Can create assigned charts using a drawing software.
		3rd	Creating charts using a drawing software	Can create simple charts using a drawing software.
		4th	Creating charts using a drawing software	Can export charts into various forms.
		5th	Creating graphs with gnuplot	Can explain an overview of gnuplot's graph-creating feature.
		6th	Creating graphs with gnuplot	Can create simple graphs using basic commands to create charts in gnuplot.
		7th	Creating graphs with gnuplot	Can create practical graphs using more complex commands.
		8th	Creating graphs with gnuplot	Can create complex graphs by fitting.
	4th Quarter	9th	LaTeX basics	Can explain the steps on how to create documents in LaTeX.

		10th	Document structures in LaTex	Can create simple documents in LaTeX.
		11th	Document structures in LaTex	Can structure documents in LaTeX.
		12th	Lists and tables in LaTeX	Can create lists using LaTeX commands.
		13th	Lists and tables in LaTeX	Can create tables using LaTeX commands.
		14th	Importing graphs in LaTeX	Can create documents with charts using LaTeX commands.
		15th	Comprehensive exercise	Can create documents with charts, graphs, and formulas using LaTeX commands.
		16th	Final exam	

Evaluation Method and Weight (%)

	Examination	Presentation	Touch Typing	Behavior	Portfolio	Other	Total
Subtotal	60	30	10	0	0	0	100
Basic Proficiency	60	30	10	0	0	0	100
Specialized Proficiency	0	0	0	0	0	0	0
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2023	Course Title	Fundamental Experiments of Electrical & Computer Engineering

Course Information

Course Code	5132	Course Category	Specialized / Compulsory
Class Format	Experiment	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	1st
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	Distribute materials in class		
Instructor	KAJIMURA Yoshihiro,HIROTA Atsushi		

Course Objectives

1) Experientially understand the basics of electrical engineering through basic experiment exercises
2) Can research independently and actively matters related to conducted experiments
3) Learn to be cooperative and kind to others through collaborative work

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Fully and experientially understand the basics of electrical engineering through basic experiment exercises	Experientially understand the basics of electrical engineering through basic experiment exercises	Do not experientially understand the basics of electrical engineering through basic experiment exercises
Achievement 2	Can fully research independently and actively matters related to conducted experiments	Can research independently and actively matters related to conducted experiments	Cannot research independently and actively matters related to conducted experiments
Achievement 3	Fully learn to be cooperative and kind to others through collaborative work	Learn to be cooperative and kind to others through collaborative work	Fail to learn to be cooperative and kind to others through collaborative work

Assigned Department Objectives

Teaching Method

Outline	Students will experientially understand the basics of electrical engineering through basic experiment exercises, and learn the basic attitude for engineering experiments, including researching independently and actively matters related to conducted experiments . They will also learn to be cooperative, considerate to others, etc., through collaborative work. The instructors hold classes jointly.
Style	Lessons are done in the form of experiment exercises by teams. Quizzes will be conducted to test students' understanding.
Notice	Students are expected to work independently and actively, and learn the fundamentals and basics of experiments. They should attend classes in appropriate lab attire, and always behave with their own and others' safety in mind. All assignments are required to be submitted. Students are expected to develop the habit of properly fulfilling responsibilities, such as cleaning and putting away the equipment used. Students are required to bring a calculator (any model) and an A4 notebook for the experiments. It doesn't need to be a new notebook, but loose leaf paper is not allowed. Students who miss 1/3 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Course outline	Understand the outline of this course (objectives, goals, and notes)
		2nd	How to use a tester and measuring resistance and voltage	Learn how to use a tester and can measure resistance and voltage
		3rd	Breadboard 1	Learn the basic use of a breadboard
		4th	Breadboard 2	Can build a basic circuit using a breadboard
		5th	Oscilloscope 1	Learn the basic use of an oscilloscope
		6th	Oscilloscope 2	Learn the basic use of an oscilloscope and can measure circuits
		7th	Building electronics 1	Can build electronics using a soldering iron
		8th	Building electronics 2	Can build electronics using a soldering iron
	2nd Quarter	9th	Oscillator 1	Learn the basic use of an oscillator
		10th	Oscillator 2	Learn the basic use of an oscillator and can give high frequencies to a circuit
		11th	Making a blinking LED circuit 1	Understand the basic mechanism of a blinking LED circuit
		12th	Making a blinking LED circuit 2	Can make a basic circuit for a blinking LED circuit
		13th	Making a blinking LED circuit 3	Can make a blinking LED circuit
		14th	Amplified circuit using an operational amplifier	Can make a sine wave amplification circuit using an operational amplifier
		15th	Practice measuring voltage with a bridge circuit	Understand the equilibrium conditions of a bridge circuit
		16th	No final exam	

Evaluation Method and Weight (%)							
	Experiment efforts	Active learning	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	80	20	0	0	0	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	80	20	0	0	0	0	100
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2024	Course Title	Japanese II-1

Course Information

Course Code	6201	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	『精選論理国語』『精選文学国語』（明治書院）、『精選古典探究』（第一学習社）、『新訂総合国語便覧』（第一学習社）		
Instructor	TANGE Atsuko		

Course Objectives

1) 論理的な文章（論説や評論）の構成や展開を理解し、要約することができる。
2) 文学的な文章（小説や韻文）を表現に即して読み取り、その表現の特質について自分の意見を述べることができる。
3) 日常的に用いられる漢字や語句を正しく理解し、活用することができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	論理的な文章（論説や評論）の構成や展開を的確に理解し、要約した上で自分の意見を述べることができる。	論理的な文章（論説や評論）の構成や展開を遺漏なく理解し、要約することができる。	論理的な文章（論説や評論）の構成や展開についてキーワード等の補助がなければまとめることができない。
評価項目2	文学的な文章（小説や韻文）について、歴史的な背景や知識をもとに表現に即して読み取り、その表現の特質について自分の意見を述べることができる。	文学的な文章（小説や韻文）を表現に即して読み取り、その表現の特質について理解することができる。	文学的な文章（小説や韻文）を読み、おおまかな内容しか理解できない。
評価項目3	日常的に用いられる漢字や語句を正しく理解し、日常生活や研究の中で自由に活用することができる。	日常的に用いられる漢字や語句に関心を持ち、吸収しようと心がけることができる。	日常的に用いられる漢字や語句について、理解が十分でない。

Assigned Department Objectives

Teaching Method

Outline	小説や評論、古典文学など、様々な文章を読むことを通して、豊かな感性と論理的思考力を養い、的確な読解力と表現力を獲得する。
Style	講義形式を基本とする。随時、小テストや課題を課す。
Notice	事前学習によって問題点を明らかにした上で授業に臨み、意欲的に取り組むこと。 評価の対象としない欠席条件(割合) 1/3以上の欠課

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	ガイダンス・「学びとは何か」の読解	授業の進行・準備物について理解することができる
		2nd	「学びとは何か」の読解	テキストの構成をとらえ、内容を適切に理解することができる
		3rd	「学びとは何か」の読解	内容を理解した上で、自分の意見を述べることができる
		4th	「山月記」の読解	表現に即して内容を理解することができる
		5th	「山月記」の読解	小説の主人公について、典拠を踏まえて人物像を理解することができる
		6th	「山月記」の読解	表現・構成に注意して小説の展開を理解することができる
		7th	「山月記」の読解	表現・構成に注意して小説の展開を理解することができる
		8th	「山月記」の読解	小説の展開を整理し、全体的な主題を理解することができる
	2nd Quarter	9th	「古今著聞集」（小式部内侍が大江山の歌の事）の読解	適切に解釈し、教科書の設問に答えることができる
		10th	「方丈記」（ゆく川の流れ）の読解	文学史上の評価を理解し、文意をとらえることができる
		11th	「方丈記」（安元の大火）の読解	適切に解釈し、教科書の設問に答えることができる
		12th	「方丈記」（安元の大火）の読解	作品の主題と特徴を説明することができる
		13th	短歌・俳句の読解	作品背景・作家論を知り、作品を解釈することができる
		14th	短歌・俳句の読解	作品の主題と特徴を説明することができる
		15th	短歌・俳句の読解	作品ごとの特徴を意見として示すことができる
		16th	期末試験	

Evaluation Method and Weight (%)

	試験	小テスト	態度	その他	Total
Subtotal	80	10	10	0	100
基礎的能力	80	10	10	0	100

専門的能力	0	0	0	0	0
分野横断的能力	0	0	0	0	0

Akashi College	Year	2024	Course Title	Japanese II-2

Course Information

Course Code	6202	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	『精選論理国語』『精選文学国語』（明治書院）、『精選古典探究』（第一学習社）、『新訂総合国語便覧』（第一学習社）		
Instructor	TANGE Atsuko		

Course Objectives

1)論理的な文章（論説や評論）の構成や展開を的確にとらえ、要約することができる。
2)文学的な文章（物語や日記）に描かれた人物やものの見方を表現に即して読み取り、自分の意見を述べることができる。
3)整理した情報をもとに、主張が効果的に伝わるように論理の構成や展開を工夫した報告を行ったり、文章を作成したりすることができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	論理的な文章（論説や評論）の構成や展開を的確に理解し、要約した上で自分の意見を述べることができる。	論理的な文章（論説や評論）の構成や展開を遺漏なく理解し、要約することができる。	論理的な文章（論説や評論）の構成や展開についてキーワード等の補助がなければまとめることができない。
評価項目2	文学的な文章（物語や日記）について、歴史的な背景や知識をもとに表現に即して読み取り、その表現の特質について自分の意見を述べることができる。	文学的な文章（小説や日記）を表現に即して読み取り、その表現の特質について理解することができる。	文学的な文章（小説や日記）を読み、おおまかな内容しか理解できない。
評価項目3	明確な意見、結論を論理的、実証的文章として構成、展開することができる。	明確な意見とそれを表す段落構成を作成することができる。	結論、意見を設け、段落分けできるが論理性・実証性に乏しい。

Assigned Department Objectives

Teaching Method

Outline	小説や評論、古典文学など、様々な文章を読むことを通して、豊かな感性と論理的思考力を養い、的確な読解力と表現力を獲得する。
Style	講義形式を基本とする。随時、小テストや課題を課す。
Notice	事前学習によって問題点を明らかにした上で授業に臨み、意欲的に取り組むこと。 評価の対象としない欠席条件(割合) 1/3以上の欠課

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	授業ガイダンス、「なぜ科学を学ぶのか」の読解	テキストに用いられている語句・表現を適切に理解することができる
		2nd	「なぜ科学を学ぶのか」の読解	テキストの構成をとらえ、内容を適切に理解することができる
		3rd	「なぜ科学を学ぶのか」の読解	テキストの構成をとらえ、内容を適切に理解することができる
		4th	「なぜ科学を学ぶのか」の読解	内容を理解した上で、自分の意見を述べることができる
		5th	「若紫」（源氏物語）の読解	文学史上の評価を理解し、文意をとらえることができる
		6th	「若紫」（源氏物語）の読解	適切に解釈し、教科書の設問に答えることができる
		7th	「若紫」（源氏物語）の読解	作品の主題と特徴を説明することができる
		8th	「若紫」（源氏物語）の読解	主題を理解し、作品に対する自分の意見を述べることができる
	4th Quarter	9th	「源氏の五十余巻」（更級日記）の読解	適切に解釈し、教科書の設問に答えることができる
		10th	「源氏の五十余巻」（更級日記）の読解	作品の主題と特徴を説明することができる
		11th	故事・寓話の読解	適切に解釈し、教科書の設問に答えることができる
		12th	故事・寓話の読解	適切に解釈し、教科書の設問に答えることができる
		13th	「水墨画入門」の読解	テキストに用いられている語句・表現を適切に理解することができる
		14th	「水墨画入門」の読解	テキストの構成をとらえ、内容を適切に理解することができる
		15th	「水墨画入門」の読解	内容を理解した上で、自分の意見を述べることができる
		16th	期末試験	

Evaluation Method and Weight (%)

	試験	小テスト	態度	その他	Total
Subtotal	80	10	10	0	100
基礎的能力	80	10	10	0	100

専門的能力	0	0	0	0	0
分野横断的能力	0	0	0	0	0

Akashi College	Year	2024	Course Title	Mathematics Ⅱ A-1

Course Information

Course Code	6205	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 2
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	4
Textbook and/or Teaching Materials	Differential AND Integral I		
Instructor	MATSUMIYA Atusi,		

Course Objectives

1. Understand limits of functions, the meaning of a derivative at a point, the definition of the derivative, the product and quotient rules for derivatives, composite functions, and inverse trigonometric functions, and can calculate the derivatives of various functions.
2. Can write a derivative sign chart for a function, find its extrema, and sketch its graph. Can use extrema to calculate functions' maximum and minimum values. Also, can investigate the shapes of graphs using second derivatives. Understand parametric representations of functions, and can use them to calculate their derivatives.
3. Understand the definition of definite integration and the fundament theorem of calculus, and can calculate simple definite integrals. Understand the definition of indefinite integration, and can calculate simple indefinite integrals. Also, can calculate indefinite and definite integrals using integration by substitution and integration by parts.
4. Can calculate indefinite and definite integrals of fractional, irrational, trigonometric, exponential, and logarithmic functions. Can use definite integration to calculate the areas of shapes enclosed by curves, the lengths of curves, and the volumes of solids in simple cases.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Fully understand limits of functions, the meaning of a derivative at a point, the definition of the derivative, the product and quotient rules for derivatives, composite functions, and inverse trigonometric functions, and can fully calculate the derivatives of various functions.	Understand limits of functions, the meaning of a derivative at a point, the definition of the derivative, the product and quotient rules for derivatives, composite functions, and inverse trigonometric functions, and can calculate the derivatives of various functions.	Do not understand the limits of functions, the meaning of a derivative at a point, the definition of the derivative, the product and quotient rules for derivatives, composite functions, and inverse trigonometric functions, and cannot calculate the derivatives of various functions.
Achievement 2	Can write a derivative sign chart for a function, find its extrema, and sketch its graph. Can fully use extrema to calculate the function's maximum and minimum values. Also, can fully investigate the shapes of graphs using second derivatives. Fully understand parametric representations of functions, and can fully use them to calculate their derivatives.	Can write a derivative sign chart for a function, find its extrema, and sketch its graph. Can use extrema to calculate functions' maximum and minimum values. Also, can investigate the shapes of graphs using second derivatives. Understand parametric representations of functions, and can use them to calculate their derivatives.	Cannot write a derivative sign chart for a function, find its extrema, and sketch its graph. Cannot use extrema to calculate the function's maximum and minimum values. Also, cannot investigate the shapes of graphs using second derivatives. Do not understand parametric representations of functions, and cannot use them to calculate their derivatives.
Achievement 3	Fully understand the definition of definite integration and the fundament theorem of calculus, and can fully calculate simple definite integrals. Fully understand the definition of an indefinite integral, and can fully calculate simple indefinite integrals. Also, can fully calculate indefinite and definite integrals using integration by substitution and integration by parts.	Understand the definition of definite integration and the fundament theorem of calculus, and can calculate simple definite integrals. Understand the definition of indefinite integration, and can calculate simple indefinite integrals. Also, can calculate indefinite and definite integrals using integration by substitution and integration by parts.	Do not understand the definition of definite integrals and the fundament theorem of calculus, and cannot calculate simple definite integrals. Do not understand the definition of indefinite integrals, and cannot calculate simple indefinite integrals. Also, cannot calculate indefinite and definite integrals using integration by substitution and integration by parts.
	Can fully calculate indefinite and definite integrals of fractional, irrational, trigonometric, exponential, and logarithmic functions. Can fully use definite integration to calculate the areas of shapes enclosed by curve, the lengths of curves, and the volumes of solids in simple cases.	Can calculate indefinite and definite integrals of fractional, irrational, trigonometric, exponential, and logarithmic functions. Can use definite integration to calculate the areas of shapes enclosed by curves, the lengths of curves, and the volumes of solids in simple cases.	Cannot calculate indefinite and definite integrals of fractional, irrational, trigonometric, exponential, and logarithmic functions. Cannot use definite integration to calculate the areas of shapes enclosed by curves, the lengths of curves, and the volumes of solids in simple cases.

Assigned Department Objectives

Teaching Method

Outline	Students will learn the basic concepts of differentiation and integration and various computational methods developed from them, and acquire the necessary skills for analyzing various events when applying them in specialized fields.
Style	Classes will assume the pre-study has been done, and follow the textbook accordingly. There will also be problem exercises. Students will be asked questions to check their understanding during classes. In the classes, focus on understanding, and ask questions about things do not understand in the pre-study or class, rather than doing nothing about them. Make an effort to always review the material on the same day, and solve the problems in the textbook and the workbook. Some of the classes will use ICT. Tests will sometimes be held without prior notice to confirm attainment. Consequently, please study properly on a daily basis.

Notice	The overall evaluation will be based 50% on exams, 20% on submitted assignments, etc., and 30% on presentations and general effort toward classes. The minimum score for a pass will be 60 marks. However, evaluation scores based on these weightings will be calculated at the end of the school year. The cumulative evaluation up to the second semester midterm be based on interim weightings rather than the ones given above. Students who do well in assignments, presentations, etc. may get them evaluated with a higher weighting. CBT will be conducted in any week. Students who miss 1/3 or more of classes will not be eligible for a passing grade.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Limits and derivatives of functions	Can find graphs and formulas for functions.
		2nd	Limits and derivatives of functions	Can calculate the limits of functions in simple cases.
		3rd	Limits and derivatives of functions	Understand the meaning of a derivative at a point and the definition of the derivative, and can calculate derivatives.
		4th	Limits and derivatives of functions	Can calculate derivatives using the product and quotient rules for derivatives. Can calculate the derivatives of composite functions.
		5th	Limits and derivatives of functions	Can calculate the derivatives of trigonometric and exponential functions.
		6th	Derivatives of various functions	Understand the derivatives of inverse functions, and can calculate the derivatives of logarithmic and inverse trigonometric functions.
		7th	Derivatives of various functions	Understand the continuous of function, and can solve applied problems accordingly.
		8th	Derivatives of various functions	Understand the intermediate value theorem, and can solve applied problems accordingly.
	2nd Quarter	9th	Variation of functions	Can calculate the equations of tangents and normals to functions in simple cases.
		10th	Variation of functions	Can write a derivative sign chart for a function, find its extrema, and sketch its graph.
		11th	Variation of functions	Can use extrema to calculate functions' maximum and minimum values.
		12th	Various applications	Can calculate higher-order derivatives. Can investigate the shapes of graphs using second derivatives.
		13th	Various applications	Understand parametric representations of functions, and can use them to calculate their derivatives.
		14th	Various applications	Understand speed and acceleration, and can solve applied problems accordingly.
		15th	Various applications	Understand and can use the mean value theorem and L'Hôpital's rule.
		16th	Final exam	

Evaluation Method and Weight (%)

	Examination	Task	Presentation・Status of efforts	Total
Subtotal	50	20	30	100
Basic Proficiency	50	20	30	100
Specialized Proficiency	0	0	0	0
Cross Area Proficiency	0	0	0	0

Akashi College	Year	2024	Course Title	Mathematics Ⅱ A-2

Course Information

Course Code	6206	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 2
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	4
Textbook and/or Teaching Materials	高遠 節夫　他 著「新微分積分Ⅰ」大日本図書　高遠 節夫　他 著「新微分積分Ⅰ問題集」大日本図書　(参考書　数学Ⅲ　LEGEND　東京書籍)		
Instructor	MATSUMIYA Atusi,OMODA Yasuhiro		

Course Objectives

１．関数の極限、微分係数の意味、導関数の定義、積・商の導関数の公式、合成関数、逆三角関数を理解し、いろいろな関数の導関数を求めることができる。
２．関数の増減表を書いて、極値を求め、グラフの概形をかくことができる。極値を利用して、関数の最大値・最小値を求めることができる。また２次の導関数を利用して、グラフの凹凸を調べることができる。関数の媒介変数表示を理解し、媒介変数を利用して、その導関数を求めることができる。
３．定積分の定義と微積分の基本定理を理解し、簡単な定積分を求めることができる。不定積分の定義を理解し、簡単な不定積分を求めることができる。また置換積分および部分積分を用いて、不定積分や定積分を求めることができる。
４．分数関数・無理関数・三角関数・指数関数・対数関数の不定積分・定積分を求めることができ、簡単な場合について、曲線で囲まれた図形の面積や曲線の長さ、立体の体積を定積分で求めることができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	関数の極限、微分係数の意味、導関数の定義、積・商の導関数の公式、合成関数、逆三角関数を理解し、いろいろな関数の導関数を求めることが十分できる。	関数の極限、微分係数の意味、導関数の定義、積・商の導関数の公式、合成関数、逆三角関数を理解し、いろいろな関数の導関数を求めることができる。	関数の極限、微分係数の意味、導関数の定義、積・商の導関数の公式、合成関数、逆三角関数を理解し、いろいろな関数の導関数を求めることができない。
評価項目2	関数の増減表を書いて、極値を求め、グラフの概形をかくことが十分できる。極値を利用して、関数の最大値・最小値を求めることが十分できる。また２次の導関数を利用して、グラフの凹凸を調べることが十分できる。関数の媒介変数表示を理解し、媒介変数を利用して、その導関数を求めることが十分できる。	関数の増減表を書いて、極値を求め、グラフの概形をかくことができる。極値を利用して、関数の最大値・最小値を求めることができる。また２次の導関数を利用して、グラフの凹凸を調べることができる。関数の媒介変数表示を理解し、媒介変数を利用して、その導関数を求めることができる。	関数の増減表を書いて、極値を求め、グラフの概形をかくことができない。極値を利用して、関数の最大値・最小値を求めることができない。また２次の導関数を利用して、グラフの凹凸を調べることができない。関数の媒介変数表示を理解し、媒介変数を利用して、その導関数を求めることができない。
評価項目3	定積分の定義と微積分の基本定理を理解し、簡単な定積分を求めることが十分できる。不定積分の定義を理解し、簡単な不定積分を求めることが十分できる。また置換積分および部分積分を用いて、不定積分や定積分を求めることが十分できる。	定積分の定義と微積分の基本定理を理解し、簡単な定積分を求めることができる。不定積分の定義を理解し、簡単な不定積分を求めることができる。また置換積分および部分積分を用いて、不定積分や定積分を求めることができる。	定積分の定義と微積分の基本定理を理解し、簡単な定積分を求めることができない。不定積分の定義を理解し、簡単な不定積分を求めることができない。また置換積分および部分積分を用いて、不定積分や定積分を求めることができない。
評価項目４	分数関数・無理関数・三角関数・指数関数・対数関数の不定積分・定積分を求めることが十分でき、簡単な場合について、曲線で囲まれた図形の面積や曲線の長さ、立体の体積を定積分で求めることが十分できる。	分数関数・無理関数・三角関数・指数関数・対数関数の不定積分・定積分を求めることができ、簡単な場合について、曲線で囲まれた図形の面積や曲線の長さ、立体の体積を定積分で求めることができる。	分数関数・無理関数・三角関数・指数関数・対数関数の不定積分・定積分を求めることができず、簡単な場合について、曲線で囲まれた図形の面積や曲線の長さ、立体の体積を定積分で求めることができない。

Assigned Department Objectives

Teaching Method

Outline	微分積分の基本概念及びそこから発展したいろいろな計算手法を習得し、専門分野での応用の際のさまざまな事象の解析に必要な素養を獲得する。
Style	予習を前提として教科書に沿って講義する。また問題演習を行う。講義中に理解度の確認をするために質問をする。講義では集中して理解に努め、予習でわからなかったことや講義で理解できなかったことは放置せずに質問するようにして下さい。その日のうちに必ず復習し教科書と問題集にある問題を解くように心がけること。ICTを活用した授業をすることがある。確認のため予告なく小試験を行うことがあります。そのためにも日頃からよく勉強しておくようにしてください。
Notice	試験を50%、課題等の提出物を20%、発表および平素の授業への取り組み状況を30%として総合的に評価し60点以上を合格とする。ただし、この割合で評価点をつけるのは学年末であり、途中までの累積評価の割合は暫定的な割合で評価し必ずしも上記の割合にならないことがある。課題等や発表などがよく出来ていれば割合以上の評価を与えることもある。いずれかの週でCBTを行う。合格の対象としない欠席条件(割合)　1/3以上の欠課

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	□ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	不定積分と定積分	不定積分の定義を理解し、簡単な不定積分を求めることができる。
		2nd	不定積分と定積分	定積分の定義を理解し、定義に従って定積分を求めることができる。
		3rd	不定積分と定積分	微分積分法の基本定理を理解し、簡単な定積分を求めることができる。
		4th	不定積分と定積分	簡単な定積分の計算をすることができる。いろいろな不定積分の公式を活用することが出来る。

		5th	積分の計算	置換積分および部分積分を用いて、不定積分や定積分を求めることができる。
		6th	積分の計算	分数関数・無理関数の不定積分・定積分を求めることができる。
		7th	積分の計算	三角関数・指数関数・対数関数の不定積分・定積分を求めることができる。
		8th	面積・曲線の長さ・体積	簡単な場合について、曲線で囲まれた図形の面積を定積分で求めることができる。
	4th Quarter	9th	面積・曲線の長さ・体積	簡単な場合について、曲線の長さを定積分で求めることができる。簡単な場合について、立体の体積や回転体の体積を定積分で求めることができる。
		10th	いろいろな応用	媒介変数表示による図形を理解し、媒介変数表示による図形の面積や曲線の長さなどを求めることができる。
		11th	いろいろな応用	極座標について理解し、極座標による図形の面積や曲線の長さを求めることができる。
		12th	いろいろな応用	広義積分について理解し、広義積分を求めることができる。
		13th	いろいろな応用	変化率と積分について理解し、応用問題を解くことができる。
		14th	微分方程式	応用問題から微分方程式の意味を理解し、簡単な変数分離形の微分方程式などを解くことができる。
		15th	微分方程式	簡単な同時形，１階線形微分方程式を解くことができる。
		16th	期末試験	

Evaluation Method and Weight (%)

	試験	課題等	発表および平素の授業への取り組み	Total
Subtotal	50	20	30	100
基礎的能力	50	15	30	95
専門的能力	0	0	0	0
分野横断的能力	0	5	0	5

Akashi College	Year	2024	Course Title	Mathematics Ⅱ B-1

Course Information

Course Code	6207	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	高遠　節夫　他　著　「新線形代数　改訂版」　大日本図書 高遠　節夫　他　著　「新線形代数　問題集　改訂版」　大日本図書		
Instructor	TAKATA Isao		

Course Objectives

1．ベクトルの計算および図形への応用ができる。
2．行列の定義および 計算ができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目 1	ベクトルの計算及び図形への応用が十分にできる。	ベクトルの計算及び図形への応用ができる。	ベクトルの計算及び図形への応用ができない。
評価項目 2	行列の定義および 計算が十分にできる。	行列の定義および 計算ができる。	行列の定義および 計算ができない。

Assigned Department Objectives

Teaching Method

Outline	幅広い分野で使われている線形代数学の基礎について講義・演習を行う．目標は平面上や空間内での図形の方程式を用いて，計算と幾何を関連付けできるようになることである
Style	シラバスに沿って、動画を使って予習してきてもらう。授業中はグループ学習をしてもらい、理解度を確認する。
Notice	予習復習をきちんとすること。分からないことは放置せず質問すること。問題集などを利用して自主的に勉強して欲しい。 ＣＢＴテストをすることもある。 評価の対象としない欠席条件(割合) 1/3以上の欠課

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	平面ベクトル	ベクトルの演算の基本法則を使って計算ができる。
		2nd	平面ベクトル	ベクトルの内積を計算できる。
		3rd	平面ベクトル	平面ベクトルの成分表示を使って計算をすることができる。
		4th	空間のベクトル	空間ベクトルの成分表示を使って計算をすることができる。
		5th	空間のベクトル	平行四辺形の面積をベクトルで計算できる。
		6th	空間のベクトル	平行条件・垂直条件を理解し、計算に使うことができる。
		7th	空間のベクトル	空間の中の直線の方程式を求めることができる。
		8th	空間のベクトル	空間の中の平面の方程式を求めることができる。
	2nd Quarter	9th	空間ベクトル	ベクトルの外積を求め、使うことができる。
		10th	空間ベクトル	点と平面との距離を求めることができる。
		11th	空間ベクトル	球面の方程式を求めることができる。
		12th	行列	行列の和・差・積の計算ができる。
		13th	行列	行列の分配法則・結合法則を使うことができる。
		14th	CBTテスト	CBTテストを行い、学習の定着度を確認する。
		15th	総括	いままでの学習の総復習をする。
		16th	期末試験	いままでの学習の確認をする。

Evaluation Method and Weight (%)

	定期試験	CBTテスト	復習テスト	課題等の提出物	出席点	Total
Subtotal	25	20	25	15	15	100
基礎的能力	25	20	25	15	15	100
専門的能力	0	0	0	0	0	0
分野横断的能力	0	0	0	0	0	0

Akashi College	Year	2024	Course Title	Mathematics Ⅱ B-2

Course Information

Course Code	6208	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	高遠　節夫　他　著　「新線形代数　改訂版」　大日本図書 高遠　節夫　他　著　「新線形代数　問題集　改訂版」　大日本図書		
Instructor	TAKATA Isao		

Course Objectives

１．行列の 計算ができ、連立1次方程式を解くことができる。
２．行列式の定義および性質を理解し、基本的な行列式の値を求めることができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	行列の計算ができ、連立1次方程式を解くことが十分にできる。	行列の計算ができ、連立1次方程式を解くことができる。	行列の計算ができ、連立1次方程式を解くことができない。
評価項目2	行列式の定義および性質を理解し、基本的な行列式の値を十分に求められる。	行列式の定義および性質を理解し、基本的な行列式の値を求められる。	行列式の定義および性質を理解し、基本的な行列式の値を求められない。

Assigned Department Objectives

Teaching Method

Outline	幅広い分野で使われている線形代数学の基礎について講義・演習を行う．目標は平面上や空間内での図形の方程式を用いて，計算と幾何を関連付けできるようになることである。
Style	シラバスに沿って、動画を使って予習してきてもらう。授業中はグループ学習をしてもらい、理解度を確認する。
Notice	予習復習をきちんとすること。分からないことは放置せず質問すること。問題集などを利用して自主的に勉強して欲しい。 ＣＢＴテストをすることもある。 評価の対象としない欠席条件(割合) 1/3以上の欠課

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	行列	零行列・単位行列を理解し、使うことができる。
		2nd	行列	転置行列と逆行列を求め、使うことができる。
		3rd	行列式の定義と性質	２次の行列式を計算し、クラメルの公式を使うことができる。
		4th	行列式の定義と性質	行列式の定義を理解し、簡単な行列式を計算できる。
		5th	行列式の定義と性質	行列式の性質を理解し、計算に使うことができる。
		6th	行列式の応用	行列式の展開をすることができる。
		7th	行列式の応用	いろいろな行列式の計算をすることができる。
		8th	行列式の応用	余因子を使って逆行列を求めることができる。
	4th Quarter	9th	行列式の応用	行列式を使って因数分解をすることができる。
		10th	連立１次方程式と行列	行列の消去法を理解し、使うことができる。
		11th	連立１次方程式と行列	消去法を使って、連立１次方程式を解くことができる。
		12th	連立１次方程式と行列	消去法を使って、逆行列を求めることができる。
		13th	連立１次方程式と行列	行列の階数を求めることができる。
		14th	ＣＢＴテスト	ＣＢＴテストで定着度の確認をする。
		15th	総括	総復習をする。
		16th	期末試験	これまでの学習の確認をする。

Evaluation Method and Weight (%)

	定期試験	CBTテスト	復習テスト	課題等の提出物	出席点	Total
Subtotal	25	20	25	15	15	100
基礎的能力	25	20	25	15	15	100
専門的能力	0	0	0	0	0	0
分野横断的能力	0	0	0	0	0	0

Akashi College	Year	2024	Course Title	Science Ⅱ B-1

Course Information

Course Code	6211	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	SAKURAI Yasuhiro		

Course Objectives

1. Can explain and calculate the basic matters related to the composition of substances (including matters related to the bonding of particles).
2. Can use chemical equations, and explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.
3. Can explain and calculate the basic matters related to acids and bases.
4. Can explain and calculate the basic matters related to oxidation and reduction reactions.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can fully and accurately explain and calculate the basic matters related to the composition of substances (including matters related to the bonding of particles).	Can explain and calculate the basic matters related to the composition of substances (including matters related to the bonding of particles).	Cannot explain and calculate the basic matters related to the composition of substances (including matters related to the bonding of particles).
Achievement 2	Can use chemical equations, and fully and accurately explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.	Can use chemical equations, and explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.	Cannot use chemical equations, and explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.
Achievement 3	Can fully and accurately explain and calculate the basic matters related to acids and bases.	Can explain and calculate the basic matters related to acids and bases.	Cannot explain and calculate the basic matters related to acids and bases.
Achievement 4	Can fully and accurately explain and calculate the basic matters related to oxidation and reduction reactions.	Can explain and calculate the basic matters related to oxidation and reduction reactions.	Cannot explain and calculate the basic matters related to oxidation and reduction reactions.

Assigned Department Objectives

Teaching Method

Outline	The objectives of this course is to gain a basic knowledge of chemicals, and to develop scientific thinking by understanding the basic theories of chemistry.
Style	Classes are taught in a lecture-style format.
Notice	We hope that by observing their everyday lives scientifically, students will recognize that chemistry is all around us. Students who miss 1/3 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Orientation: When learning chemistry	
		2nd	Composition of substances - 1	Can explain and calculate the basic matters related to the composition of substances.
		3rd	Composition of substances - 2	Can explain and calculate the basic matters related to the composition of substances.
		4th	Composition of substances - 3	Can explain and calculate the basic matters related to the composition of substances.
		5th	Composition of substances - 4	Can explain and calculate the basic matters related to the composition of substances.
		6th	Bonding of particles - 1	Can explain and calculate the basic matters related to the bonding of particles.
		7th	Bonding of particles - 2	Can explain and calculate the basic matters related to the bonding of particles.
		8th	Chemical bonding and substances	
	2nd Quarter	9th	Summary of the composition of substances	Can explain and calculate the basic matters related to the composition of substances and bonding of particles.
		10th	Chemical equations and relationship between the amounts of reactants and products in a reaction - 1	Can explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.

		11th	Chemical equations and relationship between the amounts of reactants and products in a reaction - 2	Can explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.
		12th	Chemical equations and relationship between the amounts of reactants and products in a reaction - 3	Can explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.
		13th	Chemical equations and relationship between the amounts of reactants and products in a reaction - 4	Can explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.
		14th	Chemical equations and relationship between the amounts of reactants and products in a reaction - 5	Can explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.
		15th	Chemical equations and relationship between the amounts of reactants and products in a reaction - 6	Can explain and calculate the basic matters related to the relationship between the amounts of reactants and products in a reaction.
		16th	Final exam	

Evaluation Method and Weight (%)

	Little test	Examination	Total
Subtotal	65	35	100
Basic Proficiency	65	35	100
Specialized Proficiency	0	0	0
Cross Area Proficiency	0	0	0

Akashi College	Year	2024	Course Title	Science Ⅱ B-2

Course Information

Course Code	6212	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	「新編化学基礎」数研出版、「リードα　化学基礎+化学」数研出版、「フォトサイエンス　化学図録」数研出版		
Instructor	SAKURAI Yasuhiro		

Course Objectives

1. 物質の構成（粒子の結合に関する事項を含む）に関する基本事項について説明や計算ができる。
2. 化学反応式が取り扱え、反応量の関係に関する基本事項について説明や計算ができる。
3. 酸・塩基に関する基本事項について説明や計算ができる。
4. 酸化・還元反応に関する基本事項について説明や計算ができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	物質の構成（粒子の結合に関する事項を含む）に関する基本事項について的確な説明や正確な計算が十分にできる。	物質の構成（粒子の結合に関する事項を含む）に関する基本事項について説明や計算ができる。	物質の構成（粒子の結合に関する事項を含む）に関する基本事項について説明や計算ができない。
評価項目2	化学反応式が取り扱え、反応量の関係に関する基本事項について的確な説明や正確な計算が十分にできる。	化学反応式が取り扱え、反応量の関係に関する基本事項について説明や計算ができる。	化学反応式が取り扱え、反応量の関係に関する基本事項について説明や計算ができない。
評価項目3	酸・塩基に関する基本事項について的確な説明や正確な計算が十分にできる。	酸・塩基に関する基本事項について説明や計算ができる。	酸・塩基に関する基本事項について説明や計算ができない。
評価項目4	酸化・還元反応に関する基本事項について的確な説明や正確な計算が十分にできる。	酸化・還元反応に関する基本事項について説明や計算ができる。	酸化・還元反応に関する基本事項について説明や計算ができない。

Assigned Department Objectives

Teaching Method

Outline	この科目は、企業で化学に関する研究開発を担当していた教員が、その経験を活かし、化学物質の性質や化学反応に関する基礎知識について講義形式で授業を行うものである。習得した化学の基礎事項をくらしや生活環境と関連付けて役立てる、化学の基礎理論を理解することによって、科学的思考を養うことを目標とする。また、ライフサイエンスについても学習する。
Style	授業は講義形式で行う。確認テストを複数回適宜実施する。
Notice	日常生活を科学的に考察することによって、「化学」が身近な存在であることを認識する。 評価の対象としない欠席条件（割合） 1/3以上の欠課

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	酸・塩基の反応－１：酸・塩基の性質	酸と塩基の性質について理解し、説明できる。アレニウス、ブレンステッドローリーの酸・塩基を理解し、説明できる。
		2nd	酸・塩基の反応－2：価数と電離度	価数、電離度を理解し、酸と塩基の強弱を説明できる。
		3rd	酸・塩基の反応－3：水素イオン濃度	水素イオン濃度について理解し、説明できる。
		4th	酸・塩基の反応－4：pHと指示薬	pH、指示薬について理解し、測定方法、pHの変化について考察、説明できる。
		5th	酸・塩基の反応－5：中和反応と塩	中和反応について理解できる。塩の性質を理解し、説明できる。
		6th	酸・塩基の反応－6：中和滴定	中和滴定について理解し、説明できる。
		7th	酸・塩基の反応ー7	酸・塩基の反応に関する基礎問題が解ける。
		8th	酸化・還元反応－１：酸化と還元	酸化と還元について理解し、説明できる。
	4th Quarter	9th	酸化・還元反応－2：酸化数の変化	酸化数について理解し、酸化・還元反応前後の変化を説明できる。
		10th	酸化・還元反応－3：酸化剤、還元剤	代表的な酸化剤、還元剤の性質を理解し説明できる。
		11th	酸化・還元反応－4：酸化還元反応式	酸化還元反応式を理解し、説明できる。
		12th	酸化・還元反応－5：金属の酸化還元反応	金属の酸化還元反応について理解できる。
		13th	酸化・還元反応－6：イオン化傾向	イオン化傾向について説明できる。
		14th	酸化・還元反応－7：電池	電池の仕組みについて理解し、説明できる。
		15th	酸化・還元反応 生物学1 、生物学2	酸化・還元に関する基礎問題が解ける。ライフサイエンスに関する内容について理解し、解説できる。
		16th	期末試験	後期の内容に関する基礎問題を解き、説明できる。

Evaluation Method and Weight (%)

	試験	その他	Total

Subtotal	35	65	100
基礎的能力	35	65	100
専門的能力	0	0	0
分野横断的能力	0	0	0

Akashi College	Year	2024	Course Title	Physical Education II-1

Course Information

Course Code	6213	Course Category	General / Compulsory
Class Format	Skill	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	GOTOH Takayuki,MAEDA Tadanori		

Course Objectives

・ Participate in classes to improve students' own health and physical strength. Also, have some level of self-discipline.
・ Can take action to conduct sports safely. Also, recognizes the significance of collaborating and cooperating with the team and can take the necessary action to do so.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Actively participate in classes to improve their health and physical strength. Have a high level of self-discipline.	Participate in classes to improve their health and physical strength. Have some level of self-discipline.	Reluctant to participate in classes, or improve their own health and physical strength. Do not have a high level of self-discipline.
Achievement 2	Actively participate in various sport practices and games, and are very competitive. Also have a great influence on games, etc.	Can actively participate in various sport practices and games. And also have the skills for them.	Do not participate in various sport practices and games.
Achievement 3	Understand the role of a leader well, and can help increase teamwork.	Understand and can play or take on the role of a leader.	Do not understand the role of a leader. Also, never play that role.

Assigned Department Objectives

Teaching Method

Outline	The goal of this course is for students to learn more about the fun and depth of sports so that they can build the habit of playing sports on a daily basis. This class requires an active and proactive attitude to participate. Students will split into groups and leaders will take the lead to plan, review, and implement the course content. Students can choose from: Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.
Style	Students are encouraged to actively participate in games and practice and to discover the fun of sports. First, they should learn the rules and how to play games, etc., and try to learn basic skills. In addition, they are expected to develop more advanced technologies and improve teamwork through games and game-style practice. Students and instructors should work together to create a safe and welcoming class.
Notice	・ Wear school-designated training wear, athletic shoes, or other designated clothing. If students fail to wear them, points will be deducted from their grade. ・ Do not wear accessories, watches, or any other unnecessary items, as well as chewing gum during class. These are also eligible for grade deduction. ・ Use of smartphones or any other unrelated activities during class are subject to point deductions. ・ Tardiness will be excused for the first 20 minutes. Students can participate in the class after 20 minutes, but their attendance will be marked as absent. ・ If it is discovered that a student left class early without being excused (ditching class), their attendance for that class will be marked as absent, and their grade for previous classes will suffer a deduction equal to an absence. ・Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Guidance	Understand the purposes and objectives of this course. Reacknowledge that warm-ups are necessary to safely exercise.
		2nd	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		3rd	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		4th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		5th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.

		6th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		7th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		8th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
	2nd Quarter	9th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Split into teams in each sport and select a leader.
		10th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		11th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		12th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		13th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		14th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		15th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		16th	No final exam	

Evaluation Method and Weight (%)

	Approach to a class	Practical skill	Leadership	Total
Subtotal	75	15	10	100
Basic Proficiency	75	0	0	75
Specialized Proficiency	0	0	0	0
Cross Area Proficiency	0	15	10	25

Akashi College	Year	2024	Course Title	Physical Education II-2

Course Information

Course Code	6214	Course Category	General / Compulsory
Class Format	Skill	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	GOTOH Takayuki,MAEDA Tadanori		

Course Objectives

・ Participate in classes to improve students' own health and physical strength. Also, have some level of self-discipline.
・ Can take action to conduct sports safely. Also, recognizes the significance of collaborating and cooperating with the team and can take the necessary action to do so.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Actively participate in classes to improve their health and physical strength. Have a high level of self-discipline.	Participate in classes to improve their health and physical strength. Have some level of self-discipline.	Reluctant to participate in classes, or improve their own health and physical strength. Do not have a high level of self-discipline.
Achievement 2	Actively participate in various sport practices and games, and are very competitive. Also have a great influence on games, etc.	Can actively participate in various sport practices and games. And also have the skills for them.	Do not participate in various sport practices and games.
Achievement 3	Understand the role of a leader well, and can help increase teamwork.	Understand and can play or take on the role of a leader.	Do not understand the role of a leader. Also, never play that role.

Assigned Department Objectives

Teaching Method

Outline	The goal of this course is for students to learn more about the fun and depth of sports so that they can build the habit of playing sports on a daily basis. This class requires an active and proactive attitude to participate. Students will split into groups and leaders will take the lead to plan, review, and implement the course content. Students can choose from: Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.
Style	Students are encouraged to actively participate in games and practice and to discover the fun of sports. First, they should learn the rules and how to play games, etc., and try to learn basic skills. In addition, they are expected to develop more advanced technologies and improve teamwork through games and game-style practice. Students and instructors should work together to create a safe and welcoming class.
Notice	・ Wear school-designated training wear, athletic shoes, or other designated clothing. If students fail to wear them, points will be deducted from their grade. ・ Do not wear accessories, watches, or any other unnecessary items, as well as chewing gum during class. These are also eligible for grade deduction. ・ Use of smartphones or any other unrelated activities during class are subject to point deductions. ・ Tardiness will be excused for the first 20 minutes. Students can participate in the class after 20 minutes, but their attendance will be marked as absent. ・ If it is discovered that a student left class early without being excused (ditching class), their attendance for that class will be marked as absent, and their grade for previous classes will suffer a deduction equal to an absence. ・Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Guidance	Understand the purposes and objectives of this course. Reacknowledge that warm-ups are necessary to safely exercise.
		2nd	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		3rd	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		4th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		5th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.

		6th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		7th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		8th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
	4th Quarter	9th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Split into teams in each sport and select a leader.
		10th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		11th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		12th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		13th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		14th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		15th	Softball, soccer, futsal, tennis, basketball, volleyball, badminton, table tennis, other sports as determined feasible by teachers while ensuring safety, based on requests from students.	Can do warm-up and practice, play games, and reflect on the class, led by a leader.
		16th	No final exam	

Evaluation Method and Weight (%)

	Approach to a class	Practical skill	Leadership	Total
Subtotal	75	15	10	100
Basic Proficiency	75	0	0	75
Specialized Proficiency	0	0	0	0
Cross Area Proficiency	0	15	10	25

Akashi College	Year	2024	Course Title	English II A-1

Course Information

Course Code	6215	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	New Rays English Communication II Textbook / New Rays English Communication II Study Note / New Rays English Communication II Workbook		
Instructor	HERBERT John C.		

Course Objectives

1) To review the vocabulary learned at junior high school, acquire new vocabulary following the high school learning guidelines, and use it appropriately.
2) To review the grammar learned at junior high school, and learn to use grammar rules appropriately, according to the high school study guidelines.
3) To review sentence structures learned in junior high school and learn to use sentence structures appropriately, following the high school learning guidelines.
4) To read sentences, understand text outlines, and extract necessary information from English texts.
5) To acquire English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	The student has well acquired new vocabulary following the high school learning guidelines and uses them appropriately.	The student has acquired new vocabulary following the high school learning guidelines and uses them appropriately.	The student has neither acquired new vocabulary following the high school learning guidelines nor used them appropriately.
Achievement 2	The student has well learned to use grammar rules appropriately, according to the high school study guidelines.	The student has learned to use grammar rules appropriately, according to the high school study guidelines.	The student has not learned to use grammar rules appropriately, according to the high school study guidelines.
Achievement 3	The student has well learned to use sentence structures appropriately, following the high school learning guidelines.	The student has learned to use sentence structures appropriately, following the high school learning guidelines.	The student has not learned to use sentence structures appropriately, following the high school learning guidelines.
Achievement 4	The student can read sentences, understand text outlines, and extract necessary information from English texts very well.	The student can read sentences, understand text outlines, and extract necessary information from English texts.	The student can not read sentences, understand text outlines, or extract necessary information from English texts.
Achievement 5	The student has well acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.	The student has acquired English pronunciation skills and accent rules so that the student can speak clearly and communicate to the listener.	The student has not acquired English pronunciation skills or accent rules so that the student can speak clearly and communicate to the listener.

Assigned Department Objectives

Teaching Method

Outline	Based on English learned in junior high school, this class is to help students understand the basic structure of English sentences and acquire reading skills; to help them acquire the ability to listen and express simple English sentences; and, to perform word tests and strengthen vocabulary knowledge.
Style	Attend the classes, prepare for the classes by studying the relevant sections of the workbook. A handout will be provided in the first week. Study the handout and understand it in detail.
Notice	Quizzes are used to increase student vocabulary and develop listening ability. Students who miss 1/4 or more of the classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Course guidance (Course progress method, learning method, etc.)	Understand course content and assignments.
		2nd	Chapter 1 Part 1/2	Based on the content learned in junior high school, understand the basic structure of English language.
		3rd	Chapter 1 Part 3/4	Based on the content learned in junior high school, understand the basic structure of English language.
		4th	Review	Understanding the weak points on the content learned so far.
		5th	Chapter 2 Part 1/2	Based on the content learned in junior high school, understand the basic structure of English language.
		6th	Chapter 2 Part 3/4	Based on the content learned in junior high school, understand the basic structure of English language.
		7th	Review	Understanding the weak points on the content learned so far.

		8th	Chapter 3 Part 1/2	Learn the vocabulary and grammar rules set as lesson tasks.
	2nd Quarter	9th	Chapter 3 Part 3/4	Learn the vocabulary and grammar rules set as lesson tasks.
		10th	Chapter 4 Part 1/2	Learn the vocabulary and grammar rules set as lesson tasks.
		11th	Chapter 4 Part 3/4	Learn the vocabulary and grammar rules set as lesson tasks.
		12th	Review	Understanding the weak points on the content learned so far.
		13th	Chapter 5 Part 1/2	Learn the vocabulary and grammar rules set as lesson tasks.
		14th	Chapter 5 Part 3/4	Learn the vocabulary and grammar rules set as lesson tasks.
		15th	Review	Understanding the weak points on the content learned so far and preparing for the exam.
		16th	Final exam	Test the student understanding of the content learned so far.

Evaluation Method and Weight (%)

	Final Exam	Quizzes	Assignments	Behavior/Active Learning	Total
Subtotal	40	40	10	10	100
Basic Proficiency	40	40	10	10	100
Specialized Proficiency	0	0	0	0	0
Cross Area Proficiency	0	0	0	0	0

Akashi College	Year	2024	Course Title	English II A-2

Course Information

Course Code	6216	Course Category	General / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	New Rays English Communication II 教科書／学習ノート／WORKBOOK		
Instructor	INOUE Hidetoshi		

Course Objectives

1）中学で既習の語彙の定着を図り、高等学校学習指導要領に準じた新出語彙を習得して適切に運用できる。
2）中学で既習の文法に加え、高等学校学習指導要領に準じた文法を習得して適切に運用できる。
3）中学で既習の文構造に加え、高等学校学習指導要領に準じた文構造を習得して適切に運用できる。
4）平易な英語で書かれた文章を読み、その概要を把握し必要な情報を読み取ることができる。
5）明瞭で聞き手に伝わるような発話ができるよう、英語の発音・アクセントの規則を習得して適切に運用できる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
評価項目1	高等学校学習指導要領に準じた新出語彙を十分に習得して適切に運用できる。	高等学校学習指導要領に準じた新出語彙を習得して運用できる。	高等学校学習指導要領に準じた新出語彙を習得していない。
評価項目2	高等学校学習指導要領に準じた文法や文構造を十分に習得して適切に運用できる。	高等学校学習指導要領に準じた文法や文構造を習得して運用できる。	高等学校学習指導要領に準じた文法や文構造を習得していない。
評価項目3	高等学校学習指導要領に準じた文構造を十分に習得して適切に運用できる。	高等学校学習指導要領に準じた文構造を習得して適切に運用できる。	高等学校学習指導要領に準じた文構造を習得していない。
評価項目4	平易な英語で書かれた文章を読み、その概要を十分に把握し必要な情報を読み取ることができる。	平易な英語で書かれた文章を読み、その概要を把握し必要な情報を読み取ることができる。	平易な英語で書かれた文章を読み、その概要を把握できない。
評価項目5	英語の発音・アクセントの規則を十分に習得して適切に運用できる。	英語の発音・アクセントの規則を習得して適切に運用できる。	英語の発音・アクセントの規則を習得していない。

Assigned Department Objectives

Teaching Method

Outline	中学校既習事項をもとに英文の基本構造を理解し、読解力を身につける。 簡単な英文を聞き取り、表現する力を身につける。 単語テストを適宜行い、語彙力強化を図る。
Style	毎回、教科書、学習ノートの該当箇所を予習した上で授業に出席すること。 授業終了後はワークブックで学習事項の定着を図ること。 小テスト（語彙）、ノート提出がある。
Notice	遅刻や欠席による小テストの未受験は0点の扱いとする。 評価の対象としない欠席条件(割合) 1/4以上の欠課。

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	授業ガイダンス （授業の進行方法、学習方法など）	弱点の克服を目指す。
		2nd	Lesson 6 Part 1/2	レッスンの課題として設定されている語彙・文法などを習得する。
		3rd	Lesson 6 Part 2/3	レッスンの課題として設定されている語彙・文法などを習得する。
		4th	Lesson 6 Part 3/4	レッスンの課題として設定されている語彙・文法などを習得する。
		5th	課末問題	レッスンの課題として設定されている語彙・文法などを習得する。
		6th	Lesson 7 Part 1/2	レッスンの課題として設定されている語彙・文法などを習得する。
		7th	Lesson 7 Part 2/3	これまでの学習内容について弱点を把握し中間試験に備える。
		8th	中間試験	これまでの学習内容の理解力を試す。
	4th Quarter	9th	中間試験返却および解説 Lesson 7 Part 3	弱点の克服を目指す。
		10th	Lesson 7 Part 4 課末問題	レッスンの課題として設定されている語彙・文法などを習得する。
		11th	Lesson 8 Part 1/2	レッスンの課題として設定されている語彙・文法などを習得する。
		12th	Lesson 8 Part 2/3	レッスンの課題として設定されている語彙・文法などを習得する。
		13th	Lesson 8 Part 3/4	レッスンの課題として設定されている語彙・文法などを習得する。

		14th	課末問題	レッスンの課題として設定されている語彙・文法などを習得する。
		15th	Lesson 9 Part 1/2	これまでの学習内容について弱点を把握し期末試験に備える。
		16th	期末試験	これまでの学習内容の理解力を試す。

Evaluation Method and Weight (%)

	定期試験	課題提出	小テスト	その他	Total
Subtotal	50	30	20	0	100
基礎的能力	50	30	20	0	100
専門的能力	0	0	0	0	0
分野横断的能力	0	0	0	0	0

Akashi College	Year	2024	Course Title	Ｃｏ＋ｗｏｒｋＩＡ

Course Information

Course Code	6219	Course Category	General / Compulsory
Class Format	Seminar	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	『Co+work book～３年間の記録』、Co+work学生ポータルサイト、その他、各チームの活動の内容に応じて適宜担当教員が用意する。		
Instructor	All faculty		

Course Objectives

自律に関する到達目標：自己調整ができる。
協働に関する到達目標：他者を尊重しながらチームで作業ができる。
創造に関する到達目標：課題等を発見し新しい提案ができる。

Rubric

	理想的な到達レベルの目安	標準的な到達レベルの目安	未到達レベルの目安
自律に関する到達目標	タイムマネジメントや必要に応じた報告・連絡・相談ができ、目標を立て振り返ることができる。これらを自分なりの判断と工夫を加え最善と思う行動をとる。	タイムマネジメントや必要に応じた報告・連絡・相談ができ、目標を立て振り返ることができる。これらのことをやるべき時に行う。	タイムマネジメントや必要に応じた報告・連絡・相談、目標を立て振り返ることの行動が伴わない。
協働に関する到達目標	他者の意見をしっかりと聞き、他者を受け入れつつ自己表現ができる。また、協働作業に貢献することができる。これらを自分なりの判断と工夫を加え最善と思う行動をとる。	他者の意見をしっかりと聞き、他者を受け入れつつ自己表現ができる。また、協働作業に貢献することができる。これらのことをやるべき時に行う。	他者の意見をしっかりと聞くこと、他者を受け入れつつ自己表現を行う行動が伴わない。また、協働作業に貢献する行動が伴わない。
創造に関する到達目標	記録や収集した情報の意味づけを踏まえ、新しいものやしくみの提案をすることができる。また提案の及ぼす影響や範囲を特定できる。そして、これらを自分なりの判断と工夫を加え最善と思う行動をとる。	新しいものやしくみの提案をすることができる。また提案の及ぼす影響や範囲を特定できる。また、これらのことをやるべき時に行う。	記録や収集した情報の意味づけを踏まえ、新しくものやしくみの提案をすることができない。また提案の及ぼす影響や範囲を特定できない。また、新しい提案をする行動が伴わない。

Assigned Department Objectives

Teaching Method

Outline	本授業は、２、３、４年生、４学科の学生を無作為に選んで構成された数名で編成されたチームで行うPBL型授業である。1人の教員が１チームもしくは２チームを担当する。多様な環境（他学科・他学年の学生との交わり、学外の人々との交わりなど）の中で、自律、協働、創造の能力を養成することを目的とする。受講生は、自らチーム内での役割を考えて行動しチームワーク力を発揮して、メンバーと協働しながら創造的な活動を行うことが求められる。活動テーマは、誰かを幸せにするもの（社会との関わりを持つ）、チームにとってのチャレンジを含むもの、SDGs（持続可能な開発目標）の17の目標につながるものとする。
Style	ルーブリックを参照しながら、各自で自己目標を立てる。そしてチーム内で自己紹介、アイスブレイクを通じてチーム内の人間関係を構築する。次にチームで、SDGs（持続可能な開発目標）の17の目標の目標の細分化項目の調査や把握を通じて、その理解を深める。それから話し合いを通じて、SDGsの目標につながるチームの活動テーマを確定し、活動計画書を作成する。第7週の計画発表会・意見交換会にてチームの活動テーマについて、プレゼンテーションを行い、他のチームの担当教員や学生からの助言を受ける。助言を受け、適宜チームで計画の修正を行う。その後はチームで協力、役割分担をしながら計画的に、提案やプロトタイプの作成、実践活動などを進める。毎週、授業の終わりにチームでふりかえりを行いチーム活動報告書を記入し担当教員に提出する。必要に応じて修正を加えながら次回の目標を立てる。前期終了時には、担当教員と個別に自己評価や相互評価を踏まえたふりかえりを行う。
Notice	（１）個人の取り組み 60%（自律（40%）＋協働（40%）＋創造（20%）） （２）チームの取り組み20%（協働（50%）＋創造（50%）） （３）成果 20%（協働（50%）＋創造（50%）） 上記 （１）は、ルーブリックを用いた学生の自己評価、相互評価と教員の評価をもとに、チームの担当教員が評価を行う。（２）（３）は計画発表会での複数の教員などによる評価とする。60点以上を合格とする。 評価の対象としない欠席条件(割合) 1/4以上の欠課

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	オリエンテーション 授業ガイダンス、チームビルディング 授業ガイダンスを受け、全体スケジュール、活動に関する諸注意、評価方法等を確認する。担当教員とチームメンバーの顔合わせ、チームビルディングを行う。	この授業の目的や進め方を理解する
		2nd	活動目標の決定および活動内容の計画、自己目標を各自で定めて記録する。チーム活動に向け、テーマに沿ってアイデアを出し議論をする。 決定した活動目標に沿って、実施方法、役割分担、スケジュール等を決定し活動計画書にまとめる。	自律、協働、創造の能力を身に付ける
		3rd	活動目標の決定および活動内容の計画 チーム活動の目標決定に向け、テーマに沿ってアイデアを出し議論をする。決定した活動目標に沿って、方法、役割分担、スケジュール等を決定し活動計画書にまとめる。完成後は活動を開始する。	自律、協働、創造の能力を身に付ける

		4th	活動目標の決定および活動内容の計画 チーム活動の目標決定に向け、テーマに沿ってアイデアを出し議論をする。決定した活動目標に沿って、方法、役割分担、スケジュール等を決定し活動計画書にまとめる。完成後は活動を開始する。	自律、協働、創造の能力を身に付ける
		5th	活動目標の決定および活動内容の計画 チーム活動の目標決定に向け、テーマに沿ってアイデアを出し議論をする。決定した活動目標に沿って、方法、役割分担、スケジュール等を決定し活動計画書にまとめる。活動計画書を提出する。	自律、協働、創造の能力を身に付ける
		6th	チーム活動 活動計画書に従ってチームで活動を行う。計画発表会＆意見交換会の準備を行う。	自律、協働、創造の能力を身に付ける
		7th	計画発表会＆意見交換会 活動内容を共有するためにチームの活動について報告を行う。他のチームの報告を聞き、意見交換を行う。	チームの活動を簡潔に伝えることができる 他のチームの活動を共有し評価し、意見を伝えることができる
		8th	計画の見直し・チーム活動 計画発表会＆意見交換会を踏まえ、計画の見直しを行う。スケジュールの遅延や実施方法の不備等が明らかになった場合、活動計画の修正・変更を行う。	自律、協働、創造の能力を身に付ける
	2nd Quarter	9th	チーム活動 活動計画書に従ってチームで活動を行う。スケジュールの遅延や実施方法の不備等が明らかになった場合、活動計画の修正・変更を行う。	自律、協働、創造の能力を身に付ける
		10th	チーム活動 活動計画書に従ってチームで活動を行う。スケジュールの遅延や実施方法の不備等が明らかになった場合、活動計画の修正・変更を行う。中間報告会の準備を行う。	自律、協働、創造の能力を身に付ける
		11th	チーム活動 活動計画書に従ってチームで活動を行う。スケジュールの遅延や実施方法の不備等が明らかになった場合、活動計画の修正・変更を行う。中間報告会の準備を行う。	自律、協働、創造の能力を身に付ける
		12th	チーム活動 活動計画書に従ってチームで活動を行う。スケジュールの遅延や実施方法の不備等が明らかになった場合、活動計画の修正・変更を行う。中間報告会の準備を行う。	自律、協働、創造の能力を身に付ける
		13th	チーム活動 活動計画書に従ってチームで活動を行う。スケジュールの遅延や実施方法の不備等が明らかになった場合、活動計画の修正・変更を行う。	自律、協働、創造の能力を身に付ける
		14th	これまでの活動のふりかえり 前期の振り返りを行うと共にこれまでのチーム活動を省み、今後の活動計画を確認する。各自の行動を省みて、自律、協働、創造に関して目標達成した点や反省点を自己および相互に記録する。自己および相互の行動の記録をもとにチーム担当教員より個別にフィードバックを受ける。	チームや自身の行動を客観的にふりかえることができる
		15th	これまでの活動のふりかえり 前期の振り返りを行うと共にこれまでのチーム活動を省み、今後の活動計画を確認する。各自の行動を省みて、自律、協働、創造に関して目標達成した点や反省点を自己および相互に記録する。自己および相互の行動の記録をもとにチーム担当教員より個別にフィードバックを受ける。	チームや自身の行動を客観的にふりかえることができる
		16th	期末試験　実施せず	

Evaluation Method and Weight (%)

	個人評価（プロセス評価）（自律）	個人評価（プロセス評価）（協働）	個人評価（プロセス評価）（創造）	チーム評価（成果物、報告会）（協働）	チーム評価（成果物、報告会）（創造）	Total
Subtotal	24	24	12	20	20	100
基礎的能力	0	0	0	0	0	0
専門的能力	0	0	0	0	0	0
分野横断的能力	24	24	12	20	20	100

Akashi College	Year	2024	Course Title	C o + w o r k I B

Course Information

Course Code	6220	Course Category	General / Compulsory
Class Format	Seminar	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials	No required textbook and the required material will change according to the contents of the activity of each team.		
Instructor	All faculty		

Course Objectives

1) Self-reliance: To acquire individuality and self-management ability
2) Co-operation skills: To gain the ability to work in teams and respect the teammates.
3) Creative Skills: To acquire the ability to gather and organize information, discover and propose solutions to problems.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
1 Self-reliance	Schedule management, reporting, contact, consultation, planning goals with the teammates	Individually able to schedule management, reporting, contact, consultation, planning goals.	Not able to schedule management, reporting, contact, consultation, and planning goals
2 Co-operation skills	Open to different opinions, able to express the student personal opinion, and ability to lead the team into a consensus.	Open to different opinions, able to express the student personal opinion, and ability to play the attributed role in the team.	Not open to different opinions, not able to express the student personal opinion, and can't to play the attributed role in the team.
3 Creative Skills	The student can voluntarily gather information, organize and summarize this information, form ideas and explain those ideas to others.	The student can voluntarily gather information, organize and summarize this information, and explain those ideas to others.	The student can't voluntarily gather information, can't organize and summarize this information, and can't explain those ideas to others.

Assigned Department Objectives

Teaching Method

Outline	This course aims to develop the students' self-reliance, co-operation and creative skills in a manner that the student can contribute to a team in a variety of environments (working with students from other departments, different age, and people from outside the school). Each group is to work with the instructor in charge and challenge themselves in creating something or perform activities that will bring happiness to someone other than the team members. Each team has to elaborate a plan and do its activities. The students will revise their plan after its presentation at a briefing session and retrospective evaluation.
Style	2nd,3rd, and 4th academic year students from all four departments are randomly selected to compose a group with multiple students. After each student introduces themselves to the team, they will perform ice breaks and other activities that will help to build relationships within the group. Later the team will discuss and discover a problem to work with, make plans, divide roles among the members and work together toward a solution to the problem. Through working to solve this problem the students will achieve the goals of self-reliance, co-operation, and creativity. After the course start, make sure that you can contact the teacher in charge of the team. Based on the course rubric distributed in class each student has to establish individual goals. The course rubric is used to self-evaluation, mutual evaluation, and to evaluate the performance of each student. Every week at the end of the lesson, the student has to fill a retrospective sheet and set the next goal.
Notice	The grading system of the course is composed on the self-evaluation by students, mutual evaluation, evaluation by the teacher in charge of the team (1), and multiple faculty members at the briefing session at the end of the term (2). Students who miss 1/4 or more of classes will not be eligible for evaluation.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Course overall guidance, presentation of the members of each team, team building guidance, confirmation of course schedule, restrictions and advice regarding the activities, explanation of the evaluation method. Later team members and the team and the teacher in charge meet and work together on team building.	To acquire Self-reliance, Co-operation and Creative Skills.
		2nd	Each student set the activity targets, and self-goals. The team will discuss ideas and a theme to the activities. Later according to the team activity goal, the group will work on the implementation method, division of roles among the members and schedule, which will be summarized in an action plan.	To acquire Self-reliance, Co-operation and Creative Skills.
		3rd	Each student set the activity targets, and self-goals. The team will discuss ideas and a theme to the activities. Later according to the team activity goal, the group will work on the implementation method, division of roles among the members and schedule, which will be summarized in an action plan.	To acquire Self-reliance, Co-operation and Creative Skills.

		4th	Each student set the activity targets, and self-goals. The team will discuss ideas and a theme to the activities. Later according to the team activity goal, the group will work on the implementation method, division of roles among the members and schedule, which will be summarized in an action plan.	To acquire Self-reliance, Co-operation and Creative Skills.
		5th	Setting targets and planning activities, submit the action plan. According to the theme and goals of the team, the group will draw ideas and discuss them. The group will establish the activity goal, decide the method to achieve it, decide members' role sharing, schedule, and summarize in a plan.	To acquire Self-reliance, Co-operation and Creative Skills.
		6th	Team activities: Work according to the action plan. The action plan may be modified/changed, according to schedule delay, the incompleteness of the implementation method, etc.	To acquire Self-reliance, Co-operation and Creative Skills.
		7th	Team activities: Work according to the action plan.	To acquire Self-reliance, Co-operation and Creative Skills.
		8th	No mid-term Exam	
	4th Quarter	9th	Team activities: Work according to the action plan. The action plan may be modified/changed, according to schedule delay, the incompleteness of the implementation method, etc. Prepare to the briefing session.	To acquire Self-reliance, Co-operation and Creative Skills.
		10th	Team activities: Work according to the action plan. The action plan may be modified/changed, according to schedule delay, the incompleteness of the implementation method, etc. Prepare to the briefing session.	To acquire Self-reliance, Co-operation and Creative Skills.
		11th	Team activities: Work according to the action plan. The action plan may be modified/changed, according to schedule delay, the incompleteness of the implementation method, etc. Prepare to the briefing session.	To acquire Self-reliance, Co-operation and Creative Skills.
		12th	Team activities: Work according to the action plan. The action plan may be modified/changed, according to schedule delay, the incompleteness of the implementation method, etc. Prepare to the briefing session.	To acquire Self-reliance, Co-operation and Creative Skills.
		13th	Briefing session: Report the activities of the team and listen to reports from other groups.	To acquire Self-reliance, Co-operation and Creative Skills.
		14th	Retrospective meeting and summary of activities: The group will discuss the results from the briefing session and review the team action plan. The students will evaluate individually and mutually their achieved points and goals, regarding self-reliance, co-operation, and creativity.	To acquire Self-reliance, Co-operation and Creative Skills.
		15th	Retrospective meeting and summary of activities: The group will discuss the results from the briefing session and review the team action plan. The students will evaluate individually and mutually their achieved points and goals, regarding self-reliance, co-operation, and creativity.	To acquire Self-reliance, Co-operation and Creative Skills.
		16th	No end-term Exam	

Evaluation Method and Weight (%)

	Individual Self-reliance (process)	Individual Co-operation (process)	Individual Creativity (process)	Team Co-operation (process)	Team Creativity (process)	Other	Total
Subtotal	24	24	12	20	20	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	0	0	0	0	0	0	0
Cross Area Proficiency	24	24	12	20	20	0	100

Akashi College	Year	2024	Course Title	Mathematics Certification I

Course Information

Course Code	6222	Course Category	General / Elective
Class Format	その他	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Year-round	Classes per Week	1
Textbook and/or Teaching Materials	None		
Instructor	OMODA Yasuhiro		

Course Objectives

he goal is to pass a qualifying examination by an external organization with content related to mathematics.
If you pass any of the following qualifications, you will be eligible for credit recognition.
Practical Mathematics Proficiency Test: Level 2
The evaluation shall be 100 in case of passing.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Practical Mathematics Proficiency Test: Pass Level 2.	Practical Mathematics Proficiency Test: Pass Level 2.	Practical Mathematics Proficiency Test: Fail to pass Level 2.

Assigned Department Objectives

Teaching Method

Outline	As a result of learning in the field of mathematics, it is positioned as a subject that gives credits according to the results of qualification examinations sponsored by external organizations. If you pass one of the designated external qualification exams and complete the prescribed procedures by the deadline designated by the Educational Affairs Section of the Student Affairs Division, you will be awarded one credit.
Style	This is self-study for the qualification exam, and no lectures are given.
Notice	Certificates of passing the examinations taken in the 1st and 2nd grades or certificates of passing the examinations taken in the first and second years are required for credit transfer. Credits will not be granted if proof is not submitted within this period. Strictly observe the deadline. Absence conditions (percentage) that are not considered for passing No condition

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☐ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Self-directed learning	Voluntary study for qualification exams (no lectures)
		2nd	same as above	same as above
		3rd	same as above	same as above
		4th	same as above	same as above
		5th	same as above	same as above
		6th	same as above	same as above
		7th	same as above	same as above
		8th	same as above	same as above
	2nd Quarter	9th	same as above	same as above
		10th	same as above	same as above
		11th	same as above	same as above
		12th	same as above	same as above
		13th	same as above	same as above
		14th	same as above	same as above
		15th	same as above	same as above
		16th	No final exam	
2nd Semester	3rd Quarter	1st	Self-directed learning	Voluntary study for qualification exams (no lectures)
		2nd	same as above	same as above
		3rd	same as above	same as above
		4th	same as above	same as above
		5th	same as above	same as above
		6th	same as above	same as above
		7th	same as above	same as above
		8th	same as above	same as above
	4th Quarter	9th	same as above	same as above
		10th	same as above	same as above
		11th	same as above	same as above
		12th	same as above	same as above
		13th	same as above	same as above

		14th	same as above	same as above
		15th	same as above	same as above
		16th	No final exam	

Evaluation Method and Weight (%)

	Examination	Other	Total
Subtotal	0	100	100
Basic Proficiency	0	100	100
Specialized Proficiency	0	0	0
Cross Area Proficiency	0	0	0

Akashi College	Year	2024	Course Title	Electric Circuits Ⅱ A

Course Information

Course Code	6226	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	Academic Credit: 2
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	KAJIMURA Yoshihiro		

Course Objectives

Evaluation point 1: Understand and can explain the relationship between voltage and current in resistance, coils, and capacitor elements, and can use it in the calculation of an electrical circuit.
Evaluation point 2: Understand and can explain the instantaneous values, phaser, and complex number expressions, and can use them in the calculation of a sine wave AC circuit.
Evaluation point 3: Can explain the principle and method of measuring effective power, reactive power, and power factor, and calculate them.
Evaluation point 4: Can explain how mutual inductance circuits work, and calculate circuit voltages, currents, etc.
Evaluation point 5: Can explain and calculate voltages and currents (phase voltage, line voltage, line current) in three-phase AC.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Understand the relationship between voltage and current in resistance, coils, and capacitor elements, and can use it in the applied calculation of an electrical circuit.	Understand the relationship between voltage and current in resistance, coils, and capacitor elements, and can use it in the calculation of an electrical circuit.	Do not understand the relationship between voltage and current in resistance, coils, and capacitor elements, and cannot use it in the calculation of an electrical circuit.
Achievement 2	Understand and can explain the instantaneous values, phaser, and complex number expressions, and can use them in the applied calculation of a sine wave AC circuit.	Understand and can explain the instantaneous values, phaser, and complex number expressions, and can use them in the calculation of a sine wave AC circuit.	Do not understand and cannot explain the instantaneous values, phaser, and complex number expressions, and cannot use them in the calculation of a sine wave AC circuit.
Achievement 3	Can explain the principle and method of measuring effective power, reactive power, and power factor, and solve problems.	Can explain the principle and method of measuring effective power, reactive power, and power factor.	Cannot explain the principle and method of measuring effective power, reactive power, and power factor.
	Can perform applied calculations of voltages, currents, etc. in mutual inductance circuits, etc.	Can calculate voltages, currents, etc. in mutual inductance circuits, etc.	Cannot calculate voltages, currents, etc. in mutual inductance circuits, etc.
	Can perform applied calculations of voltages and currents (phase voltage, line voltage, line current) in three-phase AC.	Can calculate voltages and currents (phase voltage, line voltage, line current) in three-phase AC.	Cannot calculate voltages and currents (phase voltage, line voltage, line current) in three-phase AC.

Assigned Department Objectives

Teaching Method

Outline	The goals of this course are to be able to explain the meaning and application of physical quantities such as voltage, current, and impedance in the AC circuit theory, which is the basis of electrical and electronic engineering, and be able to calculate them. The class also involves practice problem exercises, etc. to help students learn them.
Style	Explanations will be given in line with the textbook. The class will be carried out using slides and worksheets. There will regularly be report assignments of problem exercises.
Notice	This course's content will amount to 180 hours of study in total. These hours include learning time guaranteed in classes and the standard self-study time required for pre-study / review, and completing assignment reports. The overall evaluation will be based 80% on periodic exams, and 20% on report assignments including worksheets done during class. The reports will be mostly made up of the questions at the end of each chapter. The minimum score for a pass will be 60%. Students who miss 1/3 or more of classes will not be eligible for a passing grade.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Electrical mathematics exercise I	Can calculate derivative and complex numbers.
		2nd	Electrical mathematics exercise II	Can calculate integrals.
		3rd	Sine wave AC, mean values	Understand sine wave AC and calculate mean values.
		4th	RMS values	Can calculate RMS values.
		5th	Resistive circuits	Can find the current in a resistive circuit.
		6th	Inductance circuit	Can find the current in a inductance circuit.
		7th	Capacitor circuits	Can find the current in a capacitor circuit.

		8th	Midterm exam	
	2nd Quarter	9th	R-L circuits	Can find the current in a R-L circuit.
		10th	R-C circuits	Can find the current in a R-C circuit.
		11th	The basics of R-L-C circuit vector notation	Can find the current in a R-L-C circuit.
		12th	The basis of the vector notation I	Understand the meaning of the vector notation and express AC voltage with symbols.
		13th	Basics of the vector notation II	Can calculate an AC circuit using the vector notation.
		14th	Impedance and admittance I	Can calculate impedance and admittance.
		15th	Impedance and admittance II	Can calculate impedance and admittance of a complex circuit.
		16th	Final exam	

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Report	Portfolio	Other	Total
Subtotal	80	0	0	20	0	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	80	0	0	20	0	0	100
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2024	Course Title	Electric Circuits Ⅱ B

Course Information

Course Code	6227	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	Academic Credit: 2
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	KAJIMURA Yoshihiro		

Course Objectives

Evaluation point 1: Understand and can explain the relationship between voltage and current in resistance, coils, and capacitor elements, and can use it in the calculation of an electrical circuit.
Evaluation point 2: Understand and can explain the instantaneous values, phaser, and complex number expressions, and can use them in the calculation of a sine wave AC circuit.
Evaluation point 3: Can explain the principle and method of measuring effective power, reactive power, and power factor, and calculate them.
Evaluation point 4: Can explain how mutual inductance circuits work, and calculate circuit voltages, currents, etc.
Evaluation point 5: Can explain and calculate voltages and currents (phase voltage, line voltage, line current) in three-phase AC.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Understand the relationship between voltage and current in resistance, coils, and capacitor elements, and can use it in the applied calculation of an electrical circuit.	Understand the relationship between voltage and current in resistance, coils, and capacitor elements, and can use it in the calculation of an electrical circuit.	Do not understand the relationship between voltage and current in resistance, coils, and capacitor elements, and cannot use it in the calculation of an electrical circuit.
Achievement 2	Understand and can explain the instantaneous values, phaser, and complex number expressions, and can use them in the applied calculation of a sine wave AC circuit.	Understand and can explain the instantaneous values, phaser, and complex number expressions, and can use them in the calculation of a sine wave AC circuit.	Do not understand and cannot explain the instantaneous values, phaser, and complex number expressions, and cannot use them in the calculation of a sine wave AC circuit.
Achievement 3	Can explain the principle and method of measuring effective power, reactive power, and power factor, and solve problems.	Can explain the principle and method of measuring effective power, reactive power, and power factor.	Cannot explain the principle and method of measuring effective power, reactive power, and power factor.
	Can perform applied calculations of voltages, currents, etc. in mutual inductance circuits, etc.	Can calculate voltages, currents, etc. in mutual inductance circuits, etc.	Cannot calculate voltages, currents, etc. in mutual inductance circuits, etc.
	Can perform applied calculations of voltages and currents (phase voltage, line voltage, line current) in three-phase AC.	Can calculate voltages and currents (phase voltage, line voltage, line current) in three-phase AC.	Cannot calculate voltages and currents (phase voltage, line voltage, line current) in three-phase AC.

Assigned Department Objectives

Teaching Method

Outline	The goals of this course are to be able to explain the meaning and application of physical quantities such as voltage, current, and impedance in the AC circuit theory, which is the basis of electrical and electronic engineering, and be able to calculate them. The class also involves practice problem exercises, etc. to help students learn them.
Style	Explanations will be given in line with the textbook. The class will be carried out using slides and worksheets. There will regularly be report assignments of problem exercises.
Notice	This course's content will amount to 180 hours of study in total. These hours include learning time guaranteed in classes and the standard self-study time required for pre-study / review, and completing assignment reports. The overall evaluation will be based 80% on periodic exams, and 20% on report assignments including worksheets done during class. The reports will be mostly made up of the questions at the end of each chapter. The minimum score for a pass will be 60%. Students who miss 1/3 or more of classes will not be eligible for a passing grade.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Complex power	Can calculate complex power.
		2nd	Vector diagrams	Can draw a vector diagram.
		3rd	Bridge circuits	Understand bridge circuits and can find equilibrium conditions.
		4th	Mutual inductance circuits	Can write the meaning of mutual inductance circuits, and draw an equivalent circuit.
		5th	Equivalent circuits of mutual inductance circuits I	Can calculate the current in an equivalent circuit of a mutual inductance circuit.

		6th	Equivalent circuits of mutual inductance circuits II	Can calculate the current in an equivalent circuit of a mutual inductance circuit.
		7th	Occurrence of polyphase AC and Star and Delta connections	Can explain the occurrence of polyphase AC, and Star and Delta connections.
		8th	Midterm exam	
	4th Quarter	9th	Symbol notion and phase rotation of polyphase AC	Can calculate the voltage and current in a polyphase AC.
		10th	Phase voltage and line voltage of a Y connection	Can calculate the phase voltage and the line voltage of a Y connection.
		11th	Phase current and line current of a Δ connection	Can calculate the phase current and line current of a Δ connection.
		12th	Δ and Y connections and Δ-Y conversions	Can calculate Δ and Y connections and Δ-Y conversions.
		13th	Polyphase AC electrical power	Can calculate polyphase AC electrical power.
		14th	Non-sine waves and the basis of the Fourier series	Can describe the meaning of non-sine waves and the Fourier series.
		15th	How to compute Fourier coefficients, and Fourier series expansion of an odd function wave	Can compute Fourier coefficients, and perform Fourier series expansion of an odd function wave.
		16th	Final exam	

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Report	Portfolio	Other	Total
Subtotal	80	0	0	20	0	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	80	0	0	20	0	0	100
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2024	Course Title	Computer Programming Ⅱ A

Course Information

Course Code	6228	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	Academic Credit: 2
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	TSUCHIDA Takayuki		

Course Objectives

[1] Understand basic syntax including operators in C, data type, and function, and structures, pointers, and the relationship between pointers and arrays, and can write programs.
[2] Understand the concept of a library and write programs that utilize libraries.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Understand the basic syntax of C language and can write advanced programs that utilize structures and pointers.	Understand the basic syntax of C language and can write basic programs that utilize structures and pointers.	Cannot understand the basic syntax of C language and cannot write basic programs that utilize structures and pointers.
Achievement 2	Can explain the concept of a library and can write advanced programs that utilize many libraries.	Can explain the concept of a library and can write basic programs that utilize libraries.	Cannot explain the concept of a library and cannot write programs that utilize library.

Assigned Department Objectives

Teaching Method

Outline	Following the Programming I, the course involves lectures and exercises of programming in C. In the last half of the course, students also learn about the existing libraries used in program development and how to use them. The lectures will be conducted by a teacher who engaged in the research and development of middleware (database) at Hitachi, Ltd. Research & Development Headquarters for five years.
Style	In the first half of the course, students will understand the content of the textbook and practice applied questions individually to enhance their program development skills. In this period, it is recommended that students give a lot of thought on how to solve problems on paper and make a habit of managing their history in order to know when program planning and description changes occur. In the last half of the course, libraries, which are necessary for writing more practical programs, will be explained.
Notice	Students must have completed Programming I. This course's content will amount to 90 hours of study in total. These hours include the learning time guaranteed in classes and the standard self-study time required for pre-study / review, and completing assignment reports. All assignments are required to be submitted. Students who miss 1/3 or more of classes will not be eligible for a passing grade.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Guidance, test	Understand the class objectives. Can review, understand, and explain the basic syntax.
		2nd	Concept and basics of functions	Understand the concept and basics of functions and can write programs.
		3rd	Function definition and calls	Understand function definitions and calls, and can write programs.
		4th	Function designs	Understand various function designs and can write programs.
		5th	Exercise (1)	Can independently create programs in exercise questions that use function .
		6th	Basic type (1)	Understand the basic types and can write programs.
		7th	Basic types (2)	Can independently create programs in exercise questions that use basic types .
		8th	Midterm exercise	Understand the content of Weeks 1-7, and can write programs.
	2nd Quarter	9th	Function-like macros	Understand function-like macros and can write programs.
		10th	Enumerations	Understand enumerations and can write programs.
		11th	Text I/O	Understand the text I/O and can write programs.
		12th	Strings (1)	Understand the basics of strings and can write programs.
		13th	Strings (2)	Understand the arrays and operations of strings and can write programs.
		14th	Strings (3)	Understand the operations of strings and can write programs.

		15th	Exercise (2)	Can independently create programs in exercise questions that use strings.
		16th	Final exam	Understand the content of Weeks 8-15 and can write programs.

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	50	0	0	0	50	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	50	0	0	0	50	0	100
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2024	Course Title	Computer Programming Ⅱ B

Course Information

Course Code	6229	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	Academic Credit: 2
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	HIRANO Masatsugu		

Course Objectives

[1] Understand basic syntax including operators in C, data type, and function, and structures, pointers, and the relationship between pointers and arrays, and can write programs.
[2] Understand the concept of a library and write programs that utilize libraries.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Understand the basic syntax of C language and can write advanced programs that utilize structures and pointers.	Understand the basic syntax of C language and can write basic programs that utilize structures and pointers.	Cannot understand the basic syntax of C language and cannot write basic programs that utilize structures and pointers.
Achievement 2	Can explain the concept of a library and can write advanced programs that utilize many libraries.	Can explain the concept of a library and can write basic programs that utilize libraries.	Cannot explain the concept of a library and cannot write programs that utilize library.

Assigned Department Objectives

Teaching Method

Outline	Following the Programming I, the course involves lectures and exercises of programming in C. In the last half of the course, students also learn about the existing libraries used in program development and how to use them. The lectures will be conducted by a teacher who engaged in the research and development of middleware (database) at Hitachi, Ltd. Research & Development Headquarters for five years.
Style	In the first half of the course, students will understand the content of the textbook and practice applied questions individually to enhance their program development skills. In this period, it is recommended that students give a lot of thought on how to solve problems on paper and make a habit of managing their history in order to know when program planning and description changes occur. In the last half of the course, libraries, which are necessary for writing more practical programs, will be explained.
Notice	Students must have completed Programming I. This course's content will amount to 90 hours of study in total. These hours include the learning time guaranteed in classes and the standard self-study time required for pre-study / review, and completing assignment reports. All assignments are required to be submitted. Students who miss 1/3 or more of classes will not be eligible for a passing grade.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☑ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Pointers	Can explain the concept of pointers.
		2nd	Pointers	Understand the role of pointers and can write simple programs.
		3rd	Strings and pointers	Understand the relationship between strings and pointers.
		4th	Strings and pointers	Can write programs for string operations using pointers.
		5th	Structures	Can explain the concept of structures.
		6th	Structures	Can write simple programs using structures.
		7th	Structures	Can write practical programs using structures.
		8th	Midterm exercise	Understand the content of Weeks 1-7, and can write programs.
	4th Quarter	9th	File processing	Can explain how to process files in C.
		10th	File processing	Can write programs for file I/O.
		11th	Libraries	Can explain what libraries are.
		12th	Libraries	Can write programs using libraries.
		13th	Comprehensive exercise (1)	Can write programs that realize a given theme, determining whether or not to utilize libraries.
		14th	Comprehensive exercise (2)	Can write programs that realize a given theme, determining whether or not to utilize libraries.
		15th	Comprehensive exercise (3)	Can write programs that realize a given theme, determining whether or not to utilize libraries.
		16th	Final exam	Understand the content of Weeks 8-15 and can write programs.

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	50	0	0	0	50	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	50	0	0	0	50	0	100
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2024	Course Title	Electrical and Electronic Measurement A

Course Information

Course Code	6230	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	Shun Iwasaki:「Denjiki Keisoku」、Korona-sha		
Instructor	HOSOKAWA Atsuishi		

Course Objectives

1) Understand the concept of measurement.
2) Understand how to measure DC voltage, current, power, and resistance.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can explain different measurement methods by giving specific examples.	Understand different measurement methods.	Do not fully understand different measurement methods well.
Achievement 2	Can explain DC voltage, current, power, and resistance measurements by giving specific examples.	Understand how to measure DC voltage, current, power, and resistance.	Do not fully understand how to measure DC voltage, current, power, and resistance.

Assigned Department Objectives

Teaching Method

Outline	The aim of this course is to understand the basic concepts of measuring operations and how to measure basic electrical phenomena.
Style	Classes are mainly conducted through note-taking. There will be handouts and references to the contents of the textbook as needed for explanations. In the lesson before each exam, there will be an exercise (quiz) on the content that will be on the exam.
Notice	Students must have a good understanding of Electrical Circuits I and II from their first and second year. In addition, they should apply the contents of the class to Experiments of Electrical and Computer Engineering I in the second semester of the second year. Students who miss 1/4 or more of classes will not be eligible for a grade evaluation.

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Measurement and instrumentation, direct measurement and indirect measurement	Understand the concept of measurement and the types of measurement methods (direct measurement and indirect measurement).
		2nd	Deflection method and null method	Understand the types of instrumentation methods (deflection method and null method).
		3rd	Types of errors, significant figures	Understand accuracy and error, and understand the concept of significant figures.
		4th	Propagation of error, units and standards	Can calculate measurement values taking into consideration the propagation of error, and understand the SI base units and derived units, and the relationship between standards (instruments) and traceability.
		5th	Analog indicating instruments	Understand the main configurations of analog indicating instruments.
		6th	Moving-coil instrument, electrodynamometer instrument	Understand the operating principles of indicating instruments (moving-coil instrument and electrodynamometer instrument).
		7th	Exercise on the content from weeks 1 to 6	Understand the content from weeks 1 to 6 of the first semester.
		8th	Midterm exam	Understand the content from weeks 1 to 6 of the first semester.
	2nd Quarter	9th	Shunt, multiplier	Understand how to increase the rated values of currents and voltages using a shunt and multiplier. Understand the measurement of current and voltage using an indicating instrument.
		10th	Measurement of DC current and voltage, potentiometer	Understand the measurement of current and voltage using an indicating instrument. Also, understand the voltage measurement using a potentiometer.
		11th	Indirect measurement of DC power, DC power meter	Understand the indirect measurement of DC power using the voltmeter-ammeter method and the operating principle of a power meter.
		12th	Indirect measurement of resistance, Wheatstone Bridge	Understand the indirect measurement of resistance using the voltmeter-ammeter method and the measurement of resistance using Wheatstone Bridge.

		13th	Ohmmeter	Understand the operating principles of ohmmeter.
		14th	Low resistance measurement, high resistance measurement of high resistance	Understand the issues involved in measuring low and high resistance and how to resolve them.
		15th	Exercise on the content from weeks 9 to 14	Understand the content from weeks 9 to 14 of the first semester.
		16th	Final exam	Understand the content from weeks 9 to 14 of the first semester.

Evaluation Method and Weight (%)

	Examination	Exercise	Task	Total
Subtotal	70	30	0	100
Basic Proficiency	0	0	0	0
Specialized Proficiency	70	30	0	100
Cross Area Proficiency	0	0	0	0

Akashi College	Year	2024	Course Title	Electrical and Electronic Measurement B

Course Information

Course Code	6231	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	School Credit: 1
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	2
Textbook and/or Teaching Materials			
Instructor	HOSOKAWA Atsuishi		

Course Objectives

1) Understand how to measure AC voltage, current, power, and impedance.
2)Understand how to observe a waveform using an oscilloscope.
3) Understand digital instruments, sensors, and data processing.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can explain AC voltage, current, power, and impedance measurements by giving specific examples.	Understand how to measure AC voltage, current, power, and impedance.	Do not fully understand how to measure AC voltage, current, power, and impedance.
Achievement 2	Can explain waveform observation using an oscilloscope by giving specific examples.	Understand how to observe a waveform using an oscilloscope.	Do not fully understand how to observe a waveform using an oscilloscope well.
Achievement 3	Can explain digital instruments, sensors, and data processing by giving specific examples.	Understand digital instrumentation, sensors, and data processing	Do not fully understand digital instruments, sensors, and data processing.

Assigned Department Objectives

Teaching Method

Outline	The aim of this course is to understand the basic concepts of measuring operations and how to measure basic electrical phenomena.
Style	Classes are mainly conducted through note-taking. There will be handouts and references to the contents of the textbook as needed for explanations. In the lesson before each exam, there will be an exercise (quiz) on the content that will be on the exam.
Notice	Students must have a good understanding of Electrical Circuits I and II from their first and second year. In addition, they should apply the contents of the class to Experiments of Electrical and Computer Engineering I in the second semester of the second year. Students who miss 1/4 or more of classes will not be eligible for a grade evaluation.

Characteristics of Class / Division in Learning

☐ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	AC voltage, current, power, measurement of AC voltage and current	Understand the measurand in AC, and the difference between AC and DC measurements.
		2nd	Rectifier instrument, peak responding electronic voltmeter	Understand the operating principles of indicating instruments (rectifier instrument and peak responding electronic voltmeter).
		3rd	Thermocouple instruments, moving-iron instruments	Understand the operating principles of the indicating instruments (thermocouple instrument and moving iron instrument).
		4th	Electrodynamometer instruments, AC electrodynamometers, and induction type energy meters	Understand the principles of measuring energy. Can explain the principles and methods of measuring effective power, reactive power, and power factor.
		5th	Resistors, coils, and capacitors, measurement of impedance	Understand an equivalent circuit of resistors, coils, and capacitors, and how to measure impedance.
		6th	AC bridges	Understand the measurement of impedance using an AC bridge.
		7th	Exercise on the content from weeks 16 to 21	Understand the content from weeks 1 to 6 of the second semester.
		8th	Midterm exam	Understand the content from weeks 1 to 6 of the second semester.
	4th Quarter	9th	The operating principle of the oscilloscope	Understand the operating principles of the oscilloscope.
		10th	Waveform observations using an oscilloscope	Understand waveform observation using an oscilloscope.
		11th	A/D conversion	Understand the principles of A/D conversion.
		12th	Digital instruments	Understand the operating principles of digital instruments.
		13th	Sensors	Understand the concept of sensors and the operating principles of various sensors.

		14th	Data processing	Understand how to process data.
		15th	Exercise on the content from weeks 24 to 30	Understand the content from weeks 9 to 14 of the second semester.
		16th	Final exam	Understand the content from weeks 9 to 14 of the second semester.

Evaluation Method and Weight (%)

	Examination	Exercise	Task	Total
Subtotal	70	15	15	100
Basic Proficiency	0	0	0	0
Specialized Proficiency	70	15	15	100
Cross Area Proficiency	0	0	0	0

Akashi College	Year	2024	Course Title	Microcomputer

Course Information

Course Code	6232	Course Category	Specialized / Compulsory
Class Format	Lecture	Credits	Academic Credit: 2
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	First Semester	Classes per Week	2
Textbook and/or Teaching Materials	Keitaro HORI, Illustrated PIC Microcomputer Practice 2nd Edition, Morikita Publishing Co., Ltd.		
Instructor	NOMURA Hayato		

Course Objectives

(1) Understand the configuration and operating principles of computers.
(2) Understand the basics of the assembler language and can perform basic programming.
(3) Can create a control program using assembler language.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Fully understand the configuration and operating principles of computers.	Understand the configuration and operating principles of computers.	Do not understand the configuration and operating principles of computers.
Achievement 2	Fully understand the basics of assembler language and can fully perform basic programming.	Understand the basics of assembler language and can perform basic programming.	Do not understand the basics of assembler language and cannot perform basic programming.
Achievement 3	Can create an efficient control program using assembler language.	Can create a control program using assembler language.	Cannot create a control program using assembler language.

Assigned Department Objectives

Teaching Method

Outline	Students will understand the basics of computer architecture and learn assembler programming techniques using microcomputers.
Style	The class will be taught by explaining basic matters in accordance with the textbook. Programming using assembler language will involve exercises using actual devices in addition to lectures.
Notice	This course's content will amount to 90 hours of study in total. These hours include the learning time guaranteed in classes and the standard self-study time required for pre-study / review, and completing assignment reports. Students who miss 1/3 or more of classes will not be eligible for a passing grade.

Characteristics of Class / Division in Learning

☑ Active Learning	☑ Aided by ICT	☐ Applicable to Remote Class	☑ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Microcomputer basics	Can explain microcomputer basics.
		2nd	How to do radix conversions	Can explain how to do a radix conversion.
		3rd	The basics of logical operations	Can explain the basics of logical operations.
		4th	Hardware configuration of a PIC microcomputer	Can explain the hardware configuration of a PIC microcomputer.
		5th	Assembler language basics, flowchart basics	Can explain the assembler language basics and flowchart basics.
		6th	Assembler programming exercise 1 (how to create a program)	Can explain how to create a program using the assembler language.
		7th	How to create a timer program	Can explain how to create a timer program.
		8th	Midterm exam	
	2nd Quarter	9th	Behaviors of subroutines	Can explain the behaviors of subroutines.
		10th	Assembler programming exercise 2 (I/O control)	Can create I/O control programs.
		11th	Assembler programming exercise 3 (timer program basics)	Can create a timer program.
		12th	Pulse motor basics	Can explain the pulse motor basics.
		13th	Assembler programming exercise 4 (application of timer programs)	Can create an applied timer program.
		14th	Assembler programming exercise 5 (pulse motors)	Can create a pulse motor.
		15th	Assembler programming exercise 6 (advanced program)	Can create an advanced program.
		16th	No final exam	

Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Exercises	Total
Subtotal	50	0	0	0	0	50	100

Basic Proficiency	10	0	0	0	0	10	20
Specialized Proficiency	40	0	0	0	0	40	80
Cross Area Proficiency	0	0	0	0	0	0	0

Akashi College	Year	2024	Course Title	Experiments of Electrical and Computer Engineering I

Course Information

Course Code	6233	Course Category	Specialized / Compulsory
Class Format	Experiment	Credits	School Credit: 2
Department	Electrical and Computer Engineering	Student Grade	2nd
Term	Second Semester	Classes per Week	4
Textbook and/or Teaching Materials	Distribute materials in class		
Instructor	KAJIMURA Yoshihiro,SUYAMA Taikei,HOSOKAWA Atsuishi,		

Course Objectives

Evaluation point 1: Can explain how to handle the necessary instruments for learning electrical information engineering.
Evaluation point 2: Can write an experiment report.
Evaluation point 3: Can use the necessary instruments for an experiment safely, and conduct an experiment in cooperation with team members.

Rubric

	Ideal Level	Standard Level	Unacceptable Level
Achievement 1	Can explain how to handle the necessary instruments for learning electrical information engineering, and examine an experiment.	Can explain how to handle the necessary instruments for learning electrical information engineering.	Cannot explain how to handle the necessary instruments for learning electrical information engineering.
Achievement 2	Can write an experiment report with sufficient information.	Can write an experiment report.	Cannot write an experiment report.
Achievement 3	Can use the necessary instruments for an experiment safely, and actively conduct an experiment in cooperation with team members.	Can use the necessary instruments for an experiment safely, and conduct an experiment in cooperation with the team members.	Cannot use the necessary instruments for an experiment safely, and conduct an experiment in cooperation with team members.

Assigned Department Objectives

Teaching Method

Outline	The aim of this course is to learn how to handle the necessary instruments for learning electrical information engineering, and how to write reports. Several instructors will teach different experiment themes, and students will form groups of three to five people to conduct experiments on each theme. Suyama will teach matters related to measuring equipment, Akiyama matters related to electrical circuits, Kajimura sequencing, and Hosokawa DC bridges.
Style	Students will form groups of three to five people to conduct experiments on each theme. The themes are provided in Contents and Method of Course. After completing experiments on each theme, students must write up a report on the experiment and submit it the instructor teaching that theme. They will have to revise it until they pass. This will help students learn the basics of writing up a report.
Notice	Students will not be graded unless they have participated in all experiments. The overall evaluations will be based on the report submission and content (80%), and attitude toward the experiments (20%). The minimum score for a pass will be 60%. As this is an experiment course, submitting all reports is a prerequisite for evaluations. In addition, if all reports have not been received by the due date, students will not receive a passing grade. Students must clean the lab and put away the equipment. Precautions regarding the experiments will be given during the first week. Students will not be graded unless they have participated in all experiments.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
2nd Semester	3rd Quarter	1st	Experiment guidance	Understand the outline of experiments and how to write up a report.
		2nd	Impedance measurement	Impedance measurement experiment: create a circuit, conduct a lab, and write up a report.
		3rd	Potentiometer	Potentiometer experiment: create a circuit, conduct a lab, and write up a report.
		4th	Report organization	Can write up a report on engineering experiments.
		5th	Fall-of-potential method	An experiment of the fall-of-potential method: create a circuit, conduct a lab, and write up a report.
		6th	Report organization	Can write up a report on engineering experiments.
		7th	Operational Amplifier	Operational Amplifier experiment: create a OP Amp circuit, confirm the Slew Rate, and write up a report on the day.
		8th	DC bridges	A DC bridge experiment: create a circuit, conduct a lab, and write up a report.
	4th Quarter	9th	Report organization	Can write up a report on engineering experiments.

		10th	Relay sequence control 1	Conduct a sequence control experiment using switches, motors, and relays, and write up a report.
		11th	Relay sequence control 2	Continuing from the previous week, conduct an experiment of sequence control using switches, motors, and relays, and write up a report.
		12th	Digital oscilloscope and digital multimeter	A digital oscilloscope and digital multimeter experiment: create a circuit, conduct a lab, and write up a report.
		13th	Report organization	Can write up a report on engineering experiments.
		14th	Assembling a computer	A computer assembling experiment: create a circuit, conduct a lab, and write up a report.
		15th	Summary of engineering experiments	Can write up a report on engineering experiments.
		16th	No final exam	

Evaluation Method and Weight (%)

	Report	Initiatives	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	80	20	0	0	0	0	100
Basic Proficiency	0	0	0	0	0	0	0
Specialized Proficiency	80	20	0	0	0	0	100
Cross Area Proficiency	0	0	0	0	0	0	0