

Toyama College				Control Information Systems Engineering Course				Year		2021						
Department Goals																
Control Information Systems EngineeringProgram develops professional engineerswho acquire technologies for software,electricity / electronics and networksand who can design a system in whichthey are cooperatively coupled.																
Course Category		Course Title		Course Code	Credit Type	Credits	Class Hours per Week								Instructor	Division in Learning
							Adv. 1st Y				Adv. 2nd Y					
							1st		2nd		1st		2nd			
							1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
General	Computer	Advanced English Practicum I		0007	Academic Credit	2									Moanunu Charlton	
							2									
General	Computer	Advanced English Practicum II		0008	Academic Credit	2									Moanunu Charlton	
							2									
General	Elective	Advanced English Workshop		0009	Academic Credit	2									Nishihara Masahiro	
							2									
Specialized	Elective	Shock Compression and Blast Wave		0001	Academic Credit	2									Homa e Tomotaka	
							2									
Specialized	Computer	Thesis Research I		0002	Academic Credit	2									Shina Toru,Akiguchi Shunsuke,Matoba Ryuichi,Oguma Hiroshi,Tsukada Akira,Ito Nao,Mizumoto Iwao,Aso Tsukasa,Yoshii Yotsumi,Furuyama Shoichi	
							2									
Specialized	Computer	Thesis Research I		0003	Academic Credit	2									Shina Toru,Akiguchi Shunsuke,Matoba Ryuichi,Oguma Hiroshi,Tsukada Akira,Ito Nao,Mizumoto Iwao,Aso Tsukasa,Yoshii Yotsumi,Furuyama Shoichi	
							2									

Sp eci ali ze d	El ec tiv e	Advanced Communication Engineering	0004	Acade mic Credit	2	2							Ogum a Hirosh i	
Sp eci ali ze d	El ec tiv e	Instrument and Control Programming	0005	Acade mic Credit	2	2							Mizum oto Iwao	
Sp eci ali ze d	El ec tiv e	Quantum Electronics	0006	Acade mic Credit	2			2					Yoshii Yotsu mi	
Sp eci ali ze d	Co m pu lso ry	Technical English	0010	Acade mic Credit	2			2					Moana nu Charlt on, Ma toba Ryuich i, Yoshi i Yotsu mi, Na katani Toshih iko, Ky oden Tomo aki	
Sp eci ali ze d	El ec tiv e	Advanced Business Strategy	0011	Acade mic Credit	2			2					Miyash ige Tetsuy a	
Sp eci ali ze d	El ec tiv e	Regional Industry	0012	Acade mic Credit	2			2					,	
Sp eci ali ze d	El ec tiv e	Management of Technology	0013	Acade mic Credit	2	2							Kiyosh i Takeh aru	
Sp eci ali ze d	El ec tiv e	Information Processing	0014	Acade mic Credit	2	2							Akiguc hi Shuns uke	
Sp eci ali ze d	El ec tiv e	Object-oriented Programing	0015	Acade mic Credit	2			2					Hayas e Yoshik azu	
Sp eci ali ze d	El ec tiv e	Advanced Computational Engineering	0016	Acade mic Credit	2			2					Furuy ama Shoich i	
Sp eci ali ze d	El ec tiv e	Intelligent Information Processing	0017	Acade mic Credit	2			2					Akiguc hi Shuns uke	
Sp eci ali ze d	Co m pu lso ry	Advanced Applied Mathematics	0018	Acade mic Credit	2	2							Sakur ai Hideto	
Sp eci ali ze d	Co m pu lso ry	Advanced Applied Physics	0019	Acade mic Credit	2	2							Ohtak e Yukiko	
Sp eci ali ze d	El ec tiv e	Seminar on Mathematics and Physics Application	0020	Acade mic Credit	2			2					Ito Nao	

Sp eci ali ze d	Co m pu lso ry	Advanced Experiments	0021	Acade mic Credit	2	2										Shina Toru,A kiguch i Shuns uke,M atoba Ryuich i,Ogu ma Hirosh i,Tsuk ada Akira,I to Nao,M izumot o Iwao, Aso Tsuka sa,Yos hii Yotsu mi,Fur uyama Shoich i	
Sp eci ali ze d	Co m pu lso ry	Advanced Experiments	0022	Acade mic Credit	2			2								Tsuka da Akira,I to Nao,M izumot o Iwao, Aso Tsuka sa,Yos hii Yotsu mi	
Sp eci ali ze d	Co m pu lso ry	Advanced Seminars and Exercises	0023	Acade mic Credit	2	2										Shina Toru,A kiguch i Shuns uke,M atoba Ryuich i,Ogu ma Hirosh i,Tsuk ada Akira,I to Nao,M izumot o Iwao, Aso Tsuka sa,Yos hii Yotsu mi,Fur uyama Shoich i	
Sp eci ali ze d	Co m pu lso ry	Advanced Seminars and Exercises	0024	Acade mic Credit	2			2								Tsuka da Akira,I to Nao,M izumot o Iwao, Aso Tsuka sa,Yos hii Yotsu mi	

Sp eci ali ze d	El ec tiv e	Internship B	0025	Acade mic Credit	3	3	Furuy ama Shoich i,Hseg awa Hirosh i,Kyod en Tomo aki	
Sp eci ali ze d	El ec tiv e	Internship A	0026	Acade mic Credit	2	2	Yoshii Yotsu mi,Hs egawa Hirosh i	
Ge ne ral	El ec tiv e	Japanese Language and Literature	0035	Acade mic Credit	2	2	Kondo Shugo ,Kubo Yoko	
Ge ne ral	El ec tiv e	Regional Studies	0037	Acade mic Credit	2	2	Yokota Kazuhi ro	
Ge ne ral	El ec tiv e	Health Science	0038	Acade mic Credit	2	2	Ohashi Chisat o	
Ge ne ral	El ec tiv e	Industrial Society	0039	Acade mic Credit	2	2	Hsega wa Hirosh i	
Ge ne ral	El ec tiv e	Culture Studies of Japan Sea Rim Countries	0040	Acade mic Credit	2	2	Miyaza ki Izumi	
Sp eci ali ze d	Co m pu lso ry	Engineering Ethics/Business Ethics	0027	Acade mic Credit	2	2	Yokota Kazuhi ro,Tsu kada Akira, Matsu bara Yoshih iro	
Sp eci ali ze d	El ec tiv e	Parameter Design	0028	Acade mic Credit	2	2	Mizuta ni Junno suke	
Sp eci ali ze d	El ec tiv e	Manufacturing System	0029	Acade mic Credit	2	2	Yama moto Keiichi ro	
Sp eci ali ze d	El ec tiv e	Introduction to Geoscience	0030	Acade mic Credit	2	2	Fukud ome Kenich i	
Sp eci ali ze d	Co m pu lso ry	Thesis Research I	0031	Acade mic Credit	5	5	Shina Toru,A kiguch i Shuns uke,M atoba Ryuich i,Ogu ma Hirosh i,Tsuk ada Akira,I to Nao,M izumot o Iwao, Aso Tsuka sa,Yos hii Yotsu mi,Fur uyama Shoich i	

Sp eci ali ze d	Co m pu lso ry	Thesis Research II	0032	Acade mic Credit	5	<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>5</div> </div>	Shina Toru,A kiguch i Shuns uke,M atoba Ryuich i,Ogu ma Hirosh i,Tsuk ada Akira,I to Nao,M izumot o Iwao, Aso Tsuka sa,Yos hii Yotsu mi,Fur uyama Shoich i	
Sp eci ali ze d	El ec tiv e	Advanced Electromagnetic Waves	0033	Acade mic Credit	2	<div> <div></div> <div></div> <div></div> <div></div> <div>2</div> <div></div> <div></div> </div>	Shina Toru	
Sp eci ali ze d	El ec tiv e	Trade Procedure in Port	0034	Acade mic Credit	2	<div> <div></div> <div></div> <div></div> <div></div> <div>2</div> <div></div> <div></div> </div>	Okam oto Katsu nori	
Sp eci ali ze d	El ec tiv e	Port Logistics	0036	Acade mic Credit	2	<div> <div></div> <div></div> <div></div> <div></div> <div>2</div> <div></div> <div></div> </div>	Okam oto Katsu nori	
Sp eci ali ze d	El ec tiv e	International Relations	0041	Acade mic Credit	2	<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>2</div> </div>	Ebihar a Tsuyo shi	
Sp eci ali ze d	El ec tiv e	Biological Information Engineering	0042	Acade mic Credit	2	<div> <div></div> <div></div> <div></div> <div></div> <div>2</div> <div></div> <div></div> </div>	Tsuka da Akira	
Sp eci ali ze d	El ec tiv e	Network System	0043	Acade mic Credit	2	<div> <div></div> <div></div> <div></div> <div></div> <div>2</div> <div></div> <div></div> </div>	Aso Tsuka sa	

Toyama College		Year	2021		Course Title	Advanced English Practicum I	
Course Information							
Course Code		0007		Course Category		General / Compulsory	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		First Semester		Classes per Week		2	
Textbook and/or Teaching Materials		TOEIC Listening and Reading, 書き込みドリル. 桐原書店..					
Instructor		Moananu Charlton					
Course Objectives							
(1) Acquire advanced, technical vocabulary, word collocations, expressions, word chunks necessary to read a basic business reports, e-mails, charts, advertisements or letters. (2) To improve reading efficiency. (3) To improve listening efficiency (4) Be able to give technical presentations on a wide range of topics in English.							
Rubric							
		Estimated ideal achievement level (high) 80%		Estimated standard achievement level (standard) 60%		Estimated unachieved level (Fail) <60%	
Goal 1: Technical Vocabulary: words (including accent), word collocations, expression and word chunks		Student clearly comprehends technical vocabulary covered in the textbook.		Student partially comprehends technical vocabulary covered in the textbook.		Student is unable to comprehend technical vocabulary covered in the textbook.	
Goal 2: Reading efficiency:		Student is clearly able to read efficiently and comprehend the material.		Student is partially able to read efficiently and comprehend the material.		Student is unable to read efficiently and comprehend the material.	
Goal 3: Listening efficiency:		Student is clearly able to listen efficiently and comprehend the material.		Student is partially able to listen efficiently and comprehend the material.		Student is unable to listen efficiently and comprehend the material.	
Goal 4: Presentation skills: English, Content, Delivery, Q & A.		Student is clearly able to give a well-structured and logical presentations paying careful attention to English, Content, Delivery and Q & A. and other required elements.		Student is partially able to give a well-structured and logical presentations paying careful attention to English, Content, Delivery and Q & A. and other required elements.		Student is unable to give a well-structured and logical presentations paying careful attention to English, Content, Delivery and Q & A. and other required elements.	
Assigned Department Objectives							
ディプロマポリシー C-1 JABEE C1							
Teaching Method							
Outline		(1) This class will improve reading and listening ability on the TOEIC test through targeted drills in the textbook. (2) Students will build their English vocabulary, word collocations, useful expressions and word chunks by studying the 20 Units in the textbook. (3) TOEIC test taking strategies for each section of the test (7) will be introduced. (4) Teaching skills and methods on how to give Technical Presentations in English. *This class will be led by a teacher who is licensed in TESOL (Teaching English to Speakers of Other Languages) as well as in TEFL (Teaching English as a Foreign Language).					
Style		The class meets once a week for 90-minutes in the language lab. The teacher will use the textbook as a basis and supplement it with other authentic material. The teacher will introduce useful and effective web applications that will supplement the contents of this class and help students achieve their English educational goals.					
Notice		Students are expected to attend all classes. Tests, including word quizzes on vocabulary in the textbook, will be conducted. Students will do speaking projects individually, in pairs and in groups. This syllabus is subject to change					
Characteristics of Class / Division in Learning							
<input checked="" type="checkbox"/> Active Learning		<input checked="" type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	Guidance/ Teacher self-introduction-Quiz / Day 1. "Hotels and Restaurants" /		Syllabus explanation. TOEIC pre-test./Teacher self introduction-Kahoot Quiz. Introduction of "how to give effective presentations"/ Day 1		
		2nd	Day 1 (continued) / Speaking 1. student presentations.		students 1~20 / Day 1, related speaking, listening, reading exercises		
		3rd	Day 1 (cont.)		Day 1, related speaking, listening, reading exercises		
		4th	Day 2 "Travel and Business Trip" / Introduction of Speaking 2. News Flash presentation.		Day 2, related speaking, listening, reading exercises / Prep for "NewsFlash" project.		
		5th	News Flash presentations. Day 3 "Office Routine 1".		Day 3, related speaking, listening, reading exercises/ students 1~5 presentations,		
		6th	News Flash presentations (cont) , Day 3 (cont.)		Day 3, related speaking, listening, reading exercises / students 6~10		
		7th	News Flash presentations (cont.), Day 4 "Office Routine 2"		Day 4, related speaking, listening, reading exercises. / students 11~15		

		8th	News Flash presentations (cont.), Day 5 (Review of Days 1~4)	Day 5, related speaking, listening, reading exercises / students 16~20.
	2nd Quarter	9th	Test 1.	Units 1~5 Test (Midterm).
		10th	Speaking 3-Group Project 1 "The Country We would like to visit the most"	Speaking 3-Group Project 1 Explanation and preparation.
		11th	Speaking 3-Group Project 1 presentation	Speaking 3-Groups 1~5 presentation/evaluation
		12th	Day 6 "Job openings and Recruitment.	Day 6, related speaking, listening, reading exercises./ Class discussion of homework questions
		13th	Day 7 "Personnel Affairs"	Day 7, related speaking, listening, reading exercises./ Class discussion of homework questions
		14th	Day 8 "Conference and Presentation Seminar	Day 8, related speaking, listening, reading exercises./ Class discussion of homework questions
		15th	期末試験	Units 6~8
		16th	Day 9 "Business"	Day 9, related speaking, listening, reading exercises./ Class discussion of homework questions

#### Evaluation Method and Weight (%)

	Midterm	Final test	Homework	English Presentation/ Speaking Activities	word quizzes	Total
Subtotal	35	35	5	20	5	100
Reading	10	10	1	0	1	22
Listening	5	5	1	0	1	12
Grammar	10	10	1	2	1	24
Writing	10	10	1	3	1	25
Speaking	0	0	1	15	1	17

Toyama College		Year	2021	Course Title	Advanced English Practicum II
Course Information					
Course Code	0008		Course Category	General / Compulsory	
Class Format	Lecture		Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st	
Term	Second Semester		Classes per Week	2	
Textbook and/or Teaching Materials	TOEIC テスト書き込みドリル. 桐原書店, 英語多読図書 (後期)				
Instructor	Moananu Charlton				
Course Objectives					
(1) Acquire advanced, technical vocabulary, word collocations, expressions, word chunks necessary to read a basic business reports, e-mails, charts, advertisements or letters. (2) To improve reading efficiency. (3) To improve listening efficiency (4) Be able to give technical presentations on a wide range of topics in English.					
Rubric					
	Estimated ideal achievement level (high) 80%		Estimated standard achievement level (moderate) 60%		Estimated unachieved level (Fail) <60%
Goal 1: Technical Vocabulary: words (including accent), word collocations, expression and word chunks	Student clearly comprehends technical vocabulary covered in the textbook.		Student partially comprehends technical vocabulary covered in the textbook.		Student is unable to comprehend technical vocabulary covered in the textbook.
Goal 2: Reading efficiency:	Student is clearly able to read efficiently and comprehend the material.		Student is partially able to read efficiently and comprehend the material.		Student is unable to read efficiently and comprehend the material.
Goal 3: Listening efficiency:	Student is clearly able to listen efficiently and comprehend the material.		Student is partially able to listen efficiently and comprehend the material.		Student is unable to listen efficiently and comprehend the material.
Goal 4: Presentation skills: English, Content, Delivery, Q & A.	Student is clearly able to give a well-structured and logical presentations paying careful attention to English, Content, Delivery and Q & A. and other required elements.		Student is partially able to give a well-structured and logical presentations paying careful attention to English, Content, Delivery and Q & A. and other required elements.		Student is unable to give a well-structured and logical presentations paying careful attention to English, Content, Delivery and Q & A. and other required elements.
Assigned Department Objectives					
ディプロマポリシー C-1 JABEE C1					
Teaching Method					
Outline	(1) This class will improve reading and listening ability on the TOEIC test through targeted drills in the textbook. (2) Students will build their English vocabulary, word collocations, useful expressions and word chunks by studying the 20 Units in the textbook. (3) TOEIC test taking strategies for each section of the test (7) will be introduced. (4) Teaching skills and methods on how to give Technical Presentations in English. *This class will be led by a teacher who is licensed in TESOL (Teaching English to Speakers of Other Languages) as well as in TEFL (Teaching English as a Foreign Language).				
Style	The class meets once a week for 90-minutes in the language lab. The teacher will use the textbook as a basis and supplement it with other authentic material. The teacher will introduce various web applications including CALL that will help with the aims of this class				
Notice	Students are expected to attend all classes. Tests, including word quizzes on vocabulary in the textbook, will be conducted. Students will do speaking projects individually, in pairs and in groups.				
Characteristics of Class / Division in Learning					
<input checked="" type="checkbox"/> Active Learning		<input checked="" type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class <input type="checkbox"/> Instructor Professionally Experienced	
Course Plan					
			Theme	Goals	
2nd Semester	3rd Quarter	1st	Day 10 Review. (Days 6~9) / Speaking 4 Pair Interview.	Day 10, related speaking, listening, reading exercises./ Speaking 4.To be announced.	
		2nd	Day 11."Advertisements" / Speaking 4 (cont.)	Day 11, related speaking, listening, reading exercises. Speaking 4, preparation.	
		3rd	Day 12 "Magazines, Newspaper, Media / Speaking 4, Pair interviews.	Day 12, related speaking, listening, reading exercises / pair interviews.	
		4th	Day 13 "Negotiations and Contracts"	Day 13, related speaking, listening, reading exercises	
		5th	Day 14 "Finance, Accounting, Compensation"	Day 14, related speaking, listening, reading exercises	
		6th	Day 15 "Days 11~14 Review"	Day 15, related speaking, listening, reading exercises	
		7th	Test 3.	Days 11~15 test.	
		8th	Christmas movie. Writing 1. "Writing a movie report"	Christmas movie. Writing 1. "Writing a movie report"	



	4th Quarter	9th	Day 16 "Sales and Marketing"	Day 16, related speaking, listening, reading exercises,
		10th	Day 17 "Manufacture and Production"	Day 17, related speaking, listening, reading exercises,
		11th	Speaking 5, "Our Unicorn"	Speaking 5, Explanation and preparation
		12th	Speaking 5 (cont.) Presentations	Speaking 5 (cont.) Presentations
		13th	Day 18 "Merchandise"	18, related speaking, listening, reading exercises,
		14th	Day 19 "Repair, Maintenance, Problems" / Day 20 "Review, Days 16~19"	19, related speaking, listening, reading exercises, / 20, related speaking, listening, reading exercises,
		15th	Test 4.	Days 16~20 test.
		16th	results and consolidation.	results and consolidation.

#### Evaluation Method and Weight (%)

	Midterm	Final test	Homework	English Presentation/ Speaking Activities	word quizzes	Total
Subtotal	35	35	5	20	5	100
Reading	10	10	1	0	1	22
Listening	5	5	1	0	1	12
Grammar	10	10	1	2	1	24
Writing	10	10	1	3	1	25
Speaking	0	0	1	15	1	17

Toyama College		Year	2021		Course Title	Advanced English Workshop
Course Information						
Course Code	0009			Course Category	General / Elective	
Class Format	Lecture			Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course			Student Grade	Adv. 1st	
Term	First Semester			Classes per Week	2	
Textbook and/or Teaching Materials	Steps to Academic Presentations, Eihosha					
Instructor	Nishihara Masahiro					
Course Objectives						
1. To learn to write with an clear outline presentation abstracts and manuscripts in English. 2. To learn to create effective power point slides in English. 3. To learn to perform an effective presentation in English.						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
English abstracts and presentation manuscripts		Students are able to write with an clear outline presentation abstracts and manuscripts in English.	Students are able to write with an outline of a certain amount of clearness presentation abstracts and manuscripts in English.		Students are not able to write with an outline presentation abstracts and manuscripts in English.	
English power point slides		Students are able to create effective power point slides in English.	Students are able to create with a certain amount of effectiveness power point slides in English.		Students are not able to create any effective power point slides in English.	
Performing a presentation in English		Students are able to perform a presentation effectively in English.	Students are able to perform a presentation with a certain amount of effectiveness in English.		Students are not able to perform any effective presentation in English .	
Assigned Department Objectives						
ディプロマポリシー C-1 JABEE C1						
Teaching Method						
Outline	This course aims at helping students go through a series of processes in which English presentations are completed. It is important that students have such experience so that they will become independent in performing their own presentations in English in subsequent years.					
Style	Classes are conducted based on students' active engagements with the relevant tasks designated by the textbook. They are required to submit such things as abstracts, manuscripts, presentation slides each class. Grades are determined based on these assignments.					
Notice	Lap top computers will be needed to complete the abovementioned tasks in class.					
Characteristics of Class / Division in Learning						
<input checked="" type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme		Goals	
1st Semester	1st Quarter	1st	Unit 1: Academic presentaions		Writing up self-introduction, academic interests and academic pursuits	
		2nd	Unit 2: Presentations		Making explicit a topic, a reason, and expected learning about students' area of research	
		3rd	Unit 3: Abstracts		Writing a title, a researcher's information, background, question, method, results and conclusion	
		4th	Unit 4: Presentation manuscripts (1)		Writing an introduction to the manuscripts, including background, issues or gaps, and a purpose	
		5th	Unit 5: Presentation manuscripts (2)		Writing a body of the manuscript, including participants, methods, and results	
		6th	Unit 6: Presentation manuscripts (3)		Writing a conclusion for the manuscript	
		7th	Unit 7: Chunking		Practising chunking a manuscript and reproducing it based on the chunks	
		8th	Unit 8: Visuals (1)		Creating an effective power point slides in English	
	2nd Quarter	9th	Unit 8: Visuals (2)		Creating an effective power point slides in English	
		10th	Unit 9: Delivery and Pronunciation		Practising the pronunciation of difficult words, and refine the manuscript into a complete version	
		11th	Unit 10: Questions and answers (1)		Writing 'remembering questions' and 'understanding questions', and answering them	
		12th	Unit 11: Questions and answers (2)		Writing 'analyzing questions' and answering them	
		13th	Unit 12: Questions and answers (3)		Writing 'evaluating questions' and 'creating questions', and answering them	
		14th	Presentations		Performing a presentation, and questioning and answering	

		15th	Final assessment			Assessment based on the assignments	
		16th	Reflection			Reflection on the products and performance by students	
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	10	0	30	60	0	100
Basic Ability	0	0	0	10	10	0	20
Technical Ability	0	10	0	10	30	0	50
Interdisciplinary Ability	0	0	0	10	20	0	30

Toyama College		Year	2021		Course Title	Shock Compression and Blast Wave	
Course Information							
Course Code		0001		Course Category		Specialized / Elective	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		First Semester		Classes per Week		2	
Textbook and/or Teaching Materials		Materials will be prepared by the instructor.					
Instructor		Homae Tomotaka					
Course Objectives							
1. Reexplain of Impact phenomena, studied in Physics and/or strength of materials, from point of view of shock physics. Calculation of impact parameters. 2. Fundamental theory, analysis and application for shock compression of solids. Calculation of required parameters, such as shock pressure. 3. Understanding of effect around explosion of high energy materials, such as high explosives, and mitigation of damages by the explosion. Calculation of required parameters, such as scaled distance.							
Rubric							
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		Can explain phenomena clearly and obtain calculated results immediately.		Can explain phenomena and obtain calculated results.		Can not explain phenomena and can not obtain calculated results.	
Evaluation 2		Can explain phenomena clearly and obtain calculated results immediately.		Can explain phenomena and obtain calculated results.		Can not explain phenomena and can not obtain calculated results.	
Evaluation 3		Can explain phenomena clearly and obtain calculated results immediately.		Can explain phenomena and obtain calculated results.		Can not explain phenomena and can not obtain calculated results.	
Assigned Department Objectives							
ディプロマポリシー B-4 JABEE B4							
Teaching Method							
Outline		Shock phenomenon is unique, because it is single and high-speed phenomenon. As it can provide non-equilibrium and extremely high temperature and high pressure field relatively easily, shock phenomenon often apply to engineering. This lecture will start from fundamental impact phenomena, learned in fundamental physics and strength of materials classes. Then, fundamental theory, analysis and application for shock compression of solids, induced by hypervelocity impact, will be introduced. In latter part of this course, effect around explosion of high energy materials, such as high explosives, and mitigation of damages by the explosion will be discussed. As most of the materials are written in English, students can empirically learn how to read English materials.					
Style		The class consists of lecture, reading English materials, teaching each other, and solving exercises etc. Students are required to work on home work every week.					
Notice		A knowledge of college-level physics is a prerequisite for this lecture. [制御] B4, [JABEE基準1(2)] d(3) The recognition of credit requires 60 points or more rating.					
Characteristics of Class / Division in Learning							
<input checked="" type="checkbox"/> Active Learning		<input checked="" type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input checked="" type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	Orientation Fundamental impact phenomena I		Understanding of course structure, evaluation, learning method. Understanding of elastic and non-elastic collision.		
		2nd	Fundamental impact phenomena II		Understanding of strain energy and shock stress.		
		3rd	Fundamental impact phenomena III		Understanding of other issues related fundamental impact phenomena.		
		4th	Shock compression of solids by pypervelcoty impact		Understanding of shock compression of solids by pypervelcoty impact.		
		5th	One dimensional analysis of shock compressed solids I		Understanding of one dimensional analysis of shock compressed solids using conservation laws of mass, momentum, and energy.		
		6th	One dimensional analysis of shock compressed solids II		Application of theory, learned in 5th week, to realistic problem.		
		7th	Hugoniot compression curve		Understanding of relation between density and pressure od shock compressed solids.		
		8th	Impedance matching method		Analysis of shocked state by Hugoniot compression curve and impedance matching method.		
	2nd Quarter	9th	Typical experimental method of shock compression and its results		Understanding of typical experimental method of shock compression and its results.		
		10th	Explosion and type of explosives		Understanding of Explosion and type of explosives.		

		11th	Effect of blast waves and fragments around explosion	Understanding of effect and damage of blast waves and fragments around explosion.
		12th	Experimental method for evaluation of blast-wave effect	Understanding of experimental method for evaluation of blast-wave effect.
		13th	Mitigation of blast waves	Understanding of mitigation method for blast waves and damages.
		14th	Experimental method for evaluation of fragments	Understanding of experimental method for evaluation of high velocity fragments.
		15th	Final examination	Final examination.
		16th	Review of final examination	Review of final examination.

Evaluation Method and Weight (%)			
	Examination	Homework	Total
Subtotal	50	50	100
Basic Ability	0	0	0
Technical Ability	50	50	100

Toyama College		Year	2021	Course Title	Thesis Research I
Course Information					
Course Code	0002		Course Category	Specialized / Compulsory	
Class Format	Experiment / Practical training		Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st	
Term	First Semester		Classes per Week	2	
Textbook and/or Teaching Materials					
Instructor	Shina Toru,Akiguchi Shunsuke,Matoba Ryuichi,Oguma Hiroshi,Tsukada Akira,Ito Nao,Mizumoto Iwao,Aso Tsukasa,Yoshii Yotsumi,Furuyama Shoichi				
Course Objectives					
Following three elements are educated as encouraging abilities of a research and development. 1. Students can suggest, design and construct related systems such as software, hardware and network with considering a social background. 2. Students can solve problems by their fundamental and specific knowledge. 3. Students can present and discuss their research theme.					
Rubric					
	Ideal Level of Achievement	Standard Level of Achievement	Unacceptable Level of Achievement)		
(Research work 1) Backgrounds, purposes, methods, contents, results, discussion and future tasks are included.	All elements are included.	Acceptable contents.	Lacks of contents.		
(Research work 2) Expression of statement, figures and tabular.	Acceptable expression.	Almost acceptable expression.	Unacceptable and lack of expression.		
(Research work 3) The expression of backgrounds and purposes.	Acceptable expression.	Almost acceptable expression.	Unacceptable and lack of expression.		
(Research work 4) Methodology	Acceptable methodologies.	Almost acceptable methodologies.	Unacceptable methodologies.		
(Research work 5) Logical Structure	Reasonable logical structure.	Almost reasonable structure.	Not reasonable logical structure.		
(Research work 6) Critical Thinking	Reasonable discussion.	Almost reasonable discussion.	Unacceptable discussion.		
(Research work 7) Validity of results	Cleared and valid results are expressed.	Almost valid results are expressed.	Unacceptable results.		
(Research work 8) Future works	Valid future plan and schedule. Clear solutions are provided.	Acceptable plan and schedule.	Unacceptable plan.		
(Presentation 1) (1)Background (2)Purpose (3)Methodology (4) Contents (5) Result and Discussion	Reasonable structure.	Acceptable structure	Unacceptable structure		
(Presentation 2) Suitable expression of sentences and figures.	Reasonable sentences and figures.	Acceptable sentences and figures.	Unacceptable sentences and figures		
(Presentation 3) Logical structure	Reasonable logical structure	Almost reasonable structure	Not reasonable logical structure		
Assigned Department Objectives					
ディプロマポリシー C-3 JABEE C3					
Teaching Method					
Outline	For special research topics related to the same control information system through major departments 1 and 2 years, under the supervisor, acquire the method of literature survey, experimental / theoretical analysis method, evaluation method, and nurture research promotion ability. In line with each concrete theme, increase the comprehensive research capability through investigation and education of required knowledge necessary for application, application to problem solving, analysis and evaluation of the results obtained. We will summarize and present the research results we have worked on in Special Study I. [Control] C3 [JABEE Standard 1 (2)] (f) (g)				
Style	In each laboratory, conduct research under the guidance of the main deputy supervisor advisor. Classification method, multiple faculty charge method				
Notice	To undertake subjectively and systematically on issues under the supervisor. One chief examiner and two sub-investigators comprehensively evaluated the content of the thesis, the contents of the presentation and the status of activities based on the evaluation criteria table (total table instructions), with a paper evaluation of 50%, a presentation evaluation of 30%, an effort status of 20% , Pass score over 60 points.				
Characteristics of Class / Division in Learning					
<input checked="" type="checkbox"/> Active Learning	<input checked="" type="checkbox"/> Aided by ICT	<input checked="" type="checkbox"/> Applicable to Remote Class	<input type="checkbox"/> Instructor Professionally Experienced		
Course Plan					
		Theme	Goals		

1st Semester	1st Quarter	1st	Special Research	Determination of special research topics and academic advisors
		2nd	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		3rd	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		4th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		5th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		6th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		7th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		8th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
	2nd Quarter	9th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		10th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		11th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		12th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		13th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		14th	Special Research	Study in the field of specialization necessary for research subject (Survey, seminar, assignment setting, planning, implementation, report)
		15th	Mid term presentation	Review of studies / announcements by chief and sub-investigations
		16th	Score checked	

#### Evaluation Method and Weight (%)

	Chief and sub-investigators						Total
Subtotal	100	0	0	0	0	0	100
Research Paper	30	0	0	0	0	0	30
Presentation	50	0	0	0	0	0	50
Effort	20	0	0	0	0	0	20

Toyama College		Year	2021	Course Title	Thesis Research I
Course Information					
Course Code	0003		Course Category	Specialized / Compulsory	
Class Format	Experiment / Practical training		Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st	
Term	Second Semester		Classes per Week	2	
Textbook and/or Teaching Materials					
Instructor	Shina Toru,Akiguchi Shunsuke,Matoba Ryuichi,Oguma Hiroshi,Tsukada Akira,Ito Nao,Mizumoto Iwao,Aso Tsukasa,Yoshii Yotsumi,Furuyama Shoichi				
Course Objectives					
Following three elements are educated as encouraging abilities of a research and development. 1. Students can suggest, design and construct related systems such as software, hardware and network with considering a social background. 2. Students can solve problems by their fundamental and specific knowledge. 3. Students can present and discuss their research theme.					
Rubric					
	Ideal Level of Achievement	Standard Level of Achievement	Unacceptable Level of Achievement)		
(Research work 1) Backgrounds, purposes, methods, contents, results, discussion and future tasks are included.	All elements are included.	Acceptable contents.	Lacks of contents.		
(Research work 2) Expression of statement, figures and tabular.	Acceptable expression.	Almost acceptable expression.	Unacceptable and lack of expression.		
(Research work 3) The expression of backgrounds and purposes.	Acceptable expression.	Almost acceptable expression.	Unacceptable and lack of expression.		
(Research work 4) Methodology	Acceptable methodologies.	Almost acceptable methodologies.	Unacceptable methodologies.		
(Research work 5) Logical Structure	Reasonable logical structure.	Almost reasonable structure.	Not reasonable logical structure.		
(Research work 6) Critical Thinking	Reasonable discussion.	Almost reasonable discussion.	Unacceptable discussion.		
(Research work 7) Validity of results	Cleared and valid results are expressed.	Almost valid results are expressed.	Unacceptable results.		
(Research work 8) Future works	Valid future plan and schedule. Clear solutions are provided.	Acceptable plan and schedule.	Unacceptable plan.		
(Presentation 1) (1)Background	Reasonable structure.	Acceptable structure	Unacceptable structure		
(Presentation 2) Suitable expression of sentences and figures.	Reasonable sentences and figures.	Acceptable sentences and figures	Unacceptable sentences and figures		
(Presentation 3) Logical structure	Reasonable logical structure	Almost reasonable structure	Not reasonable logical structure		
Assigned Department Objectives					
ディプロマポリシー C-3 JABEE C3					
Teaching Method					
Outline	For special research topics related to the same control information system through major departments 1 and 2 years, under the supervisor, acquire the method of literature survey, experimental / theoretical analysis method, evaluation method, and nurture research promotion ability. In line with each concrete theme, increase the comprehensive research capability through investigation and education of required knowledge necessary for application, application to problem solving, analysis and evaluation of the results obtained. We will summarize and present the research results we have worked on in Special Study I. [Control] C3 [JABEE Standard 1 (2)] (f) (g)				
Style	In each laboratory, conduct research under the guidance of the main deputy supervisor advisor. Classification method, multiple faculty charge method				
Notice	To undertake subjectively and systematically on issues under the supervisor. One chief examiner and two sub-investigators comprehensively evaluated the content of the thesis, the contents of the presentation and the status of activities based on the evaluation criteria table (total table instructions), with a paper evaluation of 50%, a presentation evaluation of 30%, an effort status of 20% , Pass score over 60 points.				
Characteristics of Class / Division in Learning					
<input checked="" type="checkbox"/> Active Learning	<input checked="" type="checkbox"/> Aided by ICT	<input checked="" type="checkbox"/> Applicable to Remote Class	<input type="checkbox"/> Instructor Professionally Experienced		
Course Plan					
		Theme	Goals		



2nd Semester	3rd Quarter	1st	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		2nd	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		3rd	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		4th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		5th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		6th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		7th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		8th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
	4th Quarter	9th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		10th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		11th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		12th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		13th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		14th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		15th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
		16th	Special Research	Study in the field of specialization necessary for research subject (Survey, Planning, Implementation, System integration, testing, evaluation, report)
Evaluation Method and Weight (%)				
	Scoring by one supervisor and two sub-supervisor		Total	
Subtotal	100		100	
Report	30		30	
Presentation	50		50	
Effort	20		20	

Toyama College		Year	2021		Course Title	Advanced Communication Engineering	
Course Information							
Course Code		0004		Course Category		Specialized / Elective	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		First Semester		Classes per Week		2	
Textbook and/or Teaching Materials		ワイヤレス通信工学 オーム社					
Instructor		Oguma Hiroshi					
Course Objectives							
Through this course, understanding of the following will be facilitated. (1)Link budget design of wireless access (2)Fundamental technology for Wireless communication system (3)Fundamental technology for Broadcasting system							
Rubric							
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Link budget design		Clearly understands the link budget design of wireless access in detail.		Ability to explain the overview and concept of link budget design of wireless access.		Unable to explain the link budget design of wireless access.	
Wireless system		Clearly understands the technology (modulation, frequency, MIMO, etc) of cellular system, wireless LAN and wireless PAN in detail.		Ability to explain the overview and concept of cellular system, wireless LAN and wireless PAN.		Unable to explain the the technology of cellular system, wireless LAN and wireless PAN.	
Broadcasting system		Clearly understands the technology (modulation, frequency, OFDM, etc) of broadcasting system in detail.		Ability to explain the overview and concept of broadcasting system.		Unable to explain the the technology of broadcasting system.	
Assigned Department Objectives							
ディプロマポリシー B-2 JABEE B2							
Teaching Method							
Outline		Wireless networking is one of the foundational technologies in IoT. In this course, you will learn about the principles and fundamental techniques required for designing and implementing wireless network systems.					
Style		Student masters this course through lectures and seminar.					
Notice		The recognition of credit requires 60 points or more rating.					
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	Guidance		Guidance: Discuss the goals and structure of this course		
		2nd	Propagation modeling for wireless access		Learn the propagation modeling (free space equation and Okumura-Hata, etc.)for wireless access		
		3rd	Link budget design of wireless access		Learn the link budget design of wireless access		
		4th	Digital modulation and demodulation		Learn the digital modulation and demodulation technology.		
		5th	Channel fading		Learn the channel model with AWGN and various fading.		
		6th	Multiplexing		Learn the multiplexing and duplex technology for wireless network.		
		7th	Spread spectrum		Learn the spread spedtrum technology for wireless network and navigation satellite system.		
		8th	OFDM		Learn the OFDM(Orthogonal frequency division multiplexing ) technology for wireless network.		
	2nd Quarter	9th	MIMO		Learn the MIMO(Multi Input Multi Output) technology.		
		10th	Cellular system		Learn the cellular system.		
		11th	Wireless LAN		Learn the IEEE802.11 and standarization.		
		12th	Wireless PAN		Learn the IEEE802.15 and standarization.		
		13th	Beyond Wireless system		Learn the HetNet and 5G system.		
		14th	Broadcasting system		Learn the digital broadcasting technology.		
		15th	Final examination		Final examination.		
		16th	Summary		Summarize the study content and confirm grades.		
Evaluation Method and Weight (%)							

	Examination	Report	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	80	20	0	0	0	0	100
Basic Ability	10	0	0	0	0	0	10
Technical Ability	70	20	0	0	0	0	90
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Instrument and Control Programming	
Course Information							
Course Code	0005		Course Category		Specialized / Elective		
Class Format	Lecture		Credits		Academic Credit: 2		
Department	Control Information Systems Engineering Course		Student Grade		Adv. 1st		
Term	First Semester		Classes per Week		2		
Textbook and/or Teaching Materials							
Instructor	Mizumoto Iwao						
Course Objectives							
The lecture of purpose is design the electronics circuits for measurement, manufacturing of measurement system.							
Rubric							
	Ideal Level of Achievement		Standard Level of Achievement		Unacceptable Level of Achievement)		
Evaluation 1	Design of micro electrrcal circuits		discription of micro electronics circuit		non discription		
Evaluation 2	Design of oparational amplifier		discription of operational amplifier		non discription		
Evaluation 3	Design lock in amplifier		discription of lock in amplifier		non discription		
Assigned Department Objectives							
ディプロマポリシー B-2 JABEE B2							
Teaching Method							
Outline	The lecture of purpose is design the electronics circuits for measurement, manufacturing of measurement system.						
Style							
Notice							
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	Fundamental bias circuits		Fundamental bias circuits		
		2nd	Fundamental bias circuits		Fundamental bias circuits		
		3rd	Fundamental bias circuits		Fundamental bias circuits		
		4th	Fundamental bias circuits		Fundamental bias circuits		
		5th	Voltage Divider Transistor Biasing		Voltage Divider Transistor Biasing		
		6th	Voltage Divider Transistor Biasing		Voltage Divider Transistor Biasing		
		7th	Voltage Divider Transistor Biasing		Voltage Divider Transistor Biasing		
		8th	Fundamental of operational amplifier		Fundamental of operational amplifier		
	2nd Quarter	9th	Fundamental of operational amplifier		Fundamental of operational amplifier		
		10th	Fundamental of operational amplifier		Fundamental of operational amplifier		
		11th	Fundamental of operational amplifier		Fundamental of operational amplifier		
		12th	Design operational amplifier		Design perational amplifier		
		13th	Design operational amplifier		Design operational amplifier		
		14th	Design of Lock in amplifier		Design of Lock in plifier		
		15th	Assemble of Lock in amplifier		Assemble of Lock in plifier		
		16th	Assemble of Lock in amplifier		Assemble of Lock in amplifier		
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	200	0	0	0	0	0	200
Basic Ability	100	0	0	0	0	0	100
Technical Ability	50	0	0	0	0	0	50
Interdisciplinary Ability	50	0	0	0	0	0	50

Toyama College		Year	2021		Course Title	Quantum Electronics	
Course Information							
Course Code		0006		Course Category		Specialized / Elective	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		Second Semester		Classes per Week		2	
Textbook and/or Teaching Materials							
Instructor		Yoshii Yotsumi					
Course Objectives							
Through this course, understanding of the following will be facilitated.							
1. Electromagnetic theory and propagation of rays and beams.							
2. Interaction of radiation and atomic systems.							
3. Theory of laser oscillation and laser devices.							
4. Detection of optical radiation and properties of semiconductor photodiodes.							
5. Laser applications in sensors and communications.							
1.光の基本的な性質について説明できる。							
2.異なる媒質中での光の性質と光と物質の相互作用について説明できる。							
3.レーザの構造と動作原理を説明できる。							
4.受光素子の構造と動作原理を説明できる。							
5.光エレクトロニクスが応用されている装置について説明できる。							
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		Clearly understands properties of light		Ability to explain properties of light		Unable to explain properties of light	
評価項目2		Clearly understands interaction of radiation and atomic systems		Ability to explain interaction of radiation and atomic systems		Unable to explain interaction of radiation and atomic systems	
評価項目3		Clearly understands operating principles and the structure of diode lasers		Ability to explain operating principles and the structure of diode lasers		Unable to explain operating principles and the structure of diode lasers	
評価項目4		Clearly understands operating principles and the structure of photon detectors		Ability to explain operating principles and the structure of photon detectors		Unable to explain operating principles and the structure of photon detectors	
評価項目5		Clearly understands optoelectronics and laser application devices		Ability to explain optoelectronics and laser application devices		Unable to explain optoelectronics and laser application devices	
Assigned Department Objectives							
ディプロマポリシー B-2							
JABEE B2							
Teaching Method							
Outline		This course explores the fundamentals of optoelectronic phenomena and devices based on classical and quantum properties of radiation. Fundamentals include: Maxwell's electromagnetic waves, resonators and beams, classical ray optics and optical systems, quantum theory of light, matter and its interaction, lasers with continuous wave generation, semiconductor optoelectronics. Optoelectronics and laser applications are also introduced.					
Style		For the purpose of understanding quantum electronics, lectures and exercises facilitate the learning of principles and examples. MIT Open Courseware videos are also used.					
		1.Understanding Lasers and Fiberoptics					
		2.Demonstrations in Laser Fundamentals					
		3.Demonstrations in Physical Optics					
Notice							
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester	3rd Quarter	1st	Guidance ガイダンス イントロダクション		Guidance: Discuss the goals and structure of this course 量子（光）エレクトロニクスについて概説できる		
		2nd	Wave optics 波の基本的性質		Relation between wave optics and ray optics 波（光）の基本的な性質を説明できる		
		3rd	Electromagnetic theory of light 光と電磁波		Maxwell's equations and wave equation マクスウェル方程式から波動方程式を導出できる		
		4th	Polarized light 偏光		Polarization of light, reflection and refraction Polarization devices 偏光の基本的な性質を説明できる		
		5th	Optical wave guides and fibers 光導波路と光ファイバ		Propagation of optical beams in fibers 光導波路と光ファイバの原理を説明できる		
		6th	Lasers(1) レーザー光		Characteristics of the laser output レーザー光の性質を説明できる		

		7th	Lasers(2) レーザ光の発生（１）	Interactions of photon with atoms Laser amplifier 光と物質の相互作用とレーザ光の発生について説明できる
		8th	Lasers(3) レーザ光の発生（２）	Theory of laser oscillation Optical resonators 光共振器について説明できる
	4th Quarter	9th	Semiconductor photon sources(1) 発光素子の動作原理と特性（１）	Light emitting diodes Semiconductor laser amplifiers Structures of diode laser 半導体レーザの基本構造と動作原理を説明できる
		10th	Semiconductor photon sources(2) 発光素子の動作原理と特性（２）	Advanced semiconductor lasers: DFB, VECSEL, etc 特徴的な半導体レーザの原理について説明できる（FP型, DFB型）
		11th	Semiconductor photon sources(3) 発光素子の動作原理と特性（３）	Characteristics of diode laser 半導体レーザの特性について説明できる
		12th	Semiconductor photon detectors(1) 受光素子の動作原理と特性（１）	Theory of photodiodes and structure フォトダイオードの構造と動作原理を説明できる
		13th	Semiconductor photon detectors(2) 受光素子の動作原理と特性（２）	Characteristics of photodiode フォトダイオードの特性について説明できる
		14th	Optoelectronics and laser applications(1) 光エレクトロニクスの応用（１）	Optical disc drives 光ディスク装置について説明できる
		15th	Optoelectronics and laser applications(2) 光エレクトロニクスの応用（２）	Optical communications over optical fiber 光ファイバ通信方式について説明できる
		16th		

#### Evaluation Method and Weight (%)

	試験	発表	相互評価	態度	ポートフォリオ	その他	Total
Subtotal	80	0	0	0	20	0	100
基礎的能力	40	0	0	0	10	0	50
専門的能力	40	0	0	0	10	0	50
分野横断的能力	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Technical English	
Course Information							
Course Code		0010		Course Category		Specialized / Compulsory	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		Second Semester		Classes per Week		2	
Textbook and/or Teaching Materials		Although not specified, reference is made to Advanced Engineering Mathematics (John Willey & Sons. Inc.) and mechanical industrial English (Corona Company).					
Instructor		Moananu Charlton,Matoba Ryuichi,Yoshii Yotsumi,Nakatani Toshihiko,Kyoden Tomoaki					
Course Objectives							
You are going to read practical science and technology English sentences, accumulate experience of technical English composition and English presentation.							
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	
Evaluation item 1		You can express yourself with accurate English sentences and words.		Even if there is some mistake what you want to say can be expressed in English words and words.		You can not express yourself in English words and words.	
Evaluation item 2		You can express your idea effectively.		You can express your idea even if there is some error.		You can not express your own idea.	
Evaluation item 3		You can grasp the contents accurately by watching English videos about Technology.		By watching English videos on Technology, you can grasp the contents even if there are some errors.		You can not grasp the contents by watching English videos about Technology.	
Assigned Department Objectives							
ディプロマポリシー C-1 JABEE C1							
Teaching Method							
Outline		English, foreign languages, technical terms, grammar, contents concerning understanding of different cultures Each faculty member advances classes in an omnibus format.					
Style		Each faculty teacher conducts classes in a manner suitable for each field of responsibility. omnibus format.					
Notice		Each teacher in charge evaluates based on quizzes and submission tasks for each class of the omnibus method, and takes the arithmetic average and sets the final evaluation. More than 60 points are necessary to satisfy the evaluation criteria of JABEE.					
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester r	3rd Quarter	1st	Technical English Listening and Dictation -1		Listening with familiar video on science technology and its summary in Japanese		
		2nd	Technical English Listening and Dictation -2		Listening with familiar video on science technology and writing in English		
		3rd	Technical English Listening and Dictation -3		Corrected English and Japanese in easy-to-understand manner while comparing Japanese summary with English translation in English		
		4th	Technical English Listening and Dictation -4		Corrected English and Japanese in easy-to-understand manner while comparing Japanese summary with English translation in English		
		5th	Technical English Listening and Dictation -5		Corrected English and Japanese in easy-to-understand manner while comparing Japanese summary with English translation in English		
		6th	English expression in mathematics and physics -1		Professors will teach English expressions such as numbers, mathematical expressions and graphs that require accurate representation and interpretation in the field of science and technology, subjects in English mathematics primer and the like.		
		7th	English expression in mathematics and physics -2		Professors will teach English expressions such as numbers, mathematical expressions and graphs that require accurate representation and interpretation in the field of science and technology, subjects in English mathematics primer and the like.		
		8th	English expression in mathematics and physics -3		You learn about the fundamentals of science and technology expression in physics by comparing understanding content and its English expression with subjects of classical mechanics such as Newton's dynamics law which the student fully understands.		

	4th Quarter	9th	English expression in mathematics and physics -4	You learn about the fundamentals of science and technology expression in physics by comparing understanding content and its English expression with subjects of classical mechanics such as Newton's dynamics law which the student fully understands.
		10th	English expression in mathematics and physics -5	You learn about the fundamentals of science and technology expression in physics by comparing understanding content and its English expression with subjects of classical mechanics such as Newton's dynamics law which the student fully understands.
		11th	Effective Presentation	Introduce a method to transmit research contents in as simple English as possible
		12th	How to explain tables and graphs	How to explain tables and graphs in English etc. How to express in a research presentation
		13th	Research summary Slide creation	You drop my own research into one punch painting and present it in English
		14th	Presentation in English 4	You will further explain the presentation in English.
		15th	Presentation in English 5	You will further explain the presentation in English.
		16th	Comprehensive evaluation ・ Grading confirmation	We will evaluate according to the quizzes for each class of the omnibus method and the subjects to be submitted, so we will not conduct final exams.

#### Evaluation Method and Weight (%)

	試験	発表	相互評価	態度	ポートフォリオ	その他	Total
Subtotal	0	150	30	30	30	60	300
基礎的能力	0	50	10	10	10	20	100
専門的能力	0	50	10	10	10	20	100
分野横断的能力	0	50	10	10	10	20	100



Toyama College		Year	2021	Course Title	Advanced Business Strategy
Course Information					
Course Code	0011		Course Category	Specialized / Elective	
Class Format	Lecture		Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st	
Term	Second Semester		Classes per Week	2	
Textbook and/or Teaching Materials	Built to Last: Successful Habits of Visionary Companies, Nikkei BP				
Instructor	Miyashige Tetsuya				
Course Objectives					
Become to understand the theories of Business Strategy					
Rubric					
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)	
評価項目1		understood the theories of Business Strategy, and application to society	understood the theories of Business Strategy	Did not understand the theories of Business Strategy	
Assigned Department Objectives					
ディプロマポリシー A-2 JABEE A2					
Teaching Method					
Outline	understand the theories of Business Strategy, and application to society				
Style	Lectures led by both teacher and students Seminar-style discussion Presentations by students				
Notice					
Characteristics of Class / Division in Learning					
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class	
<input type="checkbox"/> Instructor Professionally Experienced					
Course Plan					
			Theme	Goals	
2nd Semester	3rd Quarter	1st	Course Orientation	Understanding of Course Structure	
		2nd	Corporate Goals	Understanding of Corporate Goals	
		3rd	Domains (1)	Understanding of Domains(1)	
		4th	Domains (2)	Understanding of Domains(2)	
		5th	Growth Strategy (1)	Understanding of Growth Strategy(1)	
		6th	Growth Strategy (2)	Understanding of Growth Strategy(2)	
		7th	Competitive Strategy (1)	Understanding of Competitive Strategy(1)	
		8th	Competitive Strategy (2)	Understanding of Competitive Strategy(2)	
	4th Quarter	9th	Competitive Strategy (3)	Understanding of Competitive Strategy(3)	
		10th	Business Organization (1)	Understanding of Business Organization(1)	
		11th	Business Organization (2)	Understanding of Business Organization(2)	
		12th	Business Management	Understanding of Business Management	
		13th	Corporate Culture	Understanding of Corporate Culture	
		14th	Business Ethics	Understanding of Business Ethics	
		15th	Final presentations and final paper	Final presentations and final paper	
		16th	Review of final paper	Review of final paper	
Evaluation Method and Weight (%)					
		Exam	Reports	Total	
Subtotal		50	50	100	
基礎的能力		50	50	100	
専門的能力		0	0	0	
分野横断的能力		0	0	0	

Toyama College		Year	2021	Course Title	Regional Industry
Course Information					
Course Code	0012		Course Category	Specialized / Elective	
Class Format	Lecture		Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st	
Term	Second Semester		Classes per Week	2	
Textbook and/or Teaching Materials					
Instructor					
Course Objectives					
Rubric					
	Ideal Level of Achievement		Standard Level of Achievement		Unacceptable Level of Achievement)
Report	Understanding and having an ability of explaining about 80% of the industrial structure and characteristics of each field within Toyama prefecture.		About 60% of the industrial structure and characteristics of each field within Toyama prefecture can be understood and explained.		Not to explain about 60% of the industrial structure and the characteristics of each field within Toyama prefecture.
Evaluation 2					
Evaluation 3					
Assigned Department Objectives					
ディプロマポリシー A-2 JABEE A2					
Teaching Method					
Outline	From the company engineer related to manufacturing in Toyama prefecture, learn about the relationship between industry and region and its technology, think about the structure of regional industry from a viewpoint related to each major, and analyze. Make an opportunity to think deeply about the position of expertise and industry, and use it for careers such as career advancement and career advancement and career design.				
Style	Invite lecturers from companies belonging to the electromechanical industry association in Toyama Prefecture to receive a lecture. The lecture is in an omnibus format, and submissions of reports about three times and factory tours about one time will be conducted.				
Notice	Try to touch social news such as reading newspaper on a daily basis and to be interested in current affairs. Submit a report summarizing the content and analysis of the regional industry, and evaluate the results mainly on the contents of the explanation. A credit rating of 60 points or more is required for unit credentials.				
Characteristics of Class / Division in Learning					
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class	<input type="checkbox"/> Instructor Professionally Experienced
Course Plan					
			Theme	Goals	
2nd Semester	3rd Quarter	1st	Outline of industry in Toyama Prefecture	It is possible to understand the characteristics of industries in Toyama prefecture, which outlines the industry in Toyama Prefecture	
		2nd	Introduction to aluminum industry (1)	Outline of aluminum industry in Toyama prefecture. I can understand the characteristics of the aluminum industry in Toyama Prefecture	
		3rd	Introduction to aluminum industry (2)	I will outline the aluminum industry in Toyama Prefecture. I can understand the characteristics of the aluminum industry in Toyama Prefecture	
		4th	Introduction to machine tools:	I can understand the characteristics of the machine tool industry in Toyama prefecture that outlines the machine tool industry in Toyama Prefecture	
		5th	Aluminum industry / machine tool Conclusion:	About the contents of learning I can understand and explain the characteristics of the aluminum industry / machine tool industry in Toyama prefecture that will investigate and group the industry with group work	
		6th	Introduction to electronic equipment (1)	I can understand the characteristics of the electronic parts industry in Toyama prefecture that outlines the electronic parts industry in Toyama prefecture	
		7th	Introduction to electronic equipment (2)	I can understand the characteristics of the electronic parts industry in Toyama prefecture that outlines the electronic parts industry in Toyama prefecture	
		8th	Introduction to Information industry (1)	Field work of companies in Toyama Prefecture.	
	4th Quarter	9th	Introduction to Information industry (2)	Field works of companies in Toyama Prefecture.	

		10th	Introduction to Information industry (3)	Understandings for outlines of information industry in Toyama prefecture.
		11th	Introduction to Information industry (4)	Understandings for outlines of information industry in Toyama prefecture.
		12th	Introduction to molds(1)	Understandings for the characteristics of the mold industry in Toyama prefecture.
		13th	Introduction to molds(2)	Understandings for the characteristics of the mold industry in Toyama prefecture.
		14th	Electronic parts / information industry / mold industry industry Summary: We survey and compile industry by group work on what we have learned so far	We can understand and explain the characteristics of Toyama prefecture's electronic parts, information industry and mold industry
		15th	conclusion	
		16th	Grading confirmation, question evaluation questionnaire	

#### Evaluation Method and Weight (%)

	report	Total
Subtotal	100	100
Presentation	100	100

Toyama College		Year	2021		Course Title	Management of Technology	
Course Information							
Course Code	0013			Course Category	Specialized / Elective		
Class Format	Lecture			Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course			Student Grade	Adv. 1st		
Term	First Semester			Classes per Week	2		
Textbook and/or Teaching Materials	Distribution						
Instructor	Kiyoshi Takeharu						
Course Objectives							
Understanding management and utilization of technology. Students can get engineering points of view and understanding of technology operations.							
Rubric							
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)		
Evaluation 1		Students can properly understand basic MOT.	Students can understand basic MOT.		Students cannot understand basic MOT.		
Evaluation 2		Students can properly explain about manufacturing process.	Students can explain about manufacturing process.		Students cannot explain about manufacturing process.		
Evaluation 3		Students can explain about practical business of manufacturing in detail.	Students can explain about practical business of manufacturing.		Students cannot explain about practical business of manufacturing.		
Assigned Department Objectives							
ディプロマポリシー A-2 JABEE A2							
Teaching Method							
Outline	The purpose of this class is to get engineering points of view and understanding technology operation for Department of International Business students. Our region has a lot of engineering manufacturing companies. Humanities students also have a chance to get a job in these areas. NIT has strong engineering knowledge as educational resources. This class is based on the resources.						
Style	This class uses active learning methods. Furthermore, students need to be able to work with a high level of independence.						
Notice	This class requires completion of assignments and preparing presentations for every session.						
Characteristics of Class / Division in Learning							
<input checked="" type="checkbox"/> Active Learning		<input checked="" type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input checked="" type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	Guidance.		Significance of the lecture		
		2nd	Background of MOT.		Understanding MOT 1		
		3rd	The uncertainty between management and technological development.		Understanding MOT 2		
		4th	The basic concept of innovation and knowledge creation.		Understanding MOT 3		
		5th	R&D management and market management.		Understanding MOT 4		
		6th	Understanding manufacturing flow.		Understanding for manufacturing 1		
		7th	Manufacturing technology.		Understanding for manufacturing 2		
		8th	Production management		Understanding for manufacturing 3		
	2nd Quarter	9th	Internationalization of manufacturing		Understanding for manufacturing 4		
		10th	Practice 1.		Practice: Production of prototypes		
		11th	Practice 2.		Practice: Production of prototypes		
		12th	Practice 3.		Practice: Production of prototypes		
		13th	Writing report.		Writing report.		
		14th	Preparing presentation.		Preparing presentation.		
		15th	Final presentation.		Final presentation.		
		16th	Evaluation.		Evaluation.		
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	100	0	0	0	0	100
Basic Ability	0	80	0	0	0	0	80
Technical Ability	0	20	0	0	0	0	20

Interdisciplinary Ability	0	0	0	0	0	0	0
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Toyama College		Year	2021		Course Title	Information Processing	
Course Information							
Course Code	0014		Course Category		Specialized / Elective		
Class Format	Lecture		Credits		Academic Credit: 2		
Department	Control Information Systems Engineering Course		Student Grade		Adv. 1st		
Term	First Semester		Classes per Week		2		
Textbook and/or Teaching Materials							
Instructor	Akiguchi Shunsuke						
Course Objectives							
Through this course, understanding of the following will be facilitated. 1. Data processing and analysis with Excel. 2. Creating macros using VBA. 3. Explanation about emotional information processing.							
Rubric							
	Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)		
Evaluation 1	Clearly understands the method of data processing and analysis using Excel in detail.		Ability to explain the overview and concept of data processing and analysis using Excel.		Unable to explain the method of data processing and analysis using Excel.		
Evaluation 2	Clearly understands the creation method of macro for VBA in detail.		Ability to explain the overview and concept of macro creation method by VBA.		Unable to explain the creation method of macro for VBA.		
Evaluation 3	Clearly understands the method of emotional information processing in detail.		Ability to explain the overview and concept of emotional information processing method.		Unable to explain the method of emotional information processing.		
Assigned Department Objectives							
ディプロマポリシー B-3 JABEE B3							
Teaching Method							
Outline	In this course, you will learn about the principles and fundamental techniques required for data processing and analysis. To understand data processing and analysis method, macro creation method and emotional information processing.						
Style	Student masters this course through lectures and seminar.						
Notice	The recognition of credit requires 60 points or more rating.						
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme	Goals			
1st Semester	1st Quarter	1st	Guidance	Guidance: Discuss the goals and structure of this course.			
		2nd	Information processing using computer -1-	Learn the data processing by Excel			
		3rd	Information processing using computer -1-	Learn the data analysis by Excel			
		4th	Information processing using computer -2-	Learn the programming method			
		5th	Information processing using computer -2-	Learn the programming method			
		6th	Information processing using computer -3-	Introduction for Excel macro			
		7th	Information processing using computer -3-	Create a macro using VBA			
		8th	Information processing using computer -3-	Create a macro using VBA			
	2nd Quarter	9th	Information processing using computer -3-	Create a macro using VBA			
		10th	Exercise	Exercise			
		11th	Emotional information processing method -1-	Introduction to the trends in the emotional information processing method.			
		12th	Emotional information processing method -2-	Learn about the details of the emotional information processing method.			
		13th	Emotional information processing method -3-	Learn about designing and implementing the emotional information processing method.			
		14th	Exercise	Exercise			
		15th	Final Examination	Final Examination			
		16th	Checking the Final Evaluation	Checking the Final Evaluation			
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	70	0	0	0	30	0	100
Basic Ability	0	0	0	0	0	0	0

Technical Ability	70	0	0	0	30	0	100
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Object-oriented Programing
Course Information						
Course Code	0015			Course Category	Specialized / Elective	
Class Format	Lecture			Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course			Student Grade	Adv. 1st	
Term	Second Semester			Classes per Week	2	
Textbook and/or Teaching Materials						
Instructor	Hayase Yoshikazu					
Course Objectives						
The lecture aims to understand the object-oriented basic concepts and analysis with UML.						
1. Understand the basic object-oriented concepts.						
2. Understand UML diagrams for object-oriented development.						
3. Understand for object-oriented analysis with UML.						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		Understand and can describe the basic object-oriented concepts correctly.	Understand and can describe the basic object-oriented concepts.		Does not understand the basic object-oriented concepts.	
Evaluation 2		Understand and can draw UML diagrams for object-oriented development correctly.	Understand and can draw UML diagrams for object-oriented development.		Does not understand UML diagrams for object-oriented development.	
Evaluation 3		Understand and can adapt can object-oriented analysis with UML correctly.	Understand and can adapt can object-oriented analysis with UML.		Does not understand object-oriented analysis with UML.	
Assigned Department Objectives						
ディプロマポリシー B-3						
JABEE B3						
Teaching Method						
Outline	Lecture on the basic object-oriented concepts. Perform exercises for object-oriented analysis with UML.					
Style	Lecture and exercise					
Notice	Require the score points of 60 or more to reach the evaluation standard of JABEE.					
Characteristics of Class / Division in Learning						
<input checked="" type="checkbox"/> Active Learning		<input checked="" type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme		Goals	
2nd Semester r	3rd Quarter	1st	Software Engineering Basics		Can describe the basic knowledge of the software development cycle.	
		2nd	Introduction to Object-Oriented Design		Can describe the basic knowledge of the Object-Oriented Design.	
		3rd	Classes basics		Can describe the basic knowledge of the Classes.	
		4th	Inheritance, Abstract Classes		Can describe Inheritance and Abstract Classes.	
		5th	Introduction to Object-Oriented Analysis		Can describe the basic knowledge of the Object-Oriented Analysis.	
		6th	Encapsulation, Information Hiding,Unit Testing		Can describe Encapsulation, Information Hiding, Unit Testing.	
		7th	Creation of Team Project		Can propose the tiny team project.	
		8th	Introduction to Design Patterns		Can describe the basic knowledge of the Design Patterns for the Object-Oriented.	
	4th Quarter	9th	Requirements Analysis with UML: The Use Case Diagram		Can describe a Use Case Diagram for a Requirements Analysis.	
		10th	Requirements Analysis with UML: The Class Diagram		Can describe a Class Diagram for a Requirements Analysis.	
		11th	Requirements Analysis with UML: The Sequence Diagram		Can describe a Sequence Diagram for a Requirements Analysis.	
		12th	Function model with UML: The Activity Diagram		Can describe an Activity Diagram for a Function model.	
		13th	Static model with UML: The Deployment Diagram		Can describe a Deployment Diagram for a Static model.	
		14th	Dynamic model with UML: The Communication Diagram		Can describe a Communication Diagram for a Dynamic model.	
		15th	Final Exam		Confirm the degree of understanding of the basic object-oriented concepts.	
		16th	Explanation of Final Exam		Explanation of answer example and returning the final exam.	
Evaluation Method and Weight (%)						



	Examination	Portfolio	Total
Subtotal	70	30	100
Basic Ability	60	20	80
Technical Ability	10	10	20

Toyama College		Year	2021		Course Title	Advanced Computational Engineering	
Course Information							
Course Code	0016			Course Category	Specialized / Elective		
Class Format	Lecture			Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course			Student Grade	Adv. 1st		
Term	Second Semester			Classes per Week	2		
Textbook and/or Teaching Materials	CG Simulation based on CIP method in Java						
Instructor	Furuyama Shoichi						
Course Objectives							
Rubric							
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)		
Advection Equation		Explanation for phenomena and difficulty of advection equation is explained.	Understanding of advection equation.		Lack of understanding of advection equation.		
Numerical Simulation for Advection Equation		Explaining of numerical diffusion and oscillation of advection equation and improved by CIP method.	Showing the numerical diffusion and oscillation.		Lack of understanding of simulation for advection equation.		
Application		Computational Fluid Dynamics (CFD) and Electro Magnetic Simulation (EMS) based on CIP method.	Some physics simulation based on CIP method.		Lack of understanding of numerical simulation.		
Assigned Department Objectives							
ディプロマポリシー B-3 JABEE B3							
Teaching Method							
Outline	To understand algorithms for derivative equations, differential equations, matrices. The programming techniques in C language and numerical simulation including a high speed calculation are studied.						
Style	Coding for numerical simulation is main task in each classes. The recognition of credit requires 60 points or more rating. If the final score is 60% or less, students can take ex-examination. The students whose score is more than 60% in ex-examination is 60%.						
Notice	Final examination (70%), Coding reports (30%)						
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester r	3rd Quarter	1st	Guidance. Advection Equation.		Introduction for Advection Equation.		
		2nd	Descritization for Advection Equation		1st order method (Upwind scheme)		
		3rd	Descritization for Advection Equation		2nd order method (Lax-Wendroff method)		
		4th	Descritization for Advection Equation		CIP method		
		5th	Descritization for Advection Equation		Programming for CIP method		
		6th	Higher accuracy		Higher accuracy scheme for CIP method		
		7th	Higher accuracy		Programming of Higher accuracy scheme for CIP method.		
		8th	Multi Dimension		Two dimensional CIP method		
	4th Quarter	9th	Multi Dimension		Programming for two dimensional CIP method		
		10th	Application for physics		Electro Magnetic Simulation (EMS)		
		11th	Application for physics		Computational Fluid Dynamics (CFD)		
		12th	Application for physics		Programming for CFD		
		13th	High Performance Computing (HPC)		HPC for numerical simulation		
		14th	High Performance Computing (HPC)		GPGPU calculation		
		15th	Final Examination		Final Examination		
		16th	Checking the Final Evaluation		Checking the Final Evaluation		
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	100	100	0	0	0	0	200
Basic Ability	40	40	0	0	0	0	80
Technical Ability	60	60	0	0	0	0	120

Interdisciplinary Ability	0	0	0	0	0	0	0
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Toyama College		Year	2021		Course Title	Intelligent Information Processing
Course Information						
Course Code	0017			Course Category	Specialized / Elective	
Class Format	Lecture			Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course			Student Grade	Adv. 1st	
Term	Second Semester			Classes per Week	2	
Textbook and/or Teaching Materials						
Instructor	Akiguchi Shunsuke					
Course Objectives						
Through this course, understanding of the following will be facilitated. ・The characteristics of Fuzzy logic, Genetic Algorithm, Reinforcement Learning and Neural Network						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		Clearly understands the overview of Fuzzy logic, and displays the ability to make an advanced program containing fuzzy logic.	Ability to explain the overview and concept of Fuzzy logic, and displays the ability to make a program containing fuzzy logic.		Unable to explain the overview and concept of Fuzzy logic.	
Evaluation 2		Clearly understands the overview of Genetic Algorithm, and displays the ability to make an advanced program containing Genetic Algorithm.	Ability to explain the overview and concept of Genetic Algorithm, and displays the ability to make a program containing Genetic Algorithm.		Unable to explain the overview and concept of Genetic Algorithm.	
Evaluation 3		Clearly understands the overview of Reinforcement Learning, and displays the ability to make an advanced program containing Reinforcement Learning.	Ability to explain the overview and concept of Reinforcement Learning, and displays the ability to make a program containing Reinforcement Learning.		Unable to explain the overview and concept of Reinforcement Learning.	
Evaluation 4		Clearly understands the overview of Neural Network, and displays the ability to make an advanced program containing Neural Network.	Ability to explain the overview and concept of Neural Network, and displays the ability to make a program containing Neural Network.		Unable to explain the overview and concept of Neural Network.	
Assigned Department Objectives						
ディプロマポリシー B-3 JABEE B3						
Teaching Method						
Outline	In this course, you will learn about the principles and fundamental techniques required for Soft Computing.To understand Fuzzy logic, Genetic Algorithm, Reinforcement Learning and Neural Network.					
Style	Student masters this course through lectures and seminar.					
Notice	The recognition of credit requires 60 points or more rating.					
Characteristics of Class / Division in Learning						
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme		Goals	
2nd Semester r	3rd Quarter	1st	Guidance		Guidance: Discuss the goals and structure of this course.	
		2nd	Soft Computing		Learn about the details of the Soft Computing.	
		3rd	Fuzzy logic -1-		Learn about the details of the Fuzzy logic.	
		4th	Fuzzy logic -2-		Learn about designing and implementing the Fuzzy logic.	
		5th	Exercise		Exercise	
		6th	Genetic Algorithm -1-		Learn about the details of the Genetic Algorithm.	
		7th	Genetic Algorithm -2-		Learn about designing and implementing the Genetic Algorithm.	
		8th	Exercise		Exercise	
	4th Quarter	9th	Reinforcement Learning -1-		Learn about the details of the Reinforcement Learning.	
		10th	Reinforcement Learning -2-		Learn about designing and implementing the Reinforcement Learning.	
		11th	Exercise		Exercise	
		12th	Neural Network -1-		Learn about the details of the Neural Network.	
		13th	Neural Network -2-		Learn about designing and implementing the Neural Network.	
		14th	Exercise		Exercise	
		15th	Final Examination		Final Examination	

		16th	Checking the Final Evaluation			Checking the Final Evaluation		
Evaluation Method and Weight (%)								
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total	
Subtotal	70	0	0	0	30	0	100	
Basic Ability	0	0	0	0	0	0	0	
Technical Ability	70	0	0	0	30	0	100	
Interdisciplinary Ability	0	0	0	0	0	0	0	

Toyama College		Year	2021		Course Title	Advanced Applied Mathematics
Course Information						
Course Code	0018		Course Category	Specialized / Compulsory		
Class Format	Lecture		Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st		
Term	First Semester		Classes per Week	2		
Textbook and/or Teaching Materials						
Instructor	Sakurai Hideto					
Course Objectives						
At the completion of this course, students will be able to 1) understand and carry out fundamental calculations on gamma function and beta function correctly. 2) understand and carry out fundamental calculations on Bessel function correctly. 3) understand and carry out fundamental calculations on Legendre function correctly.						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)		
Evaluation 1		Clearly understands, and is able to carry out fundamental calculations on gamma function and beta function.	Ability to understand and carry out fundamental calculations on gamma function and beta function.	Does not display understanding and is unable to carry out fundamental calculations on gamma function and beta function.		
Evaluation 2		Clearly understands, and is able to carry out fundamental calculations on Bessel function.	Ability to understand and carry out fundamental calculations on Bessel function.	Does not display understanding and is unable to carry out fundamental calculations on Bessel function.		
Evaluation 3		Clearly understands, and is able to carry out fundamental calculations on Legendre function.	Ability to understand and carry out fundamental calculations on Legendre function.	Does not display understanding and is unable to carry out fundamental calculations on Legendre function.		
Assigned Department Objectives						
ディプロマポリシー B-1 JABEE B1						
Teaching Method						
Outline	In this course, students will learn about the special functions, specifically: gamma function, beta function, Bessel function, and Legendre function. And, students will make basics calculations of special functions and basic applications to engineering and physics.					
Style	lectures and exercises					
Notice	This course uses mathematics learned in previous years. The recognition of credit requires 60 points or more rating.					
Characteristics of Class / Division in Learning						
<input type="checkbox"/> Active Learning		<input checked="" type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme	Goals		
1st Semester	1st Quarter	1st	Guidance	Guidance: Discuss the goals and structure of this course.		
		2nd	Basic Calculus -1-	Review the basic of differential and integral calculus.		
		3rd	Basic Calculus -2-	Review the basic of differential and integral calculus.		
		4th	Therory of function	Review the basic of the theory of a complex function.		
		5th	Series expansion	Review the basic of series expansion.		
		6th	Gamma function -1-	Learn the definition of the gamma function.		
		7th	Gamma function -2-	Learn the basic property of the gamma function.		
		8th	Beta function	Learn the definition and basic property of the beta function.		
	2nd Quarter	9th	Orthogonal functions	Learn the definition of the orthogonal function.		
		10th	Bessel function	Learn the definition and basic property of Bessel function.		
		11th	Legendre function -1-	Learn the definition of Legendre function.		
		12th	Legendre function -2-	Learn the basic property of Legendre function.		
		13th	Differential equations -1-	Learn the basic applications to differential equations.		
		14th	Differential equations -2-	Learn the basic applications to differential equations.		
		15th	Final examination	Final examination.		
		16th	Summary	Summarize the study content and confirm grades.		

Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	70	0	0	0	30	0	100
Basic Ability	70	0	0	0	30	0	100
Technical Ability	0	0	0	0	0	0	0
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Advanced Applied Physics	
Course Information							
Course Code		0019		Course Category		Specialized / Compulsory	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		First Semester		Classes per Week		2	
Textbook and/or Teaching Materials		reference : 「量子力学・統計力学入門」 星野公三・岩松雅夫 共著 (裳華房)					
Instructor		Ohtake Yukiko					
Course Objectives							
The course treats the basis of quantum mechanics and statistical mechanics. On completion of the course the student shall be able to: 1. calculate energy, wave function and existence probability of particles confined in potential wells by solving Schrödinger's equation. 2. calculate transmission and reflection probability of particle incident to step-wise potential barriers by solving Schrödinger's equation. 3. calculate entropy, temperature and pressure by using microcanonical ensemble. 4. calculate energy and pressure by using canonical ensemble.							
Rubric							
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		One can calculate energy, wave function and existence probability of particles confined in potential wells by solving Schrödinger's equation when the well walls have finite height.		One can calculate energy, wave function and existence probability of particles confined in potential wells by solving Schrödinger's equation when the well walls have infinite height.		One cannot calculate energy, wave function and existence probability of particles confined in potential wells by solving Schrödinger's equation.	
Evaluation 2		One can calculate transmission and reflection probability of particle incident to potential barriers of finite width by solving Schrödinger's equation.		One can calculate transmission and reflection probability of particle incident to step-wise potential barriers by solving Schrödinger's equation.		One cannot calculate transmission and reflection probability of particle incident to step-wise potential barriers by solving Schrödinger's equation.	
Evaluation 3		One can calculate entropy, temperature and pressure by using microcanonical ensemble in various cases.		One can calculate entropy, temperature and pressure by using microcanonical ensemble in the cases of free particles and harmonic oscillators.		One cannot calculate entropy, temperature and pressure by using microcanonical ensemble.	
Evaluation 4		One can calculate energy and pressure by using canonical ensemble in various cases.		One can calculate energy and pressure by using canonical ensemble in the cases of free particles and harmonic oscillators.		One cannot calculate energy and pressure by using canonical ensemble.	
Assigned Department Objectives							
ディプロマポリシー B-1 JABEE B1							
Teaching Method							
Outline		The course treats the basis of quantum mechanics and statistical mechanics which are essential to understand modern technology such as nanotechnology and cryogenic technology.					
Style		The schedule of this lecture might be slightly changed so that students can easily follow. Student masters this course through lectures and seminar.					
Notice		The final grade will be calculated according to the following process: reports(40%) and term-end examination(60%). The recognition of credit requires 60 points or more rating.					
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester r	1st Quarter	1st	Wave-particle duality		guidance, Compton scattering, photons, de Broglie waves, double-slit experiment		
		2nd	Framework of quantum mechanics 1		wave function, Hermitian operator, commutation relation, Schrödinger's equation		
		3rd	Framework of quantum mechanics 2		superposition principle, uncertainty principle		
		4th	Schrödinger's equation 1		particles confined in potential wells (lecture)		
		5th	Schrödinger's equation 2		particles confined in potential wells (seminar)		
		6th	Schrödinger's equation 3		particle incident to step-wise potential barriers (lecture)		
		7th	Schrödinger's equation 4		particle incident to step-wise potential barriers (seminar)		
		8th	Schrödinger's equation 5		particle incident to potential barriers of finite width, harmonic oscillator (lecture)		
	2nd Quarter	9th	Statistical mechanics 1		microcanonical ensemble (lecture)		



	10th	Statistical mechanics 2	microcanonical ensemble (seminar)
	11th	Statistical mechanics 3	canonical ensemble (lecture)
	12th	Statistical mechanics 4	canonical ensemble (seminar)
	13th	Statistical mechanics 5	grandcanonical ensemble (lecture)
	14th	Statistical mechanics 6	grandcanonical ensemble (seminar)
	15th	Term-end examination	
	16th	Checking the final grade	

#### Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	60	0	0	0	40	0	100
Basic Ability	60	0	0	0	40	0	100
Technical Ability	0	0	0	0	0	0	0
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Seminar on Mathematics and Physics Application	
Course Information							
Course Code		0020		Course Category		Specialized / Elective	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		Second Semester		Classes per Week		2	
Textbook and/or Teaching Materials							
Instructor		Ito Nao					
Course Objectives							
(1) To understand Fourier transform, Laplace transform and special functions that are related to Fourier transform and Laplace transform.							
(2) To understand how to solve physical problems using Fourier transform, Laplace transform and special functions.							
Rubric							
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		Can properly understand the definition and the nature of Fourier transform, Laplace transform and special functions, and can solve problems for application.		Can understand the definition and the nature of Fourier transform, Laplace transform and special functions, and can solve fundamental problems.		Cannot understand the definition and the nature of Fourier transform, Laplace transform and special functions, and cannot solve fundamental problems.	
Evaluation 2		Can properly use mathematical techniques for physical problems in engineering field, can solve problems for application.		Can use mathematical techniques for physical problems in engineering field, can solve fundamental problem		Cannot use mathematical techniques for physical problems in engineering field, cannot solve fundamental problems.	
Assigned Department Objectives							
ディプロマポリシー B-1 JABEE B1							
Teaching Method							
Outline		Mathematics and physics are important for acquiring technical knowledge of engineering. This course will focus on exercise for calculating equations of mathematics and physics.					
Style		In the mathematics part, students will learn about the definition and the nature of Fourier transform, Laplace transform and special functions through exercises. In the physics part, students will learn about classical mechanics, introduction to quantum mechanics and how to apply the mathematical knowledge to them.					
Notice		Instead of memorizing the mathematics and the physics knowledge, students are encouraged to study with focus on understanding the basic ways of thinking. Instead of being passive, students are expected to ask questions whenever they do not understand something. Because this course focuses on exercise, students should work on exercise each class in the way of self-learning. The recognition of credit requires 60 points or more rating.					
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester r	3rd Quarter	1st	Guidance and review for mathematics The lecture makes guidance about this course to students. Students review knowledge of mathematics that is needed for solving differential equations treated in this course.		Can solve differential equations treated in this course.		
		2nd	Fourier transform (1) Students learn the definition of Fourier series expansion and how to calculate them.		Can explain Fourier series expansion and calculate its fundamental problems.		
		3rd	Fourier transform (2) Students learn to solve partial differential equations using Fourier series.		Can solve partial differential equations using Fourier series.		
		4th	Fourier transform (3) Students learn the expansion from Fourier series to Fourier transform.		Can explain the expansion from Fourier series to Fourier transform.		
		5th	Fourier series and Riemann zeta function Students learn the definition of Riemann zeta function and how to calculate particular values of Riemann zeta function using Parseval's equation that is from Fourier series.		Can explain the definition of Riemann zeta function, and can calculate particular values of Riemann zeta function using Parseval's equation that is from Fourier series.		
		6th	Exercise Students work on exercises related to problems from contents so far.				
		7th	Laplace transform (1) Students learn the definition of Laplace transform as expansion from Fourier transform.		Can explain the definition of Laplace transform as expansion from Fourier transform.		
		8th	Laplace transform (2) Students learn how to calculate Laplace transform.		Can calculate Laplace transform for fundamental functions.		

	4th Quarter	9th	Laplace transform (3) Students learn Laplace inverse transform.	Can calculate Laplace inverse transform for fundamental functions.
		10th	Laplace transform (4) Students learn how to solve differential equations using Laplace transform.	Can solve differential equations using Laplace transform
		11th	Laplace transform (5) Students learn how to solve differential equations from problems of engineering field using Laplace transform.	Can solve differential equations from problems of engineering field using Laplace transform.
		12th	Laplace transform and Gamma function Students learn a formula of Gamma function described from Laplace transform, and how to calculate particular values of Gamma function.	Can explain the definition of Gamma function, and can calculate particular values of Gamma function.
		13th	Application of special functions to problems of physics Students learn to solve problems of physics using Riemann zeta function and Gamma function.	Can solve physics problems using Riemann zeta function and Gamma function.
		14th	Exercise Students work on exercises related to problems from Week 7 to Week 13.	
		15th	Exercise Students work on exercises related to problems from Week 7 to Week 13.	
		16th	Final Exam	

#### Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	70	0	0	0	30	0	100
Basic Ability	35	0	0	0	15	0	50
Technical Ability	35	0	0	0	15	0	50

Toyama College		Year	2021	Course Title	Advanced Experiments
Course Information					
Course Code	0021		Course Category	Specialized / Compulsory	
Class Format	Experiment / Practical training		Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st	
Term	First Semester		Classes per Week	2	
Textbook and/or Teaching Materials					
Instructor	Shina Toru,Akiguchi Shunsuke,Matoba Ryuichi,Oguma Hiroshi,Tsukada Akira,Ito Nao,Mizumoto Iwao,Aso Tsukasa,Yoshii Yotsumi,Furuyama Shoichi				
Course Objectives					
Through efforts to the task, you can understand the expertise and evaluation method concerning system construction. In addition, it can summarize and announce the acquired technical knowledge.					
Rubric					
	Ideal Level of Achievement		Standard Level of Achievement		Unacceptable Level of Achievement)
(Research 1) (1) Background, (2) Objectives, (3) Method / Means, (4) Contents, (5) Obtained Results and Discussion ・ Does the item include future prospects?	It is an item structure that is not excessive or insufficient and is extremely easy to understand.		It has a reasonable item composition.		There is a big deficiency in item composition.
(Research 2) Is sentence expression and chart display appropriate?	Is sentence expression and diagram display appropriate?		Texts and charts are properly expressed and displayed, but there are problems in some of them, but sentences and charts are generally expressed and displayed in a manner that is appropriate.		Many sentences and charts are inappropriate expressions and displays.
(Research 3) Is the background and purpose properly described?	The background and purpose are described in a very clear manner without excess or deficiency.		The background and purpose are properly described.		The background and purpose are not properly described.
(Research 4) Is the method / means appropriate?	The method / means used / applied is the optimal level.		Alternatively, it is appropriate and new.		The method / means used / applied is not appropriate.
(Research 5) Is logical development appropriate?	Very clearly, the logic is developed.		Although there are some problems, it is almost logically developed.		It is not logically deployed.
(Research 6) Are critical and rational thinking made use of?	Discussion that criticism and rational thought was fully utilized was described.		Critical, consideration based on rational thinking, etc. are described.		There is absolutely no consideration based on critical and rational thinking.
(Study 7) Is the result or the consideration on the way of progress reasonable?	Very clear, reasonable consideration, results have been drawn and described.		Reasonable consideration, results have been drawn and described.		There is no reasonable consideration, results.
(Research 8) Do you have a proposed research plan for the future and have concrete procedures reviewed? Also, are the problems and the like in planning done organized?	The research plan has been adequately studied, and problems in planning are pointed out, and reasonable reasons and solutions are clearly stated.		Research plans are being studied, and the paths and their problems in research execution are shown.		It is not a valid research plan.
(Presentation 1) (1) Background, (2) Objectives, (3) Method / Means, (4) Contents, (5) Results and Discussion Obtained ・ Items of the Future Perspective included?	There was no excess and deficiency, and it was an item structure which was extremely easy to understand.		It was a reasonable item composition.		There was a big deficiency in item composition.
(Presentation 2) Were the sentence expression of the media and the chart display proper?	Text and charts were expressed and displayed very easily.		Texts and charts were properly expressed and displayed, but there was a problem in some of them, but sentences and charts were almost properly expressed and displayed.		Many sentences and charts were inappropriate expressions and displays.
(Presentation 3) Was logical development of oral presentation reasonable?	Very clearly, the logic had been developed.		It was logically deployed.		
Assigned Department Objectives					
ディプロマポリシー C-2 JABEE C2					
Teaching Method					
Outline	Design ability to solve social needs by utilizing various science, technology and information, Ability to systematically work and systematically under the given constraints, Ability to work with teams With common constraints, individuals or teams can systematically promote PJs to realize and express creative systems				
Style	Students will be given tasks related to system construction, through experiments, solving issues and announcing the results of their work.				
Notice	Omnibus format				
Characteristics of Class / Division in Learning					

<input type="checkbox"/> Active Learning	<input type="checkbox"/> Aided by ICT	<input type="checkbox"/> Applicable to Remote Class	<input type="checkbox"/> Instructor Professionally Experienced
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## Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Natural Language Processing	Practice of analysis of grammar by computer (CKY method) By CKY method, syntactic analysis can be done if there is dictionary rule of Chomsky standard form.
		2nd	Natural Language Processing	By the exercise chart method of grammar analysis (chart method) by the computer, it is possible to parse if there is a dictionary rule.
		3rd	Natural Language Processing	You can write a procedure to program the CKY method and exercise CY and method of constructing parsing system by CKY method and chart method.
		4th	Natural Language Processing	Exercise in construction of syntactic analysis system by CKY method and chart method (Summary) The advantages of CKY method, chart method, disadvantages, calculation amount, etc. can be discussed.
		5th	System Design	Designed by PSoC PSoC devices and tools can be used.
		6th	System Design	PSoC design Analog block of PSoC device can be used.
		7th	System Design	Designed by PSoC Digital block of PSoC device can be used.
		8th	System Design	Designed by PSoC Microcomputer block of PSoC device can be used.
	2nd Quarter	9th	Learning Algorithms	You can explain the outline of Genetic Algorithm.
		10th	Learning Algorithms	Exercise in construction of Traveling Salesman Problem and Knapsack Problem by using Genetic Algorithm.
		11th	Learning Algorithms	You can present the result of Genetic Algorithm, and can discuss the advantages and disadvantages.
		12th	Numerical Method	OpenCV Foundation (Image Processing) Guidance on Image Processing and Pattern Recognition You can explain the outline of OpenCV.
		13th	Numerical Method	OpenCV foundation (image processing) OpenCV can be installed and basic image processing can be performed.
		14th	Numerical Method	OpenCV application (pattern recognition) It is possible to explain image analysis / pattern recognition by OpenCV.
		15th		
		16th		

## Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	100	0	0	0	0	100
Basic Ability	0	20	0	0	0	0	20
Technical Ability	0	80	0	0	0	0	80
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Advanced Experiments	
Course Information							
Course Code		0022		Course Category		Specialized / Compulsory	
Class Format		Experiment / Practical training		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		Second Semester		Classes per Week		2	
Textbook and/or Teaching Materials							
Instructor		Tsukada Akira,Ito Nao,Mizumoto Iwao,Aso Tsukasa,Yoshii Yotsumi					
Course Objectives							
Through challenges, it is possible to understand technical expertise and evaluation methods for the development of systems. And, it is possible to summarize and publish the acquired technical knowledge.							
Rubric							
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Have a design capability to solve the problem.		Utilizing science and technology and information, it is possible to respond to the demands of society with a wide perspective and advanced expertise.		Have specialized technologies that can meet the demands of society.		Do not have technology that meets the demands of society.	
Have the ability to perform the PJ.		The team or the person can systematically advance the PJ in the constraint and express the creative system and express it.		The team or the person can proceed with PJ systematically within the limits.		The team or the person cannot proceed systematically with PJ within the limits.	
The ability to resolve issues and publish the results of the efforts.		The background and purpose of the problem, including the trends in the relevant areas, can be understood and easily explained to others.		The background and purpose of the problem are almost understood, and it can be explained easily to the others.		Cannot understand the background or purpose of the problem, and cannot explain it easily to others.	
Assigned Department Objectives							
ディプロマポリシー C-2 JABEE C2							
Teaching Method							
Outline		Through the experiments, the expertise of electronics and information technology will be enhanced. We will also enhance our ability to build systems through our tasks.					
Style		Experiments are conducted on 5 themes.					
Notice		The credit approval requires more than 60 points.					
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester	3rd Quarter	1st	Deep learning programming 1		To be able to set up a development environment and execute a sample program for deep learning (recognition of handwritten numbers).		
		2nd	Deep learning programming 2		Set up a problem that can be solved by deep learning in a team, and create a learning program for it.		
		3rd	Deep learning programming 3		Improve the learning program and discuss the results obtained.		
		4th	Analysis of data analysis using statistical analysis method 1		The statistical analysis method can be explained.		
		5th	Analysis of data analysis using statistical analysis method 2		A statistical analysis method can be used to perform basic data analysis.		
		6th	Analysis of data analysis using statistical analysis method 3		The statistical analysis method can be used to analyze the application data.		
		7th	Hands-On Experience with IoT Devices 1		An IoT device can be explained.		
		8th	Hands-On Experience with IoT Devices 2		You can experiment with the basic features of an IoT device.		
	4th Quarter	9th	Hands-On Experience with IoT Devices 3		You can experiment with the application functionality of an IoT device.		
		10th	Phase sensitive amplifier training		The phase sensitive amplifier can be explained.		
		11th	Simulation of the simulation of signals buried in the noise		Signal detection in the noise is possible.		
		12th	Training of weak signal detection systems		Detection of a weak signal is possible.		
		13th	Data collection and analysis exercise of sensing device 1		The sensing device and the data collection can be explained.		
		14th	Data collection and analysis exercise of sensing device 2		The experiment of element technology concerning sensing devices and data collection can be carried out.		

		15th	Data collection and analysis exercise of sensing device 3			The sensing device and the data collection system can be constructed.	
		16th	Occasional date				
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	100	0	0	0	0	100
Basic Ability	0	0	0	0	0	0	0
Technical Ability	0	100	0	0	0	0	100
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College	Year	2021	Course Title	Advanced Seminars and Exercises
Course Information				
Course Code	0023	Course Category	Specialized / Compulsory	
Class Format	Seminar	Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course	Student Grade	Adv. 1st	
Term	First Semester	Classes per Week	2	
Textbook and/or Teaching Materials				
Instructor	Shina Toru,Akiguchi Shunsuke,Matoba Ryuichi,Oguma Hiroshi,Tsukada Akira,Ito Nao,Mizumoto Iwao,Aso Tsukasa,Yoshii Yotsumi,Furuyama Shoichi			
Course Objectives				
Through efforts to the task, you can understand the expertise and evaluation method concerning system construction. In addition, it can summarize and announce the acquired technical knowledge.				
Rubric				
	Ideal Level of Achievement	Standard Level of Achievement	Unacceptable Level of Achievement)	
(Research 1) (1) Background, (2) Objectives, (3) Method / Means, (4) Contents, (5) Obtained Results and Discussion ・ Does the item include future prospects?	It is an item structure that is not excessive or insufficient and is extremely easy to understand.	It has a reasonable item composition.	There is a big deficiency in item composition.	
(Research 2) Is sentence expression and chart display appropriate?	Is sentence expression and diagram display appropriate?	Texts and charts are properly expressed and displayed, but there are problems in some of them, but sentences and charts are generally expressed and displayed in a manner that is appropriate.	Many sentences and charts are inappropriate expressions and displays.	
(Research 3) Is the background and purpose properly described?	The background and purpose are described in a very clear manner without excess or deficiency.	The background and purpose are properly described.	The background and purpose are not properly described.	
(Research 4) Is the method / means appropriate?	The method / means used / applied is the optimal level.	Alternatively, it is appropriate and new.	The method / means used / applied is not appropriate.	
(Research 5) Is logical development appropriate?	Very clearly, the logic is developed.	Although there are some problems, it is almost logically developed.	It is not logically deployed.	
(Research 6) Are critical and rational thinking made use of?	Discussion that criticism and rational thought was fully utilized was described.	Critical, consideration based on rational thinking, etc. are described.	There is absolutely no consideration based on critical and rational thinking.	
(Study 7) Is the result or the consideration on the way of progress reasonable?	Very clear, reasonable consideration, results have been drawn and described.	Reasonable consideration, results have been drawn and described.	There is no reasonable consideration, results.	
(Research 8) Do you have a proposed research plan for the future and have concrete procedures reviewed? Also, are the problems and the like in planning done organized?	The research plan has been adequately studied, and problems in planning are pointed out, and reasonable reasons and solutions are clearly stated.	Research plans are being studied, and the paths and their problems in research execution are shown.	It is not a valid research plan.	
(Presentation 1) (1) Background, (2) Objectives, (3) Method / Means, (4) Contents, (5) Results and Discussion Obtained ・ Items of the Future Perspective included?	There was no excess and deficiency, and it was an item structure which was extremely easy to understand.	It was a reasonable item composition.	There was a big deficiency in item composition.	
(Presentation 2) Were the sentence expression of the media and the chart display proper?	Text and charts were expressed and displayed very easily.	Texts and charts were properly expressed and displayed, but there was a problem in some of them, but sentences and charts were almost properly expressed and displayed.	Many sentences and charts were inappropriate expressions and displays.	
(Presentation 3) Was logical development of oral presentation reasonable?	Very clearly, the logic had been developed.	It was logically deployed.		
Assigned Department Objectives				
ディプロマポリシー C-2 JABEE C2				
Teaching Method				
Outline	Design ability to solve social needs by utilizing various science, technology and information, Ability to systematically work and systematically under the given constraints, Ability to work with teams With common constraints, individuals or teams can systematically promote PJs to realize and express creative systems			
Style	Students will be given tasks related to system construction, through experiments, solving issues and announcing the results of their work.			
Notice	Omnibus format			
Characteristics of Class / Division in Learning				



<input type="checkbox"/> Active Learning	<input type="checkbox"/> Aided by ICT	<input type="checkbox"/> Applicable to Remote Class	<input type="checkbox"/> Instructor Professionally Experienced
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## Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Natural Language Processing	Practice of analysis of grammar by computer (CKY method) By CKY method, syntactic analysis can be done if there is dictionary rule of Chomsky standard form.
		2nd	Natural Language Processing	By the exercise chart method of grammar analysis (chart method) by the computer, it is possible to parse if there is a dictionary rule.
		3rd	Natural Language Processing	You can write a procedure to program the CKY method and exercise CY and method of constructing parsing system by CKY method and chart method.
		4th	Natural Language Processing	Exercise in construction of syntactic analysis system by CKY method and chart method (Summary) The advantages of CKY method, chart method, disadvantages, calculation amount, etc. can be discussed.
		5th	System Design	Designed by PSoC PSoC devices and tools can be used.
		6th	System Design	PSoC design Analog block of PSoC device can be used.
		7th	System Design	Designed by PSoC Digital block of PSoC device can be used.
		8th	System Design	Designed by PSoC Microcomputer block of PSoC device can be used.
	2nd Quarter	9th	Learning Algorithms	You can explain the outline of Genetic Algorithm.
		10th	Learning Algorithms	Exercise in construction of Traveling Salesman Problem and Knapsack Problem by using Genetic Algorithm.
		11th	Learning Algorithms	You can present the result of Genetic Algorithm, and can discuss the advantages and disadvantages.
		12th	Numerical Method	OpenCV Foundation (Image Processing) Guidance on Image Processing and Pattern Recognition You can explain the outline of OpenCV.
		13th	Numerical Method	OpenCV foundation (image processing) OpenCV can be installed and basic image processing can be performed.
		14th	Numerical Method	OpenCV application (pattern recognition) It is possible to explain image analysis / pattern recognition by OpenCV.
		15th		
		16th		

## Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	100	0	0	0	0	100
Basic Ability	0	20	0	0	0	0	20
Technical Ability	0	80	0	0	0	0	80
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Advanced Seminars and Exercises
Course Information						
Course Code	0024		Course Category	Specialized / Compulsory		
Class Format	Seminar		Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st		
Term	Second Semester		Classes per Week	2		
Textbook and/or Teaching Materials						
Instructor	Tsukada Akira,Ito Nao,Mizumoto Iwao,Aso Tsukasa,Yoshii Yotsumi					
Course Objectives						
Through challenges, it is possible to understand technical expertise and evaluation methods for the development of systems. And, it is possible to summarize and publish the acquired technical knowledge.						
Rubric						
	Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Have a design capability to solve the problem.	Utilizing science and technology and information, it is possible to respond to the demands of society with a wide perspective and advanced expertise.		Have specialized technologies that can meet the demands of society.		Do not have technology that meets the demands of society.	
Have the ability to perform the PJ.	The team or the person can systematically advance the PJ in the constraint and express the creative system and express it.		The team or the person can proceed with PJ systematically within the limits.		The team or the person cannot proceed systematically with PJ within the limits.	
The ability to resolve issues and publish the results of the efforts.	The background and purpose of the problem, including the trends in the relevant areas, can be understood and easily explained to others.		The background and purpose of the problem are almost understood, and it can be explained easily to the others.		Cannot understand the background or purpose of the problem, and cannot explain it easily to others.	
Assigned Department Objectives						
ディプロマポリシー C-2 JABEE C2						
Teaching Method						
Outline	Through the experiments, the expertise of electronics and information technology will be enhanced. We will also enhance our ability to build systems through our tasks.					
Style	Experiments are conducted on 5 themes.					
Notice	The credit approval requires more than 60 points.					
Characteristics of Class / Division in Learning						
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme		Goals	
2nd Semester	3rd Quarter	1st	Deep learning programming 1		To be able to set up a development environment and execute a sample program for deep learning (recognition of handwritten numbers).	
		2nd	Deep learning programming 2		Set up a problem that can be solved by deep learning in a team, and create a learning program for it.	
		3rd	Deep learning programming 3		Improve the learning program and discuss the results obtained.	
		4th	Analysis of data analysis using statistical analysis method 1		The statistical analysis method can be explained.	
		5th	Analysis of data analysis using statistical analysis method 2		A statistical analysis method can be used to perform basic data analysis.	
		6th	Analysis of data analysis using statistical analysis method 3		The statistical analysis method can be used to analyze the application data.	
		7th	Hands-On Experience with IoT Devices 1		An IoT device can be explained.	
		8th	Hands-On Experience with IoT Devices 2		You can experiment with the basic features of an IoT device.	
	4th Quarter	9th	Hands-On Experience with IoT Devices 3		You can experiment with the application functionality of an IoT device.	
		10th	Phase sensitive amplifier training		The phase sensitive amplifier can be explained.	
		11th	Simulation of the simulation of signals buried in the noise		Signal detection in the noise is possible.	
		12th	Training of weak signal detection systems		Detection of a weak signal is possible.	
		13th	Data collection and analysis exercise of sensing device 1		The sensing device and the data collection can be explained.	
		14th	Data collection and analysis exercise of sensing device 2		The experiment of element technology concerning sensing devices and data collection can be carried out.	

		15th	Data collection and analysis exercise of sensing device 3			The sensing device and the data collection system can be constructed.	
		16th	Occasional date				
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	100	0	0	0	0	100
Basic Ability	0	0	0	0	0	0	0
Technical Ability	0	100	0	0	0	0	100
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021	Course Title	Internship B
Course Information					
Course Code	0025		Course Category	Specialized / Elective	
Class Format	Experiment / Practical training		Credits	Academic Credit: 3	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 1st	
Term	First Semester		Classes per Week	3	
Textbook and/or Teaching Materials					
Instructor	Furuyama Shoichi,Hsegawa Hiroshi,Kyoden Tomoaki				
Course Objectives					
(Learning education goal) A1, A2, D1, E2 (Evaluation criteria) a, b, f, g As an engineer in control engineering and information engineering, acquire the ability to keep capturing phenomena from an international perspective (a, g ), A goal is to judge not only from the home country but from the viewpoint friendly to the earth (b), (f) to cultivate the ability to explain. For that purpose, we will conduct overseas language training / visit related companies for about a month.					
Rubric					
	Ideal Level of Achievement		Standard Level of Achievement	Unacceptable Level of Achievement)	
Understanding International Cultures	Enough understandings with communication at foreign countries.		Understandings to international culture.	Not understandings to international culture.	
Evaluation 2					
Evaluation 3					
Assigned Department Objectives					
ディプロマポリシー B-5 JABEE B5					
Teaching Method					
Outline	<ul style="list-style-type: none"> <li>· Explain solutions to specific international issues including control engineering and information engineering. (a, g)</li> <li>· Explain specific international issues including control engineering and information engineering from an ethical point of view. (b, f)</li> </ul>				
Style	How to proceed and contents of lessons · Method: Comprehensively based on the presentation (about 70%) and the report (about 30%).				
Notice	important point: We observe the regulations of the institution of training and pay attention to incidents and accidents during training				
Characteristics of Class / Division in Learning					
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class	
				<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan					
			Theme	Goals	
1st Semester	1st Quarter	1st	Briefing session	In addition to explaining the purpose and significance of overseas internships, we will inform about the status of implementation in the previous fiscal year, attention points for participation, etc.	
		2nd	Preparing session	We prepare an application form, a pledge form etc according to the preparation form two weeks and let me submit it by the deadline.	
		3rd	Traveling	When traveling overseas for 3 weeks, experience the procedure and connection at the direction of the outgoing school teacher in traveling abroad.	
		4th	internship	Participate in internships at universities and their affiliated companies. Understand different cultures based on experience through staying locally and living during the period.	
		5th	Reporting	After the report of 5 weeks, prepare a report and submit it. Present at the internship meeting.	
		6th			
		7th			
		8th			
	2nd Quarter	9th			
		10th			
		11th			
		12th			
		13th			
		14th			
		15th			
		16th			
Evaluation Method and Weight (%)					

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	100	0	0	0	0	100
Basic Ability	0	40	0	0	0	0	40
Technical Ability	0	40	0	0	0	0	40
Interdisciplinary Ability	0	20	0	0	0	0	20

Toyama College		Year	2021		Course Title	Internship A	
Course Information							
Course Code		0026		Course Category		Specialized / Elective	
Class Format		Experiment / Practical training		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 1st	
Term		First Semester		Classes per Week		2	
Textbook and/or Teaching Materials		internship implementation requirements					
Instructor		Yoshii Yotsumi,Hsegawa Hiroshi					
Course Objectives							
As an engineer, we aim to acquire the ability to continuously capture events from an international perspective, to cultivate the ability to judge and explain not only from home country but also from earthly friendly perspective. For that purpose, we conduct Japanese company training for more than two weeks.							
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		Through participation in practical training at the training company, it was enough to grasp, judge and explain the events from an international perspective.		Through participation in practical training at the company to be trained, we were able to grasp, judge and explain the events from an international perspective.		I could not grasp, judge and explain the events from an international perspective.	
Assigned Department Objectives							
ディプロマポリシー B-5 JABEE B5							
Teaching Method							
Outline		・ Explain the solution to specific international issues including control engineering and information engineering relations (a, g) x000D_					
		・ Explain specific international issues including control engineering and information engineering from an ethical point of view. (b, f)					
Style		Evaluate by presentation and report.					
Notice							
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	Determining the Internship Destination		Students who wish to take a class are consulted with their host institution, approved by the homeroom teacher, applied for in the application form, and obtained permission.		
		2nd	Preparation		Be sure to join student educational research disaster insurance (internship course).		
		3rd	Preparation		Submit an internship application form and designated pledge to the homeroom teacher.		
		4th	During the internship period		Students engage in internship work and prepare daily business records in a predetermined format. Also, obtain findings from the work instruction supervisor.		
		5th	After the internship is over		At the end of the internship work, prepare a report. And submit it to your teacher.		
		6th					
		7th					
		8th					
	2nd Quarter	9th					
		10th					
		11th					
		12th					
		13th					
		14th					
		15th					
		16th					
Evaluation Method and Weight (%)							
	試験	発表	相互評価	態度	ポートフォリオ	その他	Total
Subtotal	0	50	0	0	50	0	100
基礎的能力	0	50	0	0	50	0	100
専門的能力	0	0	0	0	0	0	0
分野横断的能力	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Japanese Language and Literature	
Course Information							
Course Code		0035		Course Category		General / Elective	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 2nd	
Term		Second Semester		Classes per Week		2	
Textbook and/or Teaching Materials		プリントを配布する					
Instructor		Kondo Shugo,Kubo Yoko					
Course Objectives							
学習教育目標D1 JABEE基準1（1）d, e, f 独創とは何か？ 模倣との違いは？ この講義では、主として日本近代文学を題材としながら、広く文学および文化理解の基礎を構築する。自国の文化を深く理解すると同時に、異文化理解の助けとする。（d）最先端の文化理論を参照することで、先行する技術や情報を再編しながら独創的な成果を産み出すためのノウハウ・ドウハウを学ぶ。（e）口頭発表の機会を設け、プレゼンテーションの技能を習得する。平時のミニ・レポートや最終時のレポートにより、論理的な記述力も身につける。（f）							
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		先行技術・情報を再編する原理を深く理解でき、活用できる。		先行技術・情報を再編する原理が理解できる。		先行技術・情報を再編する原理が理解できない。	
評価項目2		自ら調査した結果を効果的な方法で発表できる。		自ら調査した結果を発表できる。		自ら調査した結果を発表できない。	
評価項目3		日本の文学や文化について深く理解し、外国人と意見交換できるレベルに到達する。		日本の文学や文化について理解し、外国人と意見交換できる素地がある。		日本の文学や文化について理解できず、外国人と意見交換できるレベルにない。	
Assigned Department Objectives							
ディプロマポリシー A-1 JABEE A1							
Teaching Method							
Outline		学習教育目標D1 JABEE基準1（1）d, e, f 独創とは何か？ 模倣との違いは？ この講義では、主として日本近代文学を題材としながら、広く文学および文化理解の基礎を構築する。自国の文化を深く理解すると同時に、異文化理解の助けとする。（d）最先端の文化理論を参照することで、先行する技術や情報を再編しながら独創的な成果を産み出すためのノウハウ・ドウハウを学ぶ。（e）口頭発表の機会を設け、プレゼンテーションの技能を習得する。平時のミニ・レポートや最終時のレポートにより、論理的な記述力も身につける。（f）					
Style		講義形式で行うが、途中で受講者によるミニ発表を挿む。また、毎時ミニ・レポートを課す。					
Notice		「読む・書く・話す・聞く」のいわゆる4技能を重視するので、積極的な授業参加を心がけてほしい。The recognition of credit requires 60 points or more rating. 単位認定には、60点以上の評価が必要です。					
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester	3rd Quarter	1st	オリエンテーションOrientation		授業内容の概要を理解する。		
		2nd	文化理論概説1 Curutural Theory		間テキスト性Intertextuality理論の概略を理解する。		
		3rd	文化理論概説2 Curutural Theory		間テキスト性Intertextuality理論の概略を理解する。		
		4th	文化理論概説3 Curutural Theory		間テキスト性Intertextuality理論の概略を理解する。		
		5th	近代文学研究1 Modern Japanese Literature Studies ～江戸川乱歩「押絵と旅する男」論1～		江戸川乱歩「押絵と旅する男」の冒頭、風景描写に着目し、小説の基本的知識を身に付ける。		
		6th	近代文学研究2 Modern Japanese Literature Studies ～江戸川乱歩「押絵と旅する男」論2～		江戸川乱歩「押絵と旅する男」の色彩、天気、汽車に着目し、小説の基本的知識を身に付ける。		
		7th	近代文学研究3 Modern Japanese Literature Studies ～江戸川乱歩「押絵と旅する男」論3～		江戸川乱歩「押絵と旅する男」における「八百屋お七」の引用について、間テキスト性の効果を考察する。		
		8th	近代文学研究4 Contemporary Japanese literature Studies ～山内マリコ「あのこは貴族」論1～		山内マリコ「あのこは貴族」における小説と映画のアダプテーションについて考察するとともに、映画表現の基本的な知識を身に付ける。		
	4th Quarter	9th	近代文学研究5 Contemporary Japanese literature Studies ～山内マリコ「あのこは貴族」論2～		山内マリコ「あのこは貴族」における小説と映画のアダプテーションについて考察するとともに、映画表現の基本的な知識を身に付ける。		
		10th	近代文学研究6 Contemporary Japanese literature Studies ～山内マリコ「あのこは貴族」論3～		山内マリコ「あのこは貴族」における小説と映画のアダプテーションについて考察するとともに、映画表現の基本的な知識を身に付ける。		
		11th	近代文学研究7 Contemporary Japanese literature Studies ～宝塚「ベルサイユのばら」論1～		宝塚「ベルサイユのばら」におけるまんがから演劇へのアダプテーションについて考察するとともに、演劇表現の基本的な知識を身に付ける。		
		12th	近代文学研究8 Contemporary Japanese literature Studies ～宝塚「ベルサイユのばら」論2～		宝塚「ベルサイユのばら」におけるまんがから演劇へのアダプテーションについて考察するとともに、演劇表現の基本的な知識を身に付ける。		

		13th	近代文学研究 9 Contemporary Japanese literature Studies ～宝塚「ベルサイユのばら」論 3～	宝塚「ベルサイユのばら」におけるまんがから演劇へのアダプテーションについて考察するとともに、演劇表現の基本的な知識を身に付ける。
		14th	間テキスト性について、受講者が発表する。	小説、まんが、アニメ、CM、ポスター、音楽といった様々なジャンルにおける間テキスト性もしくはアダプテーションについて、受講者が例示し、それぞれの作品の考察を発表する。
		15th	レポート作成 Report Writing	論理的なレポートを作成する。
		16th	復習	これまでの学習の定着度を確認する。

#### Evaluation Method and Weight (%)

	試験	発表	相互評価	態度	ポートフォリオ	その他	Total
Subtotal	0	25	0	0	0	75	100
基礎的能力	0	25	0	0	0	25	50
専門的能力	0	0	0	0	0	25	25
分野横断的能力	0	0	0	0	0	25	25



Toyama College		Year	2021		Course Title	Regional Studies	
Course Information							
Course Code		0037		Course Category		General / Elective	
Class Format		Lecture		Credits		Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade		Adv. 2nd	
Term		First Semester		Classes per Week		2	
Textbook and/or Teaching Materials		使用しない					
Instructor		Yokota Kazuhiro					
Course Objectives							
産業論の基礎を学ぶとともに、北陸地域の実状を把握することに努める。特産物や地場産業や特色ある観光資源など、地域的特性を事実として、みずからの目や耳を通して、客観的に把握することをめざしていく。							
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		現代の産業に関する基礎知識を習得した上で、今後の日本経済の展望を自分なりに描くことができる。		現代の産業に関する基礎知識を習得している。		現代の産業に関する基礎知識を習得することができない。	
評価項目2		富山県や北陸地域の地域事情を把握した上で、今後の展望を自分なりに描くことができる。		富山県や北陸地域の地域事情を把握している。		富山県や北陸地域の地域事情を把握することができない。	
評価項目3							
Assigned Department Objectives							
ディプロマポリシー A-1 JABEE A1							
Teaching Method							
Outline		(学習教育目標) A1 (評価基準) a 産業論の基礎・基本を学ぶこと、近現代以降の北陸地域の態様変化を追究することをねらいとした科目である。経済活動は、まさにグローバル化してきている。その大きな動きのなかで、地域社会は如何に変化してきたのか、また、今後どのように変化していくのかを理論的・歴史的に検討してみたい。(a)					
Style		教員単独で実施による講義形式を中心とするが、演習や地域巡検も実施する。授業時間中に学生発表も行う。地域巡検については、授業時間外に別途実施する予定である(半日)。また、地元紙(北日本・富山・北陸中日)、地元経済誌(北陸経済研究・北國TODAY)、全国週刊経済誌なども学生に分担してレビューしてもらう。授業の詳細(内容・計画)は受講生と相談の上、最終的に決定する(シラバスの変更も行う)。					
Notice		[授業改善策] ①産業論の講義を中心とするが、みずからの五感で具体的事実を把握・理解できるよう、授業時に配慮したい。実地調査(巡検)を授業時及び授業外(休日に設定する)に行い、座学で得た知識を「応用」したいと考えている。 ②「近未来の職業選択」に役立つよう、授業時に配慮するつもりである。近在の大学などでの文献調査だけでなく、地元企業や特定地域を対象とするフィールドワーク(実地調査)を実施するのはそのためである。こういった「頭と身体を同時に動かす」作業を通して、地域社会の姿を浮き彫りにしていきたい。					
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	はじめに		・ガイダンス ・地域を産業の視点で学んでいく意義 ・地域を客観的・相対的に把握することの意味		
		2nd	●実地調査(1)		射水市海老江地区・堀岡地区・下村地区の巡検		
		3rd	産業論の基礎(1)		①産業構造・産業構成の基本理論 ②第1次産業(農林水産業)		
		4th	産業論の基礎(2)		③第2次産業(加工業) ④第3次産業(サービス業)		
		5th	●実地調査(2)		射水市新湊中心市街地の巡検		
		6th	北陸の地域特性(1)		・北陸地域を地理的歴史的に概観(自然地理的特性・人文的特徴) ・視点としての環日本海		
		7th	北陸の地域特性(2)		・地域間交流と北前船 ・能登地域との比較		
		8th	●実地調査(3)		南砺地域市街地(福光・城端・福野・井波など)の巡検		
	2nd Quarter	9th	地域産業論(1)		富山県地域における産業の特色(歴史的把握) ・売薬と産業の系譜 ・「創業」の伝統(日本資本主義の発展に寄与した富山人)		
		10th	地域産業論(2)		特産物		
		11th	●実地調査(4)		港湾地区(伏木富山港岩瀬地区など)の巡検		
		12th	地域産業論(3)		地場産業		
		13th	地域産業論(4)		観光資源		
		14th	●実地調査(5)		新川地域の巡検(新幹線建設・観光地など)		

		15th	期末試験			実施しない	
		16th	おわりに			・受講生による発表（地元地域の企業研究など） ・成績評価・確認	
Evaluation Method and Weight (%)							
	試験	発表	相互評価	態度	ポートフォリオ	その他	Total
Subtotal	0	30	0	30	40	0	100
基礎的能力	0	10	0	10	20	0	40
専門的能力	0	10	0	10	10	0	30
分野横断的能力	0	10	0	10	10	0	30

Toyama College		Year	2021		Course Title	Health Science
Course Information						
Course Code		0038		Course Category	General / Elective	
Class Format		Lecture		Credits	Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade	Adv. 2nd	
Term		Second Semester		Classes per Week	2	
Textbook and/or Teaching Materials						
Instructor		Ohashi Chisato				
Course Objectives						
(1)Deepen understanding of exercise physiology (2)Subjective recognition of health promotion utilizing own data, amount of daily physical activity (3)Bring up qualification for creation and action a scientific exercise program fitting own lifestyles						
Rubric						
		理想的な到達レベルの目安(優)		標準的な到達レベルの目安(良)		未到達レベルの目安(不可)
評価項目1		現代の社会的背景から、日本国民が抱える健康問題について深く理解することができ、その解決策を検討することができる。		現代の社会的背景から、日本国民が抱える健康問題について理解することができる。		現代の社会的背景から、日本国民が抱える健康問題についての理解が十分ではない。
評価項目2		自らの健康度と身体活動量のデータから、生涯にわたる健康づくりについて主体的に捉えることができる。		自らの健康度と身体活動量のデータから、生涯にわたる健康づくりの必要性を理解している。		自らの健康度と身体活動量のデータから、生涯にわたる健康づくりの必要性を十分に理解していない。
評価項目3		ライフスタイルに合った運動プログラムを身体活動ガイドラインに沿って作成し、実践するための態度が身についている。		ライフスタイルに合った運動プログラムを身体活動ガイドラインに沿って作成することができる。		ライフスタイルに合った運動プログラムを身体活動ガイドラインに沿って作成することができない。
Assigned Department Objectives						
ディプロマポリシー B-1 JABEE B1						
Teaching Method						
Outline		(1)Objective Students understand physiological effects that exercises are influential in health promotion and fitness levels. Furthermore Students acquire the ability to make exercise program fitting own lifestyle and act the program. Through the actions, students are expected to be engineers who lead a healthy life in the future. (2)Summary 現代の病気の主役となっている生活習慣病は、運動・栄養・休養・ストレス等、日常生活の送り方が大きく影響している。運動は、体力を向上し、健康を増進させることから、運動・健康に関する知識を教養として学習する。 Lifestyle [				
Style						
Notice		実験や測定を実施する場合は、運動ができる服装で授業に参加すること。				
Characteristics of Class / Division in Learning						
<input checked="" type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme	Goals		
2nd Semester r	3rd Quarter	1st	Orientation	We take an explanation of the syllabuse.		
		2nd	Execution and Estimation of Simple Fitness Test	We take a simple stamina test and estimate own fitness level.		
		3rd	Concept about Health(1)	We study a basic health concept.		
		4th	Concept about Health(2)	We study a practical health concept.		
		5th	Exercise and Fitness	We study exercise effects which influence fitness and methods of practical training.		
		6th	Exercise and Lifestyle Disease	We understand the relevance between lack of exercise and lifestyle disease.		
		7th	Exercise Therapy Effect	We study exercise therapy methods for improvement lifestyle disease and these effects.		
		8th	Daily Amount of Physical Activity.	We measure the amount of physical activity using pedometers for 2 weeks.		
	4th Quarter	9th	Healthy Exercise Practice(1)	We set exercise event, the target of intensity and time to make exercise programs fitting our lifestyles.		
		10th	Estimation of Daily Amount of Physical Activity	We estimate our physical activity on our lifes from own data of the amount of physical activity collected by pedometers.		
		11th	Physical Activity and Health	We understand the guileline "Physical activity reference for health promotion 2013" , and restart to measure the amount of physical activity.		
		12th	Healthy Exercise Practice(2)	We reset the exercise event, the target of intensity and time, and practice exercise plans which we set ourselves.		

		13th	Re-stimation of Daily Amount of Physical Activity	We make a comparison between the first physical activity data and the second.
		14th	Preparation for Presentation about Exercise Program	We make our exercise programs fitting own lifestyles and prepara presentations about these.
		15th	Presentation	We have presentations. Presentation is for 10 minutes a parson.
		16th	Presentation Class Evaluation Quastionnaire	We have presentations. Finally we answer class eveluation quastionnaires.

Evaluation Method and Weight (%)							
	試験	発表	相互評価	態度	ポートフォリオ	その他	Total
Subtotal	0	75	0	0	0	25	100
基礎的能力	0	0	0	0	0	0	0
専門的能力	0	75	0	0	0	25	100
分野横断的能力	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Industrial Society	
Course Information							
Course Code	0039		Course Category		General / Elective		
Class Format	Lecture		Credits		Academic Credit: 2		
Department	Control Information Systems Engineering Course		Student Grade		Adv. 2nd		
Term	First Semester		Classes per Week		2		
Textbook and/or Teaching Materials							
Instructor	Hsegawa Hiroshi						
Course Objectives							
"1.Students can understand the background of contemporary Japanese industry. 2.Students can understand the society and environment surrounding themselves for their own business. 3.Students can understand the innovation and problem solving."							
Rubric							
	Ideal Level of Achievement		Standard Level of Achievement		Unacceptable Level of Achievement)		
Evaluation 1	Students can understand the background of contemporary Japanese industry.		Students can almost understand the background of contemporary Japanese industry.		Students cannot understand the background of contemporary Japanese industry.		
Evaluation 2	Students can understand the society and environment surrounding themselves for their own business.		Students can almost understand the society and environment surrounding themselves for their own business.		Students cannot understand the society and environment surrounding themselves for their own business.		
Evaluation 3	Students can understand the society and environment surrounding themselves for their own business.		Students can almost understand the society and environment surrounding themselves for their own business.		Students cannot understand the society and environment surrounding themselves for their own business.		
Assigned Department Objectives							
ディプロマポリシー A-2 JABEE A2							
Teaching Method							
Outline	"The purpose of this class is to understand the background of contemporary Japanese industry. Students also can understand the society and environment surrounding themselves for their own business. And students can understand the innovation and problem solving."						
Style	Lecture and presentation						
Notice	More than 60 points are necessary to satisfy the evaluation criteria of JABEE.						
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
1st Semester	1st Quarter	1st	Course Orientation College Liberal Arts				
		2nd	Approach to social science				
		3rd	Background of modern Japanese industry (1)				
		4th	Background of modern Japanese industry (2)				
		5th	Background of modern Japanese industry (3)				
		6th	Background of modern Japanese industry (4)				
		7th	Background of modern Japanese industry (5)				
		8th	Background of modern Japanese industry (6)				
	2nd Quarter	9th	Background of modern Japanese industry (7)				
		10th	Understanding the environment surrounding the industry (1)				
		11th	Understanding the environment surrounding the industry (2)				
		12th	Viewpoint involved in industry (1)				
		13th	Viewpoint involved in industry (2)				
		14th	Viewpoint involved in industry (3)				
		15th	Final presentation of final paper				
		16th					
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	50	0	0	0	50	100

Basic Ability	0	20	0	0	0	20	40
Technical Ability	0	10	0	0	0	10	20
Interdisciplinary Ability	0	20	0	0	0	20	40

Toyama College		Year	2021		Course Title	Culture Studies of Japan Sea Rim Countries	
Course Information							
Course Code	0040			Course Category	General / Elective		
Class Format	Lecture			Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course			Student Grade	Adv. 2nd		
Term	Second Semester			Classes per Week	2		
Textbook and/or Teaching Materials	高階秀爾『西洋美術史』、中澤敦夫・宮崎衣澄『暮らしの中のロシア・アイコン』						
Instructor	Miyazaki Izumi						
Course Objectives							
1. Students can understand the culture and the religion in Russia by the analysis of Icon paintings. 2. Students can understand the history of relations between Japan and Russia on the basis of the Japan Orthodox church.							
Rubric							
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		Students can understand the history of art and russian icon paintings.		Students can almost understand the history of art and russian icon paintings.		Students cannot almost understand the history of art and russian icon paintings.	
Evaluation 2		Students can understand the russian icon paintings on the base of the russian culture.		Students can almost understand the russian icon paintings on the base of the russian culture.		Students cannot understand the russian icon paintings on the base of the russian culture.	
Evaluation 3		Students can understand the history of relations between Japan and Russia.		Students can almost understand the history of relations between Japan and Russia.		Students cannot understand the history of relations between Japan and Russia.	
Assigned Department Objectives							
ディプロマポリシー A-1 JABEE A1							
Teaching Method							
Outline	The purpose of this class is to understand the culture and the religion in Russia by the analysis of Icon paintings. Students also understand the history of relations between Japan and Russia on the basis of the Japan Orthodox church.						
Style	Lecture and presentation						
Notice	More than 60 points are necessary to satisfy the evaluation criteria of JABEE.						
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester r	3rd Quarter	1st	introduction		Students can understand the course contents and goal.		
		2nd	Art history1		Students can understand general art history		
		3rd	Art history2		Students can understand general art history		
		4th	Art history3		Students can understand general art history		
		5th	Art history4		Students can understand general art history		
		6th	Art history5		Students can understand general art history		
		7th	Preparation for research at Museum		Students can understand the collection of Toyama museum		
		8th	Research at Toyama Museum		Students can understand the history and the collection of Toyama museum		
	4th Quarter	9th	Presentation		Students can make effective presentations.		
		10th	Russia and Icon paninings1		Students can understand the history of religion and art in Russia.		
		11th	Russia and Icon paninings2		Students can understand the history of religion and art in Russia.		
		12th	Janan Orthodox church and Russia		Students can understand the history of Japan Orthodox chuch and Russia.		
		13th	Preparation for research at Museum		Students can understand the collection of Nishida museum		
		14th	Research at Nishida Museum		Students can understand the history and the collection of Toyama museum		
		15th	Final presentation of final paper		Students can make effective presentations.		
		16th	Conclusion and evaluation				
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Paper	Total

Subtotal	0	40	0	0	0	60	100
Basic Ability	0	20	0	0	0	30	50
Technical Ability	0	10	0	0	0	20	30
Interdisciplinary Ability	0	10	0	0	0	10	20



Toyama College		Year	2021		Course Title	Engineering Ethics/Business Ethics
Course Information						
Course Code	0027		Course Category	Specialized / Compulsory		
Class Format	Lecture		Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course		Student Grade	Adv. 2nd		
Term	Second Semester		Classes per Week	2		
Textbook and/or Teaching Materials	『技術者の倫理入門 第五版』 杉本泰治・高橋重厚著 丸善(2016年)					
Instructor	Yokota Kazuhiro,Tsukada Akira,Matsubara Yoshihiro					
Course Objectives						
Through this course, understanding of the following will be facilitated. (1) Basic knowledge concerning the code of conduct on engineering ethics / business ethics. (2) Explain the philosophy and background of engineering ethics / business ethics. (3) Understand cases related to science, technology and present multiple solutions as professional engineers or business persons.						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)		
Evaluation 1		Clearly explain the basic knowledge concerning the code of conduct on engineering ethics / business ethics.	Ability to explain the basic knowledge concerning the code of conduct on engineering ethics / business ethics.	Unable to explain the basic knowledge concerning the code of conduct on engineering ethics / business ethics.		
Evaluation 2		Clearly explain the philosophy and background of engineering ethics / business ethics.	Ability to explain the philosophy and background of engineering ethics / business ethics.	Unable to explain the philosophy and background of engineering ethics / business ethics		
Evaluation 3		Clearly understands cases related to science, technology and present multiple solutions as professional engineers or business persons.	Ability to explain cases related to science, technology and present multiple solutions as professional engineers or business persons.	Unable to explain cases related to science, technology and present multiple solutions as professional engineers or business persons.		
Assigned Department Objectives						
ディプロマポリシー A-2 JABEE A2						
Teaching Method						
Outline	In this course, You discuss the reasons why engineers and business persons need ethics through specific cases. And you practice ethical behavior and master basic knowledge to contribute to the development of science and technology that people and nature can coexist. In addition, you learn about intellectual property rights.					
Style	It is necessary to think from an ethical viewpoint and to express your opinion.					
Notice	・ Discussion and Report: 60% ・ Presentation of case studies: 40% The recognition of credit requires 60 points or more rating.					
Characteristics of Class / Division in Learning						
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme	Goals		
2nd Semester	3rd Quarter	1st	Guidance	Discuss the goals and structure of this course.		
		2nd	Introduction to morals Engineers, business persons and ethics	Learn morals and ethics of engineers, business persons.		
		3rd	Organization, relationships and morals	Discuss organization, relationships and morals.		
		4th	Engineers, business persons and ethics Engineer qualification	Discuss engineers, business persons and ethics.		
		5th	Method of ethics implementation Duty of care	Discuss method of ethics implementation.		
		6th	Legal liability and moral liability Honesty, Truth, Reliability	Discuss legal liability and moral liability.		
		7th	Accountability Whistle blower	Discuss accountability and Whistle blower.		
		8th	Environment and Ethics Intellectual property	Discuss environment and ethics. Learn intellectual property.		
	4th Quarter	9th	Special lecture on intellectual property	Learn intellectual property from patent attorneys.		
		10th	Case study 1	Case study and Discussion.		
		11th	Case study 2	Case study and Discussion.		
		12th	Case study 3	Case study and Discussion.		
		13th	Case study 4	Case study and Discussion.		
		14th	Case study 5	Case study and Discussion.		
		15th	Case study 6	Case study and Discussion.		
		16th	Summary	Summarize the study content.		

Evaluation Method and Weight (%)			
	Discussion	Presentation and Report	Total
Subtotal	60	40	100
Basic Ability	20	0	20
Technical Ability	20	20	40
Interdisciplinary Ability	20	20	40

Toyama College		Year	2021		Course Title	Manufacturing System			
Course Information									
Course Code		0029		Course Category		Specialized / Elective			
Class Format		Lecture		Credits		Academic Credit: 2			
Department		Control Information Systems Engineering Course		Student Grade		Adv. 2nd			
Term		Second Semester		Classes per Week		2			
Textbook and/or Teaching Materials		KISOSEISANKAKOUGAKU(Asakura Shoten)							
Instructor		Yamamoto Keiichiro							
Course Objectives									
Students will understand the manufacturing system and can answer practice questions. Students will understand the manufacturing system and can do presentation what kind of product about the manufacturing system is applied to. To reach the evaluation standard of JABEE: 60 points or more are necessary on final examination.									
Rubric									
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)			
Understand the manufacturing system and can answer practice questions		Understand the manufacturing system and can answer practice questions.		Understand the manufacturing system.		Not understand the manufacturing system and can not answer practice questions.			
Not understand the manufacturing system and can not presentation what kind of product about manufacturing system is applied to.		Understand the manufacturing system and can logically presentation what kind of product about manufacturing system is applied to.		Understand the manufacturing system and can do presentation what kind of product about manufacturing system is applied to.		Not understand the manufacturing system and can not presentation what kind of product about manufacturing system is applied to.			
Assigned Department Objectives									
ディプロマポリシー B-4 JABEE B4									
Teaching Method									
Outline		Describe the basic of the manufacturing system required as an engineer. At First, explain about outline the history of material processing technology, the production form after the industrial revolution, processing efficiency / process control. In order to teach production in general at this lecture, there is not enough time in one-sided lecture, so that students need work actively. So each students one should summarize the manufacturing system of different them and presentation. They will take the approach shared by all the students.							
Style		Lecture Exercise							
Notice		The recognition of credit requires 60 points or more rating.							
Characteristics of Class / Division in Learning									
<input checked="" type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input checked="" type="checkbox"/> Instructor Professionally Experienced			
Course Plan									
			Theme		Goals				
2nd Semester	3rd Quarter	1st	Reason why to learn the manufacturing system		Explanation of class objective by syllabus What are high quality products, about its technology and equipment				
		2nd	Outline of production processing		Choose of how to make some products and production method				
		3rd	Outline of representative production system		Explain about representative production system				
		4th	Thinking method necessary for manufacturing (development, design, production)		Explain about the manufacturing flow from development to shipment				
		5th	Cost and Quality		Explain about the concept of cost and quality of manufacturing				
		6th	Each theme settings and survey, 5 minutes speech		Set different themes individually Speech 5 min.				
		7th	Each theme settings and survey, 5 minutes speech		Individual theme analysis Speech 5 min.				
		8th	Each theme settings and survey, 5 minutes speech		Individual theme analysis Speech 5 min.				
	4th Quarter	9th	Group work, Opinion exchange		Discussion on group				
		10th	Group work, Opinion exchange		Discussion on group				
		11th	Brush up each theme		Individual theme analysis				
		12th	Brush up each theme		Individual theme analysis				
		13th	Brush up each theme		Individual theme analysis				
		14th	Sharing knowledge by each presentation		Share within class each presentation				
		15th	Final examination		Comprehensive question through lecture				
		16th	Sharing knowledge by each presentation		Share within class each presentation				
Evaluation Method and Weight (%)									
		Examination		Presentation		Report		Total	

Subtotal	60	20	20	100
Basic Ability	10	0	0	10
Technical Ability	30	10	10	50
Interdisciplinary Ability	20	10	10	40

Toyama College		Year	2021		Course Title	Introduction to Geoscience	
Course Information							
Course Code	0030			Course Category	Specialized / Elective		
Class Format	Lecture			Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course			Student Grade	Adv. 2nd		
Term	Second Semester			Classes per Week	2		
Textbook and/or Teaching Materials	Teacher distribution documents						
Instructor	Fukudome Kenichi						
Course Objectives							
Through this course, understanding of the following will be facilitated. (1) What does the the geophysical fluid dynamics (2) The governing equations of geophisycal fluid dynamics (3) The characteristics of the geophysical fluid dynamics							
Rubric							
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		Clearly understands the general idea of the geophysical fluid dynamics and displays the ability to explain it		Ability to understand the general idea of the geophysical fluid dynamics		Unable to understand the general idea of the geophysical fluid dynamics	
Evaluation 2		A thorough understanding of the fundamental processes governing oceanic and atmospheric motions		Basic understanding of the fundamental processes governing oceanic and atmospheric motions		Unable to understand the fundamental processes governing oceanic and atmospheric motions	
Assigned Department Objectives							
ディプロマポリシー B-1 JABEE B1							
Teaching Method							
Outline	This class is designed to introduce students to the physics that govern the phenomena in the ocean and atmosphere.						
Style	Students are expected to attend all classes on time. Your grade will be based participation (attendance and homework : 40%) and on a final presentation (60%).						
Notice	Basic fluid mechanics and physics knowledge, vector calculus, partial differential equations.						
Characteristics of Class / Division in Learning							
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan							
			Theme		Goals		
2nd Semester	3rd Quarter	1st	Introduction to the geophysical fluid dynamics		Characteristics of the ocean and the atmosphere, general idea of the geophysical fluid dynamics		
		2nd	The governing equations (1)		Continuity of mass, Equation of Motion, Lagrangian and Eulerian Approaches		
		3rd	The governing equations (2)		Physical characteristics of the ocean, Equation of state, Thermodynamic Equations		
		4th	The governing equations (3)		Boussinesq approximation, Rossby number		
		5th	Boundary conditions between atmosphere and ocean		The Earth's heat budget, Heat, Water, and Salt Balance		
		6th	Geostrophic Flow (1)		Geostrophic Adjustment and Balance, Sverdrup balance		
		7th	Geostrophic Flow (2)		Barotropic and baroclinic flow		
		8th	midterm exam		midterm exam		
	4th Quarter	9th	Boundary layers (1)		Boundary layers in atmosphere and ocean		
		10th	Boundary layers (2)		Bottom boundary layer, Ekman transport		
		11th	Barotropic ocean circulation (1)		Ekman pumping		
		12th	Barotropic ocean circulation (2)		Western boundary currents		
		13th	Baroclinic ocean circulation (1)		physical properties of sea water, global distribution of temperature and salinity		
		14th	Baroclinic ocean circulation (2)		Quasigeostrophic theory, eddies, rossby waves		
		15th	Final presentation		Final presentation		
		16th	Review session		Review session		
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	0	30	30	0	0	40	100
Basic Ability	0	10	10	0	0	20	40

Technical Ability	0	20	10	0	0	20	50
Interdisciplinary Ability	0	0	10	0	0	0	10

Toyama College		Year	2021	Course Title	Thesis Research I
Course Information					
Course Code	0031		Course Category	Specialized / Compulsory	
Class Format	Experiment / Practical training		Credits	Academic Credit: 5	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 2nd	
Term	First Semester		Classes per Week	5	
Textbook and/or Teaching Materials					
Instructor	Shina Toru, Akiguchi Shunsuke, Matoba Ryuichi, Oguma Hiroshi, Tsukada Akira, Ito Nao, Mizumoto Iwao, Aso Tsukasa, Yoshii Yotsumi, Furuyama Shoichi				
Course Objectives					
Following three elements are educated as encouraging abilities of a research and development. 1. Students can suggest, design and construct related systems such as software, hardware and network with considering a social background. 2. Students can solve problems by their fundamental and specific knowledge. 3. Students can present and discuss their research theme.					
Rubric					
	Ideal Level of Achievement	Standard Level of Achievement	Unacceptable Level of Achievement)		
(Research work 1) Backgrounds, purposes, methods, contents, results, discussion and future tasks are included.	All elements are included.	Acceptable contents.	Lacks of contents.		
(Research work 2) Expression of statement, figures and tabular.	Acceptable expression.	Almost acceptable expression.	Unacceptable and lack of expression.		
(Research work 3) The expression of backgrounds and purposes.	Acceptable expression.	Almost acceptable expression.	Unacceptable and lack of expression.		
(Research work 4) Methodology	Acceptable methodologies.	Almost acceptable methodologies.	Unacceptable methodologies.		
(Research work 5) Logical Structure	Reasonable logical structure.	Almost reasonable structure.	Not reasonable logical structure.		
(Research work 6) Critical Thinking	Reasonable discussion.	Almost reasonable discussion.	Unacceptable discussion.		
(Research work 7) Validity of results	Cleared and valid results are expressed.	Almost valid results are expressed.	Unacceptable results.		
(Research work 8) Future works	Valid future plan and schedule. Clear solutions are provided.	Acceptable plan and schedule.	Unacceptable plan.		
(Presentation 1) (1)Background	Reasonable structure.	Acceptable structure	Unacceptable structure		
(Presentation 2) Suitable expression of sentences and figures.	Reasonable sentences and figures.	Acceptable sentences and figures	Unacceptable sentences and figures		
(Presentation 3) Logical structure	Reasonable logical structure	Almost reasonable structure	Not reasonable logical structure		
Assigned Department Objectives					
ディプロマポリシー C-3 JABEE C3					
Teaching Method					
Outline	For special research topics related to the same control information system through major departments 1 and 2 years, under the supervisor, acquire the method of literature survey, experimental / theoretical analysis method, evaluation method, and nurture research promotion ability. In line with each concrete theme, increase the comprehensive research capability through investigation and education of required knowledge necessary for application, application to problem solving, analysis and evaluation of the results obtained. We will summarize and present the research results we have worked on in Special Study I. [Control] C3 [JABEE Standard 1 (2)] (f) (g)				
Style	In each laboratory, conduct research under the guidance of the main deputy supervisor advisor. Classification method, multiple faculty charge method				
Notice	To undertake subjectively and systematically on issues under the supervisor. One chief examiner and two sub-investigators comprehensively evaluated the content of the thesis, the contents of the presentation and the status of activities based on the evaluation criteria table (total table instructions), with a paper evaluation of 50%, a presentation evaluation of 30%, an effort status of 20% , Pass score over 60 points.				
Characteristics of Class / Division in Learning					
<input checked="" type="checkbox"/> Active Learning	<input checked="" type="checkbox"/> Aided by ICT	<input checked="" type="checkbox"/> Applicable to Remote Class	<input type="checkbox"/> Instructor Professionally Experienced		
Course Plan					
		Theme	Goals		

1st Semester	1st Quarter	1st	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		2nd	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		3rd	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		4th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		5th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		6th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		7th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		8th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
	2nd Quarter	9th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		10th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		11th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		12th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		13th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		14th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		15th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		16th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)

#### Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	100	0	0	0	0	0	100
Report	30	0	0	0	0	0	30
Presentation	50	0	0	0	0	0	50
Effort	20	0	0	0	0	0	20



Toyama College		Year	2021	Course Title	Thesis Research II
Course Information					
Course Code	0032		Course Category	Specialized / Compulsory	
Class Format	Experiment / Practical training		Credits	Academic Credit: 5	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 2nd	
Term	Second Semester		Classes per Week	5	
Textbook and/or Teaching Materials					
Instructor	Shina Toru, Akiguchi Shunsuke, Matoba Ryuichi, Oguma Hiroshi, Tsukada Akira, Ito Nao, Mizumoto Iwao, Aso Tsukasa, Yoshii Yotsumi, Furuyama Shoichi				
Course Objectives					
Following three elements are educated as encouraging abilities of a research and development. 1. Students can suggest, design and construct related systems such as software, hardware and network with considering a social background. 2. Students can solve problems by their fundamental and specific knowledge. 3. Students can present and discuss their research theme.					
Rubric					
	Ideal Level of Achievement	Standard Level of Achievement	Unacceptable Level of Achievement)		
(Research work 1) Backgrounds, purposes, methods, contents, results, discussion and future tasks are included.	All elements are included.	Acceptable contents.	Lacks of contents.		
(Research work 2) Expression of statement, figures and tabular.	Acceptable expression.	Almost acceptable expression.	Unacceptable and lack of expression.		
(Research work 3) The expression of backgrounds and purposes.	Acceptable expression.	Almost acceptable expression.	Unacceptable and lack of expression.		
(Research work 4) Methodology	Acceptable methodologies.	Almost acceptable methodologies.	Unacceptable methodologies.		
(Research work 5) Logical Structure	Reasonable logical structure.	Almost reasonable structure.	Not reasonable logical structure.		
(Research work 6) Critical Thinking	Reasonable discussion.	Almost reasonable discussion.	Unacceptable discussion.		
(Research work 7) Validity of results	Cleared and valid results are expressed.	Almost valid results are expressed.	Unacceptable results.		
(Research work 8) Future works	Valid future plan and schedule. Clear solutions are provided.	Acceptable plan and schedule.	Unacceptable plan.		
(Presentation 1) (1)Background	Reasonable structure.	Acceptable structure	Unacceptable structure		
(Presentation 2) Suitable expression of sentences and figures.	Reasonable sentences and figures.	Acceptable sentences and figures	Unacceptable sentences and figures		
(Presentation 3) Logical structure	Reasonable logical structure	Almost reasonable structure	Not reasonable logical structure		
Assigned Department Objectives					
ディプロマポリシー C-3 JABEE C3					
Teaching Method					
Outline	For special research topics related to the same control information system through major departments 1 and 2 years, under the supervisor, acquire the method of literature survey, experimental / theoretical analysis method, evaluation method, and nurture research promotion ability. In line with each concrete theme, increase the comprehensive research capability through investigation and education of required knowledge necessary for application, application to problem solving, analysis and evaluation of the results obtained. We will summarize and present the research results we have worked on in Special Study I. [Control] C3 [JABEE Standard 1 (2)] (f) (g)				
Style	In each laboratory, conduct research under the guidance of the main deputy supervisor advisor. Classification method, multiple faculty charge method				
Notice	To undertake subjectively and systematically on issues under the supervisor. One chief examiner and two sub-investigators comprehensively evaluated the content of the thesis, the contents of the presentation and the status of activities based on the evaluation criteria table (total table instructions), with a paper evaluation of 50%, a presentation evaluation of 30%, an effort status of 20% , Pass score over 60 points.				
Characteristics of Class / Division in Learning					
<input type="checkbox"/> Active Learning	<input type="checkbox"/> Aided by ICT	<input type="checkbox"/> Applicable to Remote Class	<input type="checkbox"/> Instructor Professionally Experienced		
Course Plan					
		Theme	Goals		

2nd Semester	3rd Quarter	1st	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		2nd	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		3rd	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		4th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		5th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		6th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		7th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		8th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
	4th Quarter	9th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		10th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		11th	Special Research	Study in the field of specialization necessary for research subject (Evaluation, Discussion, Re-Implementation, Improvement, Testing, Report)
		12th	Special Research	Writing research paper and preparing presentation slides for summarizing the research subjects.
		13th	Special Research	Writing research paper and preparing presentation slides for summarizing the research subjects.
		14th	Special Research	Writing research paper and preparing presentation slides for summarizing the research subjects.
		15th	Special Research( Paper presentation )	Report of the research subjects.
		16th	Special Research	Summarizing the research activity.

#### Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	100	0	0	0	0	0	100
Report	30	0	0	0	0	0	30
Presentation	50	0	0	0	0	0	50
Effort	20	0	0	0	0	0	20

Toyama College		Year	2021		Course Title	Advanced Electromagnetic Waves
Course Information						
Course Code	0033		Course Category		Specialized / Elective	
Class Format	Lecture		Credits		Academic Credit: 2	
Department	Control Information Systems Engineering Course		Student Grade		Adv. 2nd	
Term	First Semester		Classes per Week		2	
Textbook and/or Teaching Materials						
Instructor	Shina Toru					
Course Objectives						
Through this course, understanding of the following will be facilitated (1) Maxwell's equations (2) Uniform plane waves in free space and dielectrics (3) Plane waves at boundaries and in dispersive media (4) Standing waves and wave reflection						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		Clearly understands and has the ability to explain the Maxwell's Equations and uniform plane waves.	Ability to understand and explain the Maxwell's Equations and uniform plane waves.		Unable to understand and explain the Maxwell's Equations and uniform plane waves.	
Evaluation 2		Clearly understands the properties of plane waves and is able to explain them in detail. Has the ability to solve application problems.	Ability to explain the properties of plane waves and is able to explain them in detail. Has the ability to solve basic problems.		Unable to explain the properties of plane waves. Unable to solve basic problems.	
Evaluation 3		Clearly understands the properties of reflection and standing waves and is able to explain them in detail. Has the ability to solve application problems.	Ability to explain the properties of reflection and standing waves and is able to explain them in detail. Has the ability to solve basic problems.		Unable to explain the properties of reflection and standing waves. Unable to solve basic problems.	
Assigned Department Objectives						
ディプロマポリシー B-2 JABEE B2						
Teaching Method						
Outline	In this course, you will learn about the principles, properties and fundamental physics of electromagnetic waves, specifically: optical fiber, waveguide and distributed circuit.					
Style	For the purpose of understanding the Electromagnetic waves, lectures and exercises facilitate the learning of principles and examples.					
Notice	The recognition of credit requires 60 points or more rating. Based on the knowledge of basic electromagnetics and wave.					
Characteristics of Class / Division in Learning						
<input checked="" type="checkbox"/> Active Learning		<input checked="" type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input checked="" type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme	Goals		
1st Semester	1st Quarter	1st	Introduction of this class. Maxwell's Equations	To explain the Maxwell's Equations.		
		2nd	Uniform Plane Waves. (1) Introduction	To explain uniform plane waves in free space.		
		3rd	Uniform Plane Waves. (2) Phase Velocity, Group velocity	To explain the phase and group velocity in free space.		
		4th	Uniform Plane Waves. (3) Waves Propagation in Free Space.	To explain the wave propagation in free space.		
		5th	Loss Material	To explain plane waves in a loss material.		
		6th	Evanescent Waves.	To explain evanescent waves.		
		7th	Plane Waves at Boundaries. (1) Reflection at Normal Incidence. (a) Conductor	To explain the reflection of uniform plane waves at boundaries.		
		8th	Plane Waves at Boundaries. (1) Reflection at Normal Incidence. (b) Dielectronic	To explain the reflection of uniform plane waves at boundaries.		
	2nd Quarter	9th	Plane Waves at Boundaries. (2) Reflection at Oblique Incidence Angles. (a) Conductor	To explain the reflection of uniform plane waves at boundaries.		
		10th	Plane Waves at Boundaries. (2) Reflection at Oblique Incidence Angles. (b) Dielectronic	To explain the reflection of uniform plane waves at boundaries.		
		11th	To continue	To explain the reflection of uniform plane waves at boundaries.		
		12th	Standing Waves. (1) Impedance and Distributed Circuit	To explain Standing Waves and distributed circuits.		
		13th	Standing Waves. (2) Reflection	To explain the relationship between standing waves and reflection.		

		14th	Standing Wave. (3) Reflection Coefficient			To explain reflection coefficient at standing waves.	
		15th	Final examination			Final examination	
		16th	Summary			Summarize the study content and confirm grades.	
Evaluation Method and Weight (%)							
	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	60	0	0	0	0	40	100
Basic Ability	0	0	0	0	0	0	0
Technical Ability	60	0	0	0	0	40	100
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Trade Procedure in Port
Course Information						
Course Code		0034		Course Category	Specialized / Elective	
Class Format		Lecture		Credits	Academic Credit: 2	
Department		Control Information Systems Engineering Course		Student Grade	Adv. 2nd	
Term		First Semester		Classes per Week	2	
Textbook and/or Teaching Materials		ASAZUMA Yutaka, FUKUDA Tomoko, TOGAWA Kenichi, OKAMOTO Katsunori "Jidousya riyuusu to guroubaru shijyou-chyuukosya・chyuukobuhin no kokusai ryuutsuu-" Seizandou syoten, 2017.And we will distribute the handouts at times.				
Instructor		Okamoto Katsunori				
Course Objectives						
①Students get basic knowledge about Incoterms and procedures of port transportation, customs clearance, and payment terms.						
Rubric						
		Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)
Evaluation 1		Students will be able to explain about technical terms of Incoterms and procedures of port transportation, customs clearance, and payment terms. As a result, they will be able to explain about those purposes, benefits, and faults with technical terms.		Students will be able to explain about technical terms of Incoterms and procedures of port transportation, customs clearance, and payment terms.		Students can't explain about technical terms of Incoterms and procedures of port transportation, customs clearance, and payment terms.
Assigned Department Objectives						
ディプロマポリシー A-2 JABEE A2						
Teaching Method						
Outline		Students lean about procedures of port transportation, customs clearance, and payment terms with mutual relation in the case of used car export.				
Style		Lecture by single teacher.				
Notice		Students must read beforehand the designated part of required materials. Student's final grade will be decided based on the following: Term-end examination : 100% To pass, students must earn at least 60 points out of 100				
Characteristics of Class / Division in Learning						
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme		Goals	
1st Semester	1st Quarter	1st	The functions and economic roles of ports		Students will be able to understand the plan, goal, and way of assess about this subject.	
		2nd	The functions and economic roles of ports		Students will be able to understand concepts of ports.	
		3rd	Institutions of transportation for export -in the case of used car export-		Students will comprehend outline of transition about institutions of transportation for export. Then they will be able to understand the roles of "Export Trade Control Order" and "The Fundamental Directives of Customs Law". In addition, they will comprehend outline about logistics and modes of transportation.	
		4th	Institutions of transportation for export -in the case of used car export-		Students will comprehend outline of transition about institutions of transportation for export. Then they will be able to understand the roles of "Export Trade Control Order" and "The Fundamental Directives of Customs Law". In addition, they will comprehend outline about logistics and modes of transportation.	
		5th	Institutions of transportation for export with cargo flow -in the case of used car export-		Students will be able to understand major pre-defined commercial terms for trade in Incoterms.	
		6th	Institutions of transportation for export with cargo flow -in the case of used car export-		Students will be able to understand major pre-defined commercial terms for trade in Incoterms.	
		7th	Institutions of transportation for export with cargo flow -in the case of used car export-		Students will be able to understand major pre-defined commercial terms for trade in Incoterms.	
		8th	Procedures of transportation for export with cargo flow (1) -in the case of used car export-		Students will comprehend procedures of port transportation until issuance of B/L. And they will be able to understand the roles of each document.	
	2nd Quarter	9th	Procedures of transportation for export with cargo flow (2) -in the case of used car export-		Students will comprehend procedures of port transportation until issuance of B/L. And they will be able to understand the roles of each document.	

		10th	Procedures of customs clearance for export with cargo flow (1) –in the case of used car export-	Students will comprehend procedures of customs clearance until issuance of E/P. And they will be able to understand the roles of each document. In addition, they will understand about details and roles of S/A.
		11th	Procedures of customs clearance for export with cargo flow (2) –in the case of used car export-	Students will comprehend procedures of customs clearance until issuance of E/P. And they will be able to understand the roles of each document. In addition, they will understand about details and roles of S/A.
		12th	Procedures of payment terms for export with cargo flow –in the case of used car export-	Students will comprehend procedures of payment terms. For example, management of documentary bill of exchange with L/C and management of T/T. And they will be able to comprehend about relationship between port transportation, customs clearance and payment terms in procedures. As a result, they will understand about benefits and faults of each payment terms.
		13th	Procedures of payment terms for export with cargo flow –in the case of used car export-	Students will comprehend procedures of payment terms. For example, management of documentary bill of exchange with L/C and management of T/T. And they will be able to comprehend about relationship between port transportation, customs clearance and payment terms in procedures. As a result, they will understand about benefits and faults of each payment terms.
		14th	Procedures of tax refund for exporters with cargo flow –in the case of used car export-	Students will comprehend procedures of tax refund for exporters.
		15th	A terminal examination	Teacher confirms achievement degree of each student for all lectures.
		16th	Return answer papers and explain about model answer	Students and teacher confirm score of examination and achievement of this subject.

#### Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	100	0	0	0	0	0	100
Basic Ability	0	0	0	0	0	0	0
Technical Ability	100	0	0	0	0	0	100
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Port Logistics
Course Information						
Course Code	0036		Course Category	Specialized / Elective		
Class Format	Lecture		Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course		Student Grade	Adv. 2nd		
Term	First Semester		Classes per Week	2		
Textbook and/or Teaching Materials	KOBAYASHI Teruo, SAWA Kishiro, KAGAWA Masatoshi, YOSHIOKA Hideki"Gendai nihon keizai to kouwan"Seizandou syoten, 2001.ASAZUMA Yutaka, FUKUDA Tomoko, TOGAWA Kenichi, OKAMOTO Katsunori "Jidousya riyuusu to guroubaru shijyou-chyuukosya・chyuukobuhin no kokusai ryyuutsuu-" Seizandou syoten, 2017.And we will distribute the handouts at times.					
Instructor	Okamoto Katsunori					
Course Objectives						
Students study port logistics. Students understand the economic functions of port facilities and the logistics of port logistics and understand the issues in port logistics.						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)		
Evaluation 1		Students will be able to explain about port logistics. Students will be able to explain the economic functions of port facilities and the logistics of port logistics using technical terms. In addition, students will be able to look at future issues in port logistics.	Students will be able to explain about port logistics. Students will be able to explain the economic functions of port facilities and the logistics of port logistics using technical terms.	Students can not explain port logistics using technical terms. Students can not explain the economic functions of port facilities and the logistics of port logistics using technical terms.		
Assigned Department Objectives						
ディプロマポリシー A-2 JABEE A2						
Teaching Method						
Outline	Students learn the role port logistics plays in society from the relationship between port logistics and the regional economy. In addition, students will learn the contents and transformation of logistics operations, especially in harbors.					
Style	Lecture by single teachers.					
Notice	Students must read beforehand the designated part of required materials. Student's final grade will be decided based on the following: Term-end examination : 100% To pass, students must earn at least 60 points out of 100.					
Characteristics of Class / Division in Learning						
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme	Goals		
1st Semester	1st Quarter	1st	Guidance	Students will be able to understand the plan, goal, and way of assess about this subject.		
		2nd	Position of Japanese port in the world	Students understand the international competitiveness of Japanese ports.		
		3rd	International specialization in industry	Students understand development of the horizontal international specialization.		
		4th	Ports as logistics hub	Students understand occurrence factor of ports as logistics hub.		
		5th	Ports as logistics hub	Students understand factor of ports as logistics hub.		
		6th	Build up to logistics base in port	Students understand devepoment of logistics base and it's role.		
		7th	Build up to logistics base in port	Students understand devepoment of logistics base and it's role.		
		8th	Build up to logistics base in port	Students understand devepoment of logistics base and it's role.		
	2nd Quarter	9th	Character of port logistics	Students understand five character of port logistics.		
		10th	Character of port logistics	Students understand five character of port logistics.		
		11th	Free trade zone	Students understand system of free trade zone and FAZ.		
		12th	Management of Information	Students understand the purpose and background of port logistics EDI.		
		13th	Outsourcing of ports	Students understand the role of 3 PL and the background of its occurrence.		

		14th	Multimodal transportation	Students understand the mechanism of multimodal transportation. In addition, understand the relationship with port logistics industry and the position of forwarders.
		15th	A terminal examination	Teacher confirms achievement degree of each student for all lectures.
		16th	Return answer papers and explain about model answer	Students and teacher confirm score of examination and achievement of this subject.

#### Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	100	0	0	0	0	0	100
Basic Ability	0	0	0	0	0	0	0
Technical Ability	100	0	0	0	0	0	100
Interdisciplinary Ability	0	0	0	0	0	0	0



Toyama College		Year	2021		Course Title	International Relations
Course Information						
Course Code	0041			Course Category	Specialized / Elective	
Class Format	Lecture			Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course			Student Grade	Adv. 2nd	
Term	Second Semester			Classes per Week	2	
Textbook and/or Teaching Materials	Documents distributed					
Instructor	Ebihara Tsuyoshi					
Course Objectives						
1. Students can understand the cocepts, the theories and the frameworks of international relations. 2. Students can understand the major international orders from the Modern period to the contemporary era. 3. Students can understand the international relations in the East Asia region including Japan Sea rim from the aspects of the Japan's bilateral relations with the countries in the region.						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)	
Evaluation 1		Students can properly understand the cocepts, the theories and the frameworks of international relations.	Students can understand the cocepts, the theories and the frameworks of international relations.		Students cannot understand the cocepts, the theories and the frameworks of international relations.	
Evaluation 2		Students can properly understand the major international orders from the Modern period to the contemporary era.	Students can understand the major international orders from the Modern period to the contemporary era.		Students cannot understand the major international orders from the Modern period to the contemporary era.	
Evaluation 3		Students can properly understand the international relations in the East Asian region including Japan Sea rim from the aspects of the Japan's bilateral relations with the countries in the region.	Students can understand the international relations in the East Asian region including Japan Sea rim from the aspects of the Japan's bilateral relations with the countries in the region.		Students cannot understand the international relations in the East Asian region including Japan Sea rim from the aspects of the Japan's bilateral relations with the countries in the region.	
Assigned Department Objectives						
ディプロマポリシー A-1 JABEE A1						
Teaching Method						
Outline		This course focuses on the way of understanding the reality of international relations formed by the various actors' behaviors with the analytical frameworks of international relations.				
Style		This course consists of two parts. In the first part, the instructor will teach the basic concepts and theories as the important elements of the framework of international relations, and then, will teach the major international orders since the modern period in order to let students understand the characteristics of the international order after Cold War. In the second part, the instructor will teach the analytical framework of the states' power under the trend of globalization, and then students will try to analyze the real situations of international relations in the East Asia region including Japan Sea rim with the framework.				
Notice		In this course, students must read and summarize the main points of the papers or books before the class. Because the instructor values the contents of the papers in the evaluation, it is necessary for students to write papers according to the instructions.				
Characteristics of Class / Division in Learning						
<input checked="" type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input checked="" type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme		Goals	
2nd Semester	3rd Quarter	1st	Course orientation		Students can understand the course contents and goal.	
		2nd	Main theme of the international relations / Characteristics of international society		Students can understand the main theme of international relations and the characteristics of international society.	
		3rd	Major actors of international relations		Students can understand major actors of international relations	
		4th	Theory of international relations #1		Students can understand the the Realist Theories of international relations.	
		5th	Theory of international relations #2		Students can understand the the Liberalist Theories of international relations.	
		6th	International relations in Modern times #1		Students can understand the formation of the Modern international relations.	
		7th	International relations in Modern times #2		Students can understand the major international orders from the WWI to WWII.	
		8th	International relations in Modern times #3		Students can understand the major international orders during the Cold War.	
	4th Quarter	9th	International relations in Modern times #4		Students can understand the transformation of the international order after the Cold War.	

		10th	Globalization and states #1	Students can understand the concept of globalization and its influence on states.
		11th	Globalization and states #2	Students can understand the power of states under the globalized international society.
		12th	Analysis of the international relations in the East Asian Region including Japan Sea rim #1	Students can collect data related the international relations in the East Asian Region including Japan Sea rim.
		13th	Analysis of the international relations in the East Asian Region including Japan Sea rim #2	Students can give a presentation and have discussion of the international relations in the East Asian Region including Japan Sea rim.
		14th	Analysis of the international relations in the East Asian Region including Japan Sea rim #3	Students can give a presentation and have discussion of the international relations in the East Asian Region including Japan Sea rim.
		15th	Analysis of the international relations in the East Asian Region including Japan Sea rim #4	Students can give a presentation and have discussion of the international relations in the East Asian Region including Japan Sea rim.
		16th	Conclusion and evaluation	

#### Evaluation Method and Weight (%)

	Examination	Presentation	homework	Behavior	Portfolio	Paper	Total
Subtotal	0	15	15	0	0	70	100
Basic Ability	0	0	0	0	0	0	0
Technical Ability	0	15	15	0	0	70	100
Interdisciplinary Ability	0	0	0	0	0	0	0

Toyama College		Year	2021		Course Title	Biological Information Engineering
Course Information						
Course Code	0042		Course Category	Specialized / Elective		
Class Format	Lecture		Credits	Academic Credit: 2		
Department	Control Information Systems Engineering Course		Student Grade	Adv. 2nd		
Term	First Semester		Classes per Week	2		
Textbook and/or Teaching Materials						
Instructor	Tsukada Akira					
Course Objectives						
After learning this course the students should be able to: 1. Describe the foundations of electroencephalography. 2. Perform quantitative measurement of electroencephalography by their own design and implement system. 3. Understand the fundamental digital signal processing and apply some filters to the wave.						
Rubric						
		Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)		
Evaluation 1		Be able to describe the electroencephalography in detail.	Be able to describe the foundations of electroencephalography.	Be not able to describe the foundations of electroencephalography.		
Evaluation 2		Be able to perform quantitative measurement of electroencephalography by their own implement system.	Be able to perform quantitative measurement of electroencephalography	Be not able to perform quantitative measurement of electroencephalography		
Evaluation 3		Be able to describe the digital signal processing well and apply some filters to the wave with effect.	Be able to describe the digital signal processing and apply a filter to the wave.	Be not able to describe the digital signal processing		
Assigned Department Objectives						
ディプロマポリシー B-5 JABEE B5						
Teaching Method						
Outline	One of the biological engineering purposes is to find ways in which the structures and functions of living organisms can be used as models for the design and engineering of materials and machines. This subject focuses on biomedical measurement, beginning with study of electroencephalography(EEG), following to design and implement the measurement devices, following to data acquisition and finally to retrieval and analysis.					
Style	Lectures led by both teacher and students Design, implement and experimentation by students Presentations by students					
Notice	Prerequisite: Knowledge of op-amp based circuit, digital signal processing, programming. This subject is open to students having an interest in biological engineering and information system design with the responsibility to carry out a team project. The recognition of credit requires 60 points or more rating.					
Characteristics of Class / Division in Learning						
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class		<input type="checkbox"/> Instructor Professionally Experienced
Course Plan						
			Theme	Goals		
1st Semester	1st Quarter	1st	Guidance	(1) Bio-Information Engineering (2) Outline of the subject		
		2nd	About electroencephalographs(EEG)	Study of electroencephalography(EEG) and its measurement system		
		3rd		Research of recent developments in applying EEG		
		4th	Measurement of EEG	Study of instrumentation amplifier		
		5th		Study of analogue filters		
		6th	Data aquisition	Study of analog-to-digital converter		
		7th		Study of digital signal processing, suach as FIR filter, FFT and coherent averaging		
		8th	Course Project - Implementation of EEG measurement system	Plan and discuss the development of the measurement system with teamwork		
	2nd Quarter	9th		Understand an individual role in the team and work with responsibility		
		10th		Understand an individual role in the team and work with responsibility		
		11th		Understand an individual role in the team and work with responsibility		
		12th	Measurement of EEG	Measurement of EEG or investigation of failure cause		
		13th	Data analysis	Data analysis and concideration		

		14th	Results briefing	Presentation and discussion		
		15th	Final exam	Final exam		
		16th	Summary	Summarize the study content and confirm grades		
Evaluation Method and Weight (%)						
	Examination	Experimental Participation and Presentation	Behavior	Portfolio	Other	Total
Subtotal	40	60	0	0	0	100
Basic Ability	10	0	0	0	0	10
Technical Ability	30	50	0	0	0	80
Interdisciplinary Ability	0	10	0	0	0	10

Toyama College		Year	2021	Course Title	Network System
Course Information					
Course Code	0043		Course Category	Specialized / Elective	
Class Format	Lecture		Credits	Academic Credit: 2	
Department	Control Information Systems Engineering Course		Student Grade	Adv. 2nd	
Term	First Semester		Classes per Week	2	
Textbook and/or Teaching Materials	CISCO CCENT/CCNA Routing and Switctychng ICND1v3.0(SHOEISHA)				
Instructor	Aso Tsukasa				
Course Objectives					
Through this course, understanding of the following will be facilitated. (1) The roles of switching devices on TCP/IP architecture (2) Design of IP addressing with the subnet in an IP network (3) Establishing a networking in a virtual LAN environment with switching technologies 本講義を通じて、次の項目を理解することを目標とします。 (1) TCP/IPアーキテクチャに対応付けて、ネットワーク構成に必要な中継機器の役割を説明できる。 (2)サブネットを含むIPネットワークのIPアドレスの計算ができる。 (3)スイッチを用いてVLANを含むネットワーク設定ができる。					
Rubric					
	Ideal Level of Achievement (Very Good)		Standard Level of Achievement (Good)		Unacceptable Level of Achievement (Fail)
Evaluation 1	Clearly understands TCP/IP architecture and the overview of protocols, and displays the ability to explain the role of each protocol in detail. TCP/IP階層とプロトコルの全体像、並びに個々のプロトコルの役割について詳細を説明できる。		Ability to explain the overview and concept of TCP/IP architecture and the roles of protocols. TCP/IPの各階層とプロトコルについての全体像と概念、および役割について説明できる。		Unable to explain the TCP/IP architecture and protocols. TCP/IPの各階層とプロトコルを説明できない。
Evaluation 2	Clearly understands the network devices in IP networking, and displays the ability to make a plan for IP addressing and subnetting in the network. IPネットワーク構成に必要な中継機器を理解して、サブネットを含むIPアドレス計算ができる。		Ability to explain the network devices of IP networking in general. Can carry out calculations to assign IP address in the IP network. IPネットワークを構成する中継機器について説明でき、IPアドレスの計算を行える。		Unable to explain IP networking and IP addressing. IPネットワークの構成やIPアドレスについて説明できない。
Evaluation 3	Clearly understands virtual LAN networking and displays the ability to configure virtual LAN networks on switches. VLANの概念を理解しており、スイッチを用いて、VLANを含むネットワーク設定ができる。		Ability to explain LAN networks without virtual LANs. Can carry out configurations of LANs on switches without virtual LANs. VLANを含まないネットワーク構成について説明でき、スイッチを用いて、VLANを含まないLANを構成することができる。		Unable to carry out the fundamental procedure to configure a LAN using switches. LANを構成するためのスイッチを用いた基本的な手順を実行することができない。
Evaluation 4	Clearly understands the role of routing devices and displays the ability to propose and configure routing devices used for routing control between LANs. ルータの役割を理解しており、ルータへの適切な経路制御を設計して設定することができる。		Ability to configure the routing control of routing devices according to the given specifications. ルータに指定された経路制御を設定することができる。		Unable to carry out the fundamental procedure for configuring routing devices. ルータへの経路制御設定を行うことができない。
Assigned Department Objectives					
ディプロマポリシー B-5 JABEE B5					
Teaching Method					
Outline	Networking is one of the foundational technologies in system development. In this course, you will learn about the principles and fundamental techniques required for designing and implementing network systems. This course consists of lectures and practices that are organized to facilitate the learning of practical methods of networking with layer 2 and layer 3 switches. ネットワークはシステム開発において欠くことのできない技術である。本講義では、ネットワーク構築に必要な知識と通信制御のための技術について学ぶ。座学と演習の両面で、スイッチやルータを用いたネットワーク設計と構築の手順を踏まえながら実践的な知識を深める。				
Style	(1)For the purpose of understanding the procedure of designing networks, lectures and exercises facilitate the learning of practical methods of configurations. (2)For the purpose of learning practical methods of networking, students are required to build networks according to the specification of assigned network configurations. (1)構築過程を明確に意識させるために、設計を座学として行い、その実装を演習として行う。 (2)課題を設定して、その実現に取り組み、ネットワーク設定と実践的なネットワーク構築を行う。				
Notice					
Characteristics of Class / Division in Learning					
<input type="checkbox"/> Active Learning		<input type="checkbox"/> Aided by ICT		<input type="checkbox"/> Applicable to Remote Class	
				<input type="checkbox"/> Instructor Professionally Experienced	
Course Plan					
		Theme		Goals	

1st Semester	1st Quarter	1st	Guidance ガイダンス	Guidance: Discuss the goals and structure of this course. 講義の目的と進め方について理解する。
		2nd	Networking fundamentals -1- ネットワーク構築基礎-1	Introduce TCP/IP networking and IP addressing. TCP/IP階層の概要とIPアドレスについて説明できる。
		3rd	Networking fundamentals -2- ネットワーク構築基礎-2	Learn the role of the MAC address in Ethernet LAN, data packet structures and concepts of VLAN. イーサネットLANにおけるMACアドレスの役割およびデータパケットの構成とVLANの概念について説明できる。
		4th	Networking fundamentals -3- ネットワーク構築基礎-3	Learn about designing and implementing route information on the network. ネットワークでの経路情報の設計とその実装方法について説明できる。
		5th	Exercise in fundamental networking -1- ネットワーク構築演習-1	Perform exercise to apply current knowledge for designing LANs without VLAN. ここまでの内容を応用して、VLANを含まないLANを設計することができる。
		6th	Exercise in fundamental networking -2- ネットワーク構築演習-2	Perform exercise to apply current knowledge for designing VLANs. ここまでの内容を応用して、VLANを構築を構築することができる。
		7th	Review of fundamental networking 学習内容の確認	Midterm examination to assess current ability. ここまでの内容について確認試験により確認する。
		8th	Technology trends in networking and applications. ネットワークの技術動向	Introduction to the trends in networking and application technology. 最近のネットワーク応用技術について概要を説明することができる。
	2nd Quarter	9th	Practical applications of networks -1- ネットワーク構築実習-1	Practical training in setting methods required for LAN configurations using switches (1). スイッチを用いてLAN構成に必要な設定方法に沿って、ネットワーク構築ができる。
		10th	Practical applications of networks -2- ネットワーク構築実習-2	Practical training for LAN and switches (2). スイッチを用いてLAN構成に必要な設定方法に沿って、課題実習の仕様に応じた設定を行うことができる。
		11th	Summary of the practical applications of networks (1,2) ネットワーク構築演習1,2のまとめ	Confirm exercise contents, write reports and check (1,2). 演習内容を確認し、報告書の作成通じて定着を図る。
		12th	Practical applications of networks -3- ネットワーク構築実習-3	Practical exercise in setting-up networking equipment (3). ネットワーク機器の設定方法の実習を行い、実践的な課題の仕様に沿ったネットワークを構築できる。
		13th	Practical applications of networks -4- ネットワーク構築実習-4	Practical exercise on building and setting a LAN network (4). ネットワーク機器の設定によりLANを構築する実習課題を通じて、実践的な設定内容を提案して設定することができる。
		14th	Summary of the practical applications of networks (3,4) ネットワーク構築実習3,4のまとめ	Confirm exercise contents, write reports and check (3,4). 実習内容を確認し、報告書を作成を通じてまとめる。
		15th	Final exam. 期末試験	Final examination. 学習内容に関する試験を行う。
		16th	Summary 講義のまとめ・成績評価・確認	Summarize the study content and confirm grades. 学習内容の要約を行う。成績確認を行う。

#### Evaluation Method and Weight (%)

	Examination	Presentation	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	80	20	0	0	0	0	100
Basic Ability	40	10	0	0	0	0	50
Technical Ability	40	10	0	0	0	0	50
Interdisciplinary Ability	0	0	0	0	0	0	0