

Academic Year 2023

Program for Leading Graduate Schools

HIGO program

Health life science: Interdisciplinary and Glocal Oriented

Syllabus

URL: <https://higoprogram.jp/en/>

**The Graduate School of Medical Sciences
The Graduate School of Pharmaceutical Sciences**

Kumamoto University

The class timetable

	Oe Campus	Honjyo Campus	Kurokami Campus
1st period	8:40 - 10:10	8:45 - 10:15	8:40-10:10
2nd period	10:20 - 11:50	10:30 - 12:00	10:25-11:55
3rd period	12:50 - 14:20	13:15 - 14:45	12:55-14:25
4th period	14:30 - 16:00	15:00 - 16:30	14:40-16:10
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6th period	18:30 - 20:00	18:30 - 20:00	18:10-19:40

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HIGO Infection and Immune Control 2 3

HIGO Human brain functional Science 2 5

HIGO Neuroscience 2 6

HIGO Developmental and Regenerative Medicine 2 8

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HIGO Metabolic and Circulatory Regulations 3 4

HIGO Reproductive and Developmental Medicine 3 6

HIGO Advances in Oncologic Medicine 3 8

HIGO The Forefront of Clinical Oncology 3 9

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HIGO Palliative Care 4 5

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HIGO Environmental and Socio-medical Sciences 4 8

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1. HIGO Courses, Credits and How to Apply

HIGO Program Advanced Course (Graduate School of Medical Sciences)

Subjects		Credits		How to take credits	Others
		Compulsory	Elective		
HIGO Governmental Seminar Series II		1			
HIGO Business Seminar Series II		2			
HIGO Chinese course II			1	2 credits or more	
HIGO English course II			1		
HIGO Japanese course II			1	※	
HIGO Governmental Internship II			1	3 credits or more	
HIGO Business Internship II			1		
HIGO Overseas Internship II			1		
HIGO Research presentation			1		
Career Vision Development Course	HIGO Public Policy I		2	4 credits	
	HIGO Public Policy II		2		
	HIGO Technology and Organizational Management I		2		
	HIGO Technology and Organizational Management II		2		
	HIGO Cross-cultural Communication I		2		
	HIGO Cross-cultural Communication II		2		
HIGO Social and Cultural Sciences tutorial		2			
HIGO Cutting-Edge Seminar Series II		6			
HIGO Cutting-Edge Research Project II		10			

※ Need to take language subjects conducted in language except for your mother tongue.

HIGO Program Four-Year Course (Graduate School of Medical Sciences)

Subjects		Credits		How to take credits	Others	
		Compulsory	Elective			
HIGO Environmental and Sociomedical Sciences		2		3 credits or more ※1	Graduate School of Medical Sciences	
HIGO Medical Informatics and Medical Ethics			2			
HIGO Pathophysiology and Structural Biochemistry of Biomolecules			2			
HIGO Cell Biology			2			
HIGO Hematopoietic and Immune Systems			2			
HIGO Infection and Immune Control			2			
HIGO Human Brain Functional Science			2			
HIGO Neuroscience			2			
HIGO Developmental and Regenerative Medicine			2			
HIGO Current Theory of Medical Diagnosis			2			
HIGO Advanced Therapeutics			2			
HIGO Metabolic and Circulatory Regulations			2			
HIGO Reproductive and Developmental Medicine			2			
HIGO Advances in Oncologic Medicine			2			
HIGO The Forefront of Clinical Oncology			2			
HIGO Restorative Medicine			2			
HIGO Cancer therapeutics			2			
HIGO Palliative Care			2			
HIGO The Theory of Clinical Research			2			
HIGO Advanced Organic Chemistry			1			
HIGO Advanced Biophysical Chemistry			1	3 credits or more ※1	Graduate School of Pharmaceutical Sciences	
HIGO Advanced Drug Methodology			1			
HIGO Advanced Biopharmaceutics			1			
HIGO Advanced membrane physiology			1			
HIGO Clinical Pharmacy Advanced Course			1			
HIGO Advanced Drug Delivery System			1			
HIGO Advanced Medical Sciences			1			
HIGO Advanced Practical Training of Pharmaceutical			1			
HIGO Advanced Pharmaceutical Biochemistry			1			
HIGO Advanced Organic Synthesis			1			
HIGO Advanced Natural Products Chemistry			1			
HIGO Advanced Molecular Embryology			1			
HIGO Advanced Developmental Genetics			1			
HIGO Paper Research on Pharmaceutical Health Care			1			
HIGO Pharmacoepidemiology			1			
HIGO Introduction of Healthcare Management			1			
HIGO Advanced Medical and Pharmaceutical Sciences			1			
HIGO Advanced Pharmaceutical Development and Production			1			
HIGO Special lectures by clinical professors concerning pharmacy specialists			1			
HIGO Translational Basic Studies			1			
HIGO Principles of Social and Cultural Sciences		2				
HIGO Practical Training		1				
HIGO Governmental Seminar Series		1				
HIGO Business Seminar Series		1				
HIGO Chinese course			1	1 credit or more ※2		
HIGO English course			1			
HIGO Japanese course			1			
HIGO Governmental Internship			1	3 credits or more		
HIGO Business Internship			1			
HIGO Overseas Internship			1			
HIGO Research presentation			1			
Career Vision Development Course	HIGO Public Policy I		2	4 credits or more		
	HIGO Public Policy II		2			
	HIGO Technology and Organizational Management I		2			
	HIGO Technology and Organizational Management II		2			
	HIGO Cross-cultural Communication I		2			
	HIGO Cross-cultural Communication II		2			
HIGO Social and Cultural Sciences tutorial		2				
HIGO Leadership Training Course		1				
HIGO Cutting-Edge Seminar Series		2				
HIGO Cutting-Edge Research Project		10				

※1 Need to 1 or more credits from the subjects conducted both in Graduate School of Medical Sciences and in Graduate School of Pharmaceutical Sciences.

※2 Need to take language subjects conducted in language except for your mother tongue.

HIGO Program Advanced Course (Graduate School of Pharmaceutical Sciences)

Subjects		Credits		How to take credits	Others
		Compulsory	Elective		
HIGO Governmental Seminar Series II		1			
HIGO Business Seminar Series II		2			
HIGO Chinese course II			1	2 credits or more ※1	
HIGO English course II			1		
HIGO Japanese course II			1		
HIGO Governmental Internship II			1	3 credits or more	
HIGO Business Internship II			1		
HIGO Overseas Internship II			1		
HIGO Research presentation			1		
Career Vision Development Course	HIGO Public Policy I		2	4 credits	
	HIGO Public Policy II		2		
	HIGO Technology and Organizational Management I		2		
	HIGO Technology and Organizational Management II		2		
	HIGO Cross-cultural Communication I		2		
	HIGO Cross-cultural Communication II		2		
HIGO Social and Cultural Sciences tutorial		2			
HIGO Cutting-Edge Seminar Series II		6			
HIGO Cutting-Edge Research Project II		10			

※1 Need to take language subjects conducted in language except for your mother tongue.

(Doctoral Course) Registration Application
(HIGO Program Advanced Course)

()year/month/day

Dean, The Graduate School of Medical Sciences

Year entered:

Name :

Student number: _____

E-mail address:

Here, I would like to register for the following subjects.

Department		Supervisor	stamp
Course	Advanced Course		

【Compulsory subjects】

Subjects	Credit	Opening	Instructor	Other
HIGO Governmental Seminar Series II	1	1-4 grade		
HIGO Business Seminar Series II	2	1-4 grade		
HIGO Social and Cultural Sciences tutorial	2	1-4 grade		
HIGO Cutting-Edge Seminar Series II	6	1-4 grade		
HIGO Cutting-Edge Research Project II	1 0	1-4 grade		
Total	2 1			

【Elective subjects Language】 2 credits from HIGO Japanese course, HIGO English course, HIGO Chinese course (Other than native language)

Subjects	Credit	Opening	Instructor	Other
	1	1-4 grade		
	1	1-4 grade		
Total	2			

【Elective subjects I 】 3 credits or more from Internship and Research Presentation

Subjects	Credit	Opening	Instructor	Other
	1	1-4 grade		
	1	1-4 grade		
	1	1-4 grade		
	1	1-4 grade		
Total				

【Elective subjects II】 4 credits or more from Public Policy(I and II), Technology and Organizational Management(I and II) and Cross-cultural Communication(I and II)

Subjects	Credit	Opening	Instructor	Other
	2	1-4 grade		
	2	1-4 grade		
	2	1-4 grade		
Total				

Need to take 30 or more credits from the subjects opened in your school years.

**(Doctoral Course) Registration Application
(HIGO Program Four-year Course)**

()year/month/day

Dean, The Graduate School of Medical Sciences

Year entered: _____

Name : _____

Student number: _____

E-mail address: _____

Here, I would like to register for the following subjects.

Department		Supervisor	<div style="border: 1px solid black; padding: 2px;">stamp</div>
Course	Four-year Course		

【Compulsory subjects】

Subjects	Credit	Opening	Instructor	Other
HIGO Environmental and Sociomedical Sciences	2	1-4 grade		
HIGO Principles of Social and Cultural Sciences	2	1-4 grade		
HIGO Practical Training	1	1-4 grade		
HIGO Governmental Seminar Series	1	1-4 grade		
HIGO Business Seminar Series	1	1-4 grade		
HIGO Social and Cultural Sciences tutorial	2	1-4 grade		
HIGO Leadership Training Course	1	1-4 grade		
HIGO Cutting-Edge Seminar Series	2	1-4 grade		
HIGO Cutting-Edge Research Project	1 0	1-4 grade		
Total	2 2			

【Elective subjects Language】 1 credit or more from HIGO Japanese course, HIGO English course, HIGO Chinese course (Other than native language)

Subjects	Credit	Opening	Instructor	Other
	1	1-4 grade		
	1	1-4 grade		
Total				

【Elective subjects I】 3 credits or more from Internship and Research Presentation

Subjects	Credit	Opening	Instructor	Other
	1	1-4 grade		
	1	1-4 grade		
	1	1-4 grade		
	1	1-4 grade		
Total				

【Elective subjects II】 4 credits from Public Policy(I and II), Technology and Organizational Management(I and II) and Cross-cultural Communication(I and II)

Subjects	Credit	Opening	Instructor	Other
	2	1-4 grade		
	2	1-4 grade		
	2	1-4 grade		
Total				

【Elective subjects III】 3 credits from lecture course of Medical Sciences and Pharmaceutical Sciences

Need to take 1 or more credits from the subjects conducted both in Graduate School of Medical Sciences and in Graduate School of Pharmaceutical Sciences.

Subjects	Credit	Opening	Instructor	Other
		1-4 grade		
		1-4 grade		
		1-4 grade		
		1-4 grade		
		1-4 grade		
		1-4 grade		
Total				

Need to take 33 or more credits from the subjects opened in your school years.

(Doctoral Course) Registration Application (HIGO Program Advanced Course)

()year/month/day

Dean, The Graduate School of Pharmaceutical Sciences

Year entered: _____

Name : _____

Student number: _____

E-mail address: _____

Here, I would like to register for the following subjects.

Department		Supervisor	<div style="border: 1px solid black; padding: 2px;">stamp</div>
Course	Advanced Course		

【Compulsory subjects】

Subjects	Credit	Opening	Instructor	Other
HIGO Governmental Seminar Series II	1	1-4 grade		
HIGO Business Seminar Series II	2	1-4 grade		
HIGO Social and Cultural Sciences tutorial	2	1-4 grade		
HIGO Cutting-Edge Seminar Series II	6	1-4 grade		
HIGO Cutting-Edge Research Project II	1 0	1-4 grade		
Total	2 1			

【Elective subjects Language】 2 credit or more from HIGO Japanese course, HIGO English course, HIGO Chinese course (Other than native language)

Subjects	Credit	Opening	Instructor	Other
	1	1-4 grade		
	1	1-4 grade		
Total				

【Elective subjects I】 3 credits or more from Internship and Research Presentation

Subjects	Credit	Opening	Instructor	Other
	1	1-4 grade		
	1	1-4 grade		
	1	1-4 grade		
	1	1-4 grade		
Total				

【Elective subjects II】 4 credits from Public Policy(I and II), Technology and Organizational Management(I and II) and Cross-cultural Communication(I and II)

Subjects	Credit	Opening	Instructor	Other
	2	1-4 grade		
	2	1-4 grade		
	2	1-4 grade		
Total				

Need to take 30 or more credits from the subjects opened in your school years.

2. Lecture Course

(Graduate School of Medical Sciences)

Subject Code

Subjects	Subject Code		Course Start Date	Room
	Medical Sciences	Pharmaceutical Sciences		
HIGO Medical Informatics and Medical Ethics	24000	09105	June 1	e-learning only
HIGO Pathophysiology and Structural Biochemistry of Biomolecules	24010	09110	June 1	e-learning only
HIGO Cell Biology	24020	09115	June 1	e-learning only
HIGO Hematopoietic and Immune Systems	24030	09120	June 1	e-learning only
HIGO Infection and Immune Control	24040	09125	June 1	e-learning only
HIGO Human Brain Functional Science	24050	09130	June 1	e-learning only
HIGO Neuroscience	24060	09135	June 1	e-learning only
HIGO Developmental and Regenerative Medicine	24070	09140	June 1	e-learning only
HIGO Current Theory of Medical Diagnosis	24080	09145	June 1	e-learning only
HIGO Advanced Therapeutics	24090	09150	June 1	e-learning only
HIGO Metabolic and Circulatory Regulations	24100	09155	October 13	Mainly e-learning, Some part of face-to-face lecture
HIGO Reproductive and Developmental Medicine	24110	09160	October 5	Mainly face-to-face lecture,Some part of e-learning
HIGO Advances in Oncologic Medicine	24120	09165	October 3	Mainly e-learning, Some part of face-to-face lecture
HIGO The Forefront of Clinical Oncology	24130	09170	June 1	e-learning only
HIGO Restorative Medicine	24140	09175	June 1	e-learning only
HIGO Cancer therapeutics	24150	09180	June 1	e-learning only
HIGO Paliative Care	24160	09185	June 1	e-learning only
HIGO The Theory of Clinical Research	24170	09190	June 1	e-learning only
HIGO Environmental and Sociomedical Sciences	24075		June 16	Mainly face-to-face lecture,Some part of e-learning

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-000-81-2	2023whole year	Graduate School of Medical Sciences (24000)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Medical Informatics and Medical Ethics(A1 Medical Informatics and Medical Ethics)			KADOOKA Yasuhiro, KASAOKA Shunji, NAKAMURA Taishi, USUKU Koichiro		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……25% 2.Profound inter-disciplinary knowledge ……25% 3.Global perspective and ability to take initiative action ……25% 4.Social leadership drive ……25%					
Type of Class(授業の形態)		Lecture and Seminar			
Teaching Method(授業の方法)		The course is provided by lecture and discussion or e-Learning using the moodle or CITI Japan.			
Course Goals(授業の目的)		Medical Informatics and Medical Ethics aims at proper management of health information and ethical problems arose from medical practice. In this course, you learn basic concepts used in this filed, including electronic health records, protection of computer-processed personal data, health care system in Japan and other countries, evaluation of medical care and DPC, problems of abortion, euthanasia and death with dignity, informed consent, principle of ethics. This course serves as introductory for all students as you obtain essential knowledge on medical informatics and medical ethics, and emergency medicine.			
Course Learning goals(学修目標)		【A level (A水準)】 To be able to handle or manage health information and ethical problems arose from medical practice. 【C level (C水準)】			
Course Outline(授業の概要)		In order to explain basic principles of medical informatics and medical ethics, it is discussed how the problems are managed. Basic concepts are introduced. More specifically, you are expected to understand the followings: (1) electronic health records; (2) protection of computer-processed personal data; (3) information literacy; (4) ethical issues at the beginning of life; (5) ethical issues at the end of life; (6) informed consent, privacy and principle of ethics, (7) research, high technology medicine and ELSIs, (8) emergency medical service system and (9)disaster medicine. Participants are requested to learn medical ethics through e-learning system offered by the project of Collaborative Institutional Training Initiative (CITI) Japan, or submit a short comment on some lectures, which will be helpful to provide positive feed back to the next session.			
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		6th period Yasuhiro Kadooka 【eEJ-0】 Class Orientation and eAPRIN	Introduction and orientation of this course Responsible Conduct of Research_RCR Research Misconduct_RCR		
2		6th period eAPRIN 【eEJ-0】	Data Handling_RCR / Rules for Collaborative Research_RCR / Conflicts of Interest_RCR		
3		4th period eAPRIN 【eEJ-0】	Authorship_RCR / Plagiarism(Biomedical)_RCR / Communicating Information to the Public_RCR		
4		4th period eAPRIN 【eEJ-0】	Peer Review(Biomedical)_RCR / Mentoring_RCR / Managing Public Research Funds_RCR		
5		4th period eAPRIN 【eEJ-0】	The History and Principles of Bioethics, and the Development of Its Rules_HSR / Review by an Institutional Review Board (IRB)_HSR / Handling Personal Information in Research_HSR		
6		4th period eAPRIN 【eEJ-0】	Genomic and Genetic Analysis Studies in Human Populations_HSR / Group Harm Arising from Research_HSR / Informed Consent in Research_HSR		
7		4th period eAPRIN 【eEJ-0】	Research Subjects Who Merit Special Considerations_HSR / Records-Based Research_HSR / Social and Behavioral Research for Biomedical Researchers_HSR		
8		4th period eAPRIN 【eEJ-0】	International Studies_HSR / The Ethics of Pluripotent Stem Cell Research I_HSR / The Ethics of Pluripotent Stem Cell Research II_HSR		
9		4th period eAPRIN 【eEJ-0】	Digest: Human Subjects Research_HSR / Care and Use of Laboratory Animals Module 1 Basic Knowledge of Animal Experiments_ACU / Care and Use of Laboratory Animals Module 2 What You Should Consider When Conducting Animal Experiments_ACU		
10		4th period Taishi Nakamura and Koichiro Usuku 【eJ-0】	Health care system in Japan and in the world		
11		4th period Taishi Nakamura and Koichiro Usuku 【eEJ-0】	Future prospects of Electronic medical records, Clinical research and data ware house		
12		4th period Shunji Kasaoka 【eE-0】 【eJ-0】	Emergency Medical Service System, Post-Cardiac Arrest Syndrome		
13		4th period Shunji Kasaoka 【eE-0】 【eJ-0】	Disaster Medicine, Triage		
14		4th period Yasuhiro Kadooka	Step up Lecture for Research Ethics (1)		
15		4th period Yasuhiro Kadooka	Step up Lecture for Research Ethics (2)		

Estimated out-of-class study time	This subject requires 90 hours of study, and the class is 30 hours. Therefore pre- and post-study on tasks equivalent to 60 hours is necessary to deepen the understanding of the class.
Required Textbook(テキスト)	Textbooks are not specified, and handouts will be distributed by the moodle system.
Reading List(参考文献)	Provided in the lectures.
Enrollment Conditions(履修条件)	No prerequisite.
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on active class participation, paper summaries, and the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and questions related to the topics dealt with in class to be scored from grade 1 to 5. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions.
Language Used in Instruction(使用言語)	Japanese and English
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験を活かした授業)	Applicable

Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-001-79-2	2023whole year	Graduate School of Medical Sciences (24010)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Pathophysiology and Structural Biochemistry of Biomolecules(B1)			BABA Masaya, YAMAGATA Kazuya, YAMANAKA Kunitoshi, ARIMA Yuichiro, MIHARADA Kenichi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……30% 2.Profound inter-disciplinary knowledge ……30% 3.Global perspective and ability to take initiative action ……30% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint will be used in the lectures, and active participation in the discussion is encouraged.				
Course Goals(授業の目的)	(1)To understand the pathophysiology of hypertension, cardiac hypertrophy, and atherosclerosis, and the therapeutic strategy of these cardiovascular diseases. (2)To understand the basic knowledge of glucose/lipid metabolism and its dysregulation in diabetes mellitus, metabolic syndrome, and lipid metabolism disorder. (3) Molecular basis, various cellular functions, and roles of ATPases, especially AAA family proteins, in human diseases will be learnt. (4) To understand the mechanisms for protein quality control in cells and its implications in diseases (5) To understand the role of hypoxia signaling pathway, mTOR signaling pathway and metabolite signaling in diseases				
Course Learning goals(学修目標)	【A level (A水準)】 To understand the detailed findings of the structure, function, physiological role, role in various diseases, and clinical application of biomolecule, and to be able to apply them to the study. 【C level (C水準)】 To understand the structure, function, physiological role, role in various diseases, and clinical application of biomolecule.				
Course Outline(授業の概要)	(1) You will learn the mechanism for the regulation of oxidative stress and its signaling cascades. (2) You will learn fundamental metabolic pathways under normal conditions and its relationship to pathology. (3) Proteins are biopolymers containing functional motifs and domains. Molecular chaperones and ATP-dependent proteases are related to life of proteins and consist of several different types of ATPases. Their functions will be discussed from the point of view of ATPases. In particular, common molecular basis and various cellular functions of AAA family proteins will be discussed. In addition, human genetic diseases and developmental disorders of model animals caused by mutations in AAA family proteins will be described. (4) You will learn how quantity and quality of functional proteins is maintained at the desired levels, and molecular mechanisms of unfolded protein response. Furthermore,you will learn how its disruption is implicated in various diseases. (5)You will learn the role of hypoxia signaling pathway, mTOR signaling pathway and metabolite signaling in diseases				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		ARIMA Yuichiro 【eEJ-0】	Pathophysiology of cardiovascular diseases (1)		
2		ARIMA Yuichiro 【eEJ-0】	Pathophysiology of cardiovascular diseases (2)		
3		ARIMA Yuichiro 【eJ-0】	Hypertension and hyperglycemia during pregnancy		
4		YAMAGATA Kazuya 【eEJ-0】	Pathophysiology of glucose/lipid metabolism (1)		
5		YAMAGATA Kazuya 【eEJ-0】	Pathophysiology of glucose/lipid metabolism (2)		
6		YAMAGATA Kazuya 【eEJ-0】	Pathophysiology of glucose/lipid metabolism (3)		
7		YAMANAKA Kunitoshi 【eEJ-0】	ATPases related to life of proteins		
8		YAMANAKA Kunitoshi 【eEJ-0】	Various functions of AAA proteins		
9		YAMANAKA Kunitoshi 【eEJ-0】	Human diseases caused by AAA proteins		
10		MIHARADA Kenichi 【eJ-0】	Growth factors and receptors in cancer		
11		MIHARADA Kenichi 【eJ-0】	Cell signaling in cancer		
12		MIHARADA Kenichi 【eJ-0】	Molecular targeted therapy in cancer		
13		BABA Masaya 【eJ-0】	Hypoxia signaling pathway and disease		
14		BABA Masaya 【eJ-0】	mTOR signaling pathway and disease		
15		BABA Masaya 【eJ-0】	metabolite signaling and disease		
Estimated out-of-class study time					
Required Textbook(テキスト)		Textbooks are not specified, and handouts will be distributed in some classes.			
Reading List(参考文献)		“Harper's Illustrated Biochemistry” by Robert K. Murray, Daryl K. Granner, Victor W. Rodwell, The McGraw-Hill Companies, 2006 “Handbook of Lipoprotein Testing” by Nader Rifal et al., AACCC Press, 2000			
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		The students' understanding will be evaluated comprehensively based on the quality of report. Students must select one area from all attended courses and submit its report to the Student Affairs Section.			

Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験を 活かした授業)	Not applicable

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-002-79-2	2023whole year	Graduate School of Medical Sciences (24020)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Cell Biology(B2)			IWAMOTO Kazuya, TOMIZAWA Kazuhito, BUNDO Miki, ONO Yusuke, TATEISHI Satoshi, NAKAO Mitsuyoshi, Hino Shinjiro, NAKACHI Yutaka		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……75% 2.Profound inter-disciplinary knowledge ……20% 3.Global perspective and ability to take initiative action ……5%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	Face-to face lecture & E-learning lecture				
Course Goals(授業の目的)	The students understand the various biological phenomena such as development/regeneration, cancer, aging, psychiatric disorders, molecular genetics, and stem cells based on cellular functions.				
Course Learning goals(学修目標)	【A level (A水準)】 The students can understand the various biological phenomena including development/regeneration, cancer, aging, psychiatric disorders, molecular genetics, and stem cells at the molecular level. In addition, they can understand and discuss the latest topics. 【C level (C水準)】 The students can understand the various biological phenomena including development/regeneration, cancer, aging, psychiatric disorders, molecular genetics, and stem cells at the molecular level.				
Course Outline(授業の概要)	The topics of this course include development/regeneration, cancer, aging, psychiatric disorders, molecular genetics, and stem cells. The teachers give lectures on basic knowledge and current status of each topic, based on their specialty.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Kazuhito Tomizawa [eE-0, eJ-0]	Regulation in physiology and pathophysiology		
2		Kazuhito Tomizawa [eE-0, eJ-0]	Regulation by protein phosphorylation		
3		Shinjiro Hino [eE-0, eJ-0]	Cross talk between metabolism and epigenome		
4		Yusuke Ono [eE-0, eJ-0]	Stem cells and tissue regeneration/adaptation I		
5		Yusuke Ono [eE-0, eJ-0]	Stem cells and tissue regeneration/adaptation II		
6		Yutaka Nakachi [eE-0, eJ-0]	Osteoblasts and Osteoclasts I		
7		Yutaka Nakachi [eE-0, eJ-0]	Osteoblasts and Osteoclasts II		
8		Miki Bundo [eE-0, eJ-0]	Single cell analysis of brain functions		
9		Mitsuyoshi Nakao [eJ-0, eE-0]	Medical epigenetics I (General remarks)		
10		Mitsuyoshi Nakao [eJ-0, eE-0]	Medical epigenetics II		
11		Kazuya Iwamoto [eE-0, eJ-0]	Neuroepigenetics I		
12		Kazuya Iwamoto [eE-0, eJ-0]	Neuroepigenetics II		
13		Satoshi Tateishi [eEJ-0]	Cell growth and cell cycle		
14		Satoshi Tateishi [eEJ-0]	About Mitosis and Meiosis		
15		Satoshi Tateishi [eEJ-0]	DNA repair and recombination		
Estimated out-of-class study time	This course consists of content that requires 90 hours of study. Since the class is 30 hours, 60 hours of pre- and post-study (including assignments) is necessary to understand the class.				
Required Textbook(テキスト)	Not specified.				
Reading List(参考文献)	「Pathophysiology of Disease: An Introduction to Clinical Medicine, 6th Edition」 edited by Stephan J. McPhee and William F. Ganong, The McGraw-Hill Companies (2009) 「Developmental Biology, 10th Edition」 edited by Scott F Bilbert. Sinauer Associates Inc. (2013) 「Essential Cell Biology, 4th edition」 edited by Bruce Alberts et al. Garland Science, (2013) 「EPIGENETICS」 edited by David Allis et al. Cold Spring Harbor Laboratory Press (2007)				
Enrollment Conditions(履修条件)	Should have the basic knowledge of cell biology.				
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on the understanding of the course subject matter. The understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions.				
Language Used in Instruction(使用言語)	Japanese and English				
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English				
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable				

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-003-79-2	2023whole year	Graduate School of Medical Sciences (24030)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Hematopoietic and Immune Systems(B3 Hematopoietic and Immune Systems)			OKADA Seiji, OGUCHI Hiroto, SASHIDA Goro, SATO Yorifumi, OSHIUMI Hiroyuki, KOGA Saori, OGAWA Minetaro, IRIE Atsushi, SUZU Shinya, TAKIZAWA Hitoshi, NOMURA Takushi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……35% 2.Profound inter-disciplinary knowledge ……35% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	Omnibus lectures. E-learning contents are available in some lectures in both English and Japanese.				
Course Goals(授業の目的)	The goal of this lecture series is to understand the basis of hematopoietic and immune systems, and disruption of these systems (malignancy, immunodeficiency, and immune disorders).				
Course Learning goals(学修目標)	【A level (A水準)】 Understand the basics of hematopoietic and immune systems, their development, function, disruption, and related diseases and discuss about recent progress. 【C level (C水準)】 Understand the basics of hematopoietic and immune systems, their development, function, disruption, and related diseases.				
Course Outline(授業の概要)	The aims of this lecture series are to understand the followings: (1) The mechanisms how the homeostasis of hematopoietic system is maintained as a stem cell system, (2) The origin of hematopoietic system and the mechanisms of development of hematopoietic stem cells, (3) The animal model bearing human hematopoietic system and applications of this animal model, (4) Aging and tumorigenesis of hematopoietic system, (5) Cell-cell interaction in the immune system, (6) The mechanism of antigen-recognition and the immune response				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Minetaro Ogawa [eJ-0]	Ontogeny of hematopoietic system-1		
2		Minetaro Ogawa [eJ-0]	Ontogeny of hematopoietic system-2		
3		Saori Koga [eJ-0]	Ontogeny of hematopoietic system- 3		
4		Seiji Okada [eJ-0,eE-0]	Differentiation of immune cells		
5		Seiji Okada [eJ-0,eE-0]	Application of Humanized mice		
6		Goro Sashida [eEJ-0]	Molecular mechanism of myeloid malignancies		
7		Shinya Suzu [eEJ-0]	Regulation of Hematopoiesis		
8		Hitoshi Takizawa [eE-0]	Role of inflammation on hematopoiesis		
9		Yorifumi Sato [eEJ-0]	T-cell and retroviral infection		
10		Hiroto Ohguchi [eEJ-0]	Molecular pathogenesis of plasma cell neoplasm		
11		Hiroyuki Oshiumi [eJ-0]	Role of innate immune cells during viral infection		
12		Takushi Nomura [eEJ-0]	Flow cytometric analysis for T-cells		
13		Hiroyuki Oshiumi [eJ-0]	Development and function of innate lymphoid cells		
14		Takushi Nomura [eEJ-0]	T-cell responses in SARS-CoV-2 infection		
15		Atsushi Irie [eJ-0]	B cell development and function		
Estimated out-of-class study time					
Required Textbook(テキスト)		Textbooks are not specified, and handouts will be distributed.			
Reading List(参考文献)		・ "The Immune System" by Peter Parham. Garland Publishing Inc. New York and London, 2007 ・ "Janeway's Immunobiology Seventh Edition" by Kenneth Murphy, Paul Travers, Mark Walport. Garland Science, Taylor & Francis Group LLC. New York and Abingdon, 2008. ・ The Immune System, 4th Edition [Peter Parham] Garland Science ・ WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues. WHO, 2017. ・ The Science of Stem Cells. Jonathan M. W. Slack. Wiley Blackwell, 2018 ・ Williams Hematology, 9th ed. MCGRAW-HILL EDUCATION. 2016			
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		Achievement of the Objectives will be evaluated by active class participation and the reports, of which the theme will be specified after the lectures. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of the reports and brief examinations. Final grades will be based on the average of the best 10 scores of the reports and brief examinations as well as the participation in class discussions.			
Language Used in Instruction(使用言語)		English			

Textbook/Material Language(教科書・資料の言語)	English
Course Based on Practical Work Experience(実務経験を 活かした授業)	Not applicable

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-004-99-2	2023whole year	Graduate School of Medical Sciences (24040)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Infection and Immune Control(B4 Infection and Immune Control)			SATO Yorifumi, KUWATA Takeo, IKEDA Masanori, KUBOTA Ryuji, OKADA Seiji, OSHIUMI Hiroyuki, MATSUI Hirotaka, MOTOZONO Chihiro, MATSUOKA Masao, SAWA Tomohiro, Maeda Yousuke, SUZU Shinya, NAKATA Hirotomo, IKEDA Terumasa, TANAKA Yasuhito		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……30% 2.Profound inter-disciplinary knowledge ……30% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……20%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons. (Before starting this course students will be informed of the individual lecture style of instructors in detail.)				
Course Goals(授業の目的)	The aim of this lecture series “Special Lecture I on Infectious Diseases and AIDS” is to learn following topics important for basic and clinical research of infectious diseases: (1) interaction between pathogen and host response, (2) molecular pathogenesis of viral infection, (3) immune control and vaccine research, (4) management of nosocomial/opportunistic infection, (5) diagnosis and treatment of emerging/re-emerging infectious diseases, (6) pathogenesis and treatment of infectious diseases.				
Course Learning goals(学修目標)	【A level (A水準)】 Students will learn following topics important for basic and clinical research of infectious diseases. Students will learn following topics important for basic and clinical research of infectious diseases. (1) interaction between pathogen and host response,(2) molecular pathogenesis of viral infection, (3) immune control and vaccine research, (4) management of nosocomial/opportunistic infection, (5) diagnosis and treatment of emerging/re-emerging infectious diseases, (6) Pathogenesis and treatment of HIV-1 infection. 【C level (C水準)】 Understanding for the following points. (1) interaction between pathogen and host response (2) molecular pathogenesis of viral infection (3) immune control and vaccine research (4) management of nosocomial/opportunistic infection (5) diagnosis and treatment of emerging/re-emerging infectious diseases (6) Pathogenesis and treatment of HIV-1 infection				
Course Outline(授業の概要)	The course addresses the introduction (bacteriology, virology) and particulars of various pathogenic organisms (including gram-positive and negative bacteria, a DNA or RNA viruses) focusing on topics of pathogenesis, control and prevention of infectious diseases and emerging and reemerging infectious diseases. The course addresses protective immunity of host against infectious diseases including HIV-1 infection. Especially, recent topics such as the mechanism of T-cell recognition of the viral antigens, differentiation of immune cells from hematopoietic stem cells and the strategy for the development of effective vaccine against HIV-1 infection will be discussed.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Terumasa Ikeda 【eE-O】	Retrovirus life cycle		
2		Tomohiro Sawa 【eE-O】	Bacterial infection and pathogenesis		
3		Hiroyuki Oshiumi 【eE-O】	Innate immune responses to pathogens		
4		Chihiro Motozono 【eE-O】	Cellular immune responses to pathogens		
5		Takeo Kuwata 【eE-O】	Humoral immune responses to pathogens		
6		Yosuke Maeda 【eE-O】	Pathogenesis of Mycobacterium tuberculosis and HIV confection		
7		Masao Matsuoka 【eE-O】	Emerging/re-emerging infectious diseases		
8		Shinya Suzu 【eE-O】	Retroviruses-host interaction		
9		Yorifumi Sato 【eE-O】	Retroviral infections and latency		
10		Masanori Ikeda 【eE-O】	Molecular pathogenesis of hepatitis viruses		
11		Yasuhito Tanaka 【eE-O】	Hepatitis viruses and Liver cancer		
12		Ryuji Kubota 【eE-O】	Virus-induced neurological diseases		
13		Seiji Okada 【eE-O】	Animal model research in infectious diseases		
14		Hirotaka Matsui 【eE-O】	Roles of laboratory medicine for infectious diseases		
15		Hirotomo Nakata 【eE-O】	Nosocomial/opportunistic infection		
Estimated out-of-class study time	・ This course consists of content that requires hours (90 hours) of study. Since the class is 30 hours (2h x 15 frames) , 60 hours of pre- and post-study (including assignments) is necessary to understand the class. It is necessary to deepen.				
Required Textbook(テキスト)	Textbooks are not specified, and handouts will be distributed.				
Reading List(参考文献)	“Atlas of AIDS” edited by Gerald L. Mandell and Donna Mildvan. Current Medicine, Inc. Philadelphia, 2001. “Infectious Diseases and Medical Microbiology” 2nd Edition, Abraham I. Braude et al., W.B. Saunders Company				

Enrollment Conditions(履修条件)	Have basic knowledge concerning what is taught in this course.
Assessment Methods and Criteria(評価方法・基準)	This class consisted of a series of omnibus lectures by 15 lecturers as listed in the schedule. Evaluation will be done based on active class participation, examination test and/or report for subjects by each lecturer. In order to get credits students have to take more than 2/3 lectures. Grading will be based on the average of top 10 scores among ones obtained by the student.
Language Used in Instruction(使用言語)	English
Textbook/Material Language(教科書・資料の言語)	English
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable

Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-005-79-2	2023whole year	Graduate School of Medical Sciences (24050)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Human Brain Functional Science(B5 Human brain function science)			SHIMAMURA Kenji, Boku Syuken, IWAMOTO Kazuya, BUNDO Miki, Sou Bunketsu, TAKEBAYASHI Minoru, FUJISE Noboru, ESUMI Shigeyuki, HASHIMOTO Mamoru		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……80% 2.Profound inter-disciplinary knowledge ……19% 3.Global perspective and ability to take initiative action ……1%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint and/or OHP will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons.				
Course Goals(授業の目的)	A highly complex structure, human brain is developed from a simple central nervous system (CNS) that detects environmental information and uses the information directly for its body response. Human brain achieved memory, cognition, spirit and identity in its structure by increasing number of neurons and number of subtypes of neurons. In this lecture series, ‘Human brain functional Science’, students will be able to understand how mental activity appears from ‘gene expression’, neuron electrical activity, information convergence and divergence in the neuronal circuit. Students will understand the mechanisms underlying brain function as well as mental and psychiatric disorders.				
Course Learning goals(学修目標)	[A level (A水準)] Fully understand the contents and points that the lecturers set. [C level (C水準)] Understand about 60% of the contents and points that the lecturers set.				
Course Outline(授業の概要)	We will describe and discuss following issues: cellular and molecular mechanisms of induction of neural plate and regionalization, neural differentiation and process of morphogenesis, histogenesis, circuit formation, and synaptogenesis. You will learn how environmental information is conveyed to human brain region and processed. You will also learn genetic and neuronal bases of mental activity and disorders.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		SHIMAMURA [eE-0,eJ-0]	Neural induction		
2		SHIMAMURA [eE-0,eJ-0]	Regionalization of embryonic brain		
3		SHIMAMURA [eE-0,eJ-0]	Regionally distinct histogenesis in brain		
4		ESUMI [eEJ-0]	Neuronal diversity and network formation		
5		ESUMI [eEJ-0]	Neuronal network in the neocortex		
6		SONG [eE-0,eJ-0]	Action potential		
7		SONG [eE-0,eJ-0]	Synapse and synaptic transmission		
8		SONG [eE-0,eJ-0]	Neurotransmitter		
9		SONG [eE-0,eJ-0]	Synaptic plasticity		
10		FUJISE [eE-0,eJ-0]	Neurotransmitter and mental symptom		
11		IWAMOTO [eE-0]	Genetics and epigenetics of psychiatric disorders		
12		BUNDO [eE-0]	Somatic mutations and psychiatric disorders		
13		HASHIMOTO [eEJ-0]	Neural basis of dementia		
14		TAKEBAYASHI [eJ-0]	Multiple approaches to mental disorder		
15		BOKU [eJ-0]	Neural basis of mental disorder		
Estimated out-of-class study time		60 hours			
Required Textbook(テキスト)		Not specified.			
Reading List(参考文献)		Not specified			
Enrollment Conditions(履修条件)		attending 60% of lectures and taking short tests in each lecture			
Assessment Methods and Criteria(評価方法・基準)		Rate of finished e-Learning. Points earned by passing short examinations.			
Language Used in Instruction(使用言語)		Japanese and English (e-learning contents are either in English, Japanese, or mixture of them.)			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English (e-learning contents are either in English or Japanese)			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-006-79-2	2023whole year	Graduate School of Medical Sciences (24060)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Neuroscience(B6)			FUKUDA Takaichi, MIZUNO Hidenobu, SHIODA Norifumi, ERA Takumi, ORITA Yoriyisa, Itou Yasuhiro, HAMASAKI Tadashi, INOUE Toshihiro, TAKEMOTO Makoto, YAMASHITA Satoshi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……80% 2.Profound inter-disciplinary knowledge ……20%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint will be used in the lectures.				
Course Goals(授業の目的)	In this course, you learn structure and function of several brain regions, postnatal development of somatosensory cortex, malformation of the brain due to the abnormalities in development, pathophysiology in the sensory systems, and neurodegenerative disorders. Recent advances in the therapeutic approaches including regenerative medicine are discussed.				
Course Learning goals(学修目標)	【A level (A水準)】 Students can explain the structure and function of the central nervous system and its abnormalities, new therapeutic approaches to the neural disorders using stem cells and gene targeting, pathophysiology in the somatosensory, visual, and auditory systems and their treatments. Students can also find unresolved issues in the presented topics and explain their ideas to investigate the issues. 【C level (C水準)】 Students can explain the basic knowledge about the structure and function of the central nervous system and its abnormalities, new therapeutic approaches to the neural disorders using stem cells and gene targeting, pathophysiology in the somatosensory, visual, and auditory systems and their treatments.				
Course Outline(授業の概要)	(1) general structure of the brain; (2) Structure and function of the neocortex and hippocampus; (3) ` Postnatal development of somatosensory cortex; (4) Morphology and function of the visual cortex; (5) Morphology and function of the basal ganglia; (6) Neural crest cells and pluripotency; (7) Nerve growth factor and apoptosis; (8) Gene abnormality and the resultant congenital insensitivity to pain; (9) Deformity of central nervous system and treatment; (10) Pathophysiology and treatment of retinal diseases; (11) Glaucoma pathophysiology and treatment; (12) Hearing impairment and treatment; (13) Regenerative medicine for neurodegenerative diseases; (14) State-of-the-art therapies for Parkinson's diseases				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		FUKUDA Takaichi [eEJ-0]	General structure of the brain		
2		FUKUDA Takaichi [eEJ-0]	Structure and function of the neocortex and hippocampus		
3		MIZUNO Hidenobu [eEJ-0]	Postnatal development of the somatosensory forex		
4		FUKUDA Takaichi [eEJ-0]	Structure and function of the visual system		
5		FUKUDA Takaichi [eEJ-0]	Structure and function of the basal ganglia		
6		ERA Takumi [eJ-0,eE-0]	Development and differentiation of neural crest cell, pluripotency		
7		ERA Takumi [eJ-0,eE-0]	New medical application to diseases of the nervous system using stem cell		
8		TAKEMOTO Makoto [eE-0]	Learning, memory, and emotion		
9		SHIODA Norifumi [eE-0]	The potential of nucleic acid structures as a therapeutic target for neurological diseases		
10		HAMASAKI Tadashi [eEJ-0]	Deformity of central nervous system and treatment		
11		ITOU Yasuhiro [eE-0]	Pathology and treatment of retinal diseases		
12		INOUE Toshihiro [eE-0]	Glaucoma pathophysiology and therapy		
13		ORITA Yoriyisa [eJ-0]	Olfaction impairment and the treatment		
14		YAMASHITA Satoshi [eE-0]	Regenerative medicine for neurodegenerative diseases		
15		YAMASHITA Satoshi [eE-0]	State-of-the-art therapies for Parkinson's diseases		
Estimated out-of-class study time					
Required Textbook(テキスト)					
Reading List(参考文献)					
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		The students' understanding will be evaluated on the basis of quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average of the 10 highest scores out of 15 quizzes.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			

語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験を活かした授業)	Applicable (Fourteen out of fifteen classes are lectured by teachers with practical work experience in clinical medicine.)

Course Coding(科目ナンバ－)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-007-79-2	2023whole year	Graduate School of Medical Sciences (24070)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Developmental and Regenerative Medicine(B7)			NISHINAKAMURA Ryuichi, ISHIGURO Keiichiro, NAKAMURA Akira, ERA Takumi, FUKUDA Takaichi, ONO Yusuke, NIWA Hitoshi, ARAKI Masatake, ESUMI Shigeyuki, TAKEO Tooru, OKANO Masaki, SHINDO Asako, OKAE Hiroaki, KOBAYASHI Akio		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……50% 2.Profound inter-disciplinary knowledge ……25% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……5%					
Type of Class(授業の形態)		Lecture			
Teaching Method(授業の方法)		PowerPoint will be used in the lectures, and active participation in the discussion is encouraged.			
Course Goals(授業の目的)		Developmental and regenerative medicine aims at curing diseases by revealing molecular mechanisms of organ development. In this course, you learn basic concepts and techniques used in this filed, including knockout mice, which have now become essential for any area of research. This course serves as introductory for those in the Developmental and Regenerative Researcher Program, and will also be useful for those in other programs, as you obtain essential knowledge on genetic engineering techniques.			
Course Learning goals(学修目標)		【A level (A水準)】 Master basic concepts and techniques used in this filed, and is able to explain the disease mechanisms and treatments based on the knowledge. 【C level (C水準)】 Master basic concepts and techniques used in this filed, and is able to understand the disease mechanisms and treatments.			
Course Outline(授業の概要)		(1) Establishment and application of stem cells including ES and iPS cells; (2) Reproductive engineering including in vitro fertilization, freezing of embryos and sperms, embryo transfer, intracytoplasmic sperm injection, and nuclear transfer; (3) Genome editing technology and knockout mice; (4) Maintenance and differentiation of stem cells; (5) Placental development; (6) Anatomy of each organ in the aspects of ontogeny and phylogeny; (7) Mechanisms of organ and tissue development including the kidney, liver, pancreas, muscle, and gonad; (8) Regenerating organs from stem cells			
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)		Brief Outline of Class(内容概略)	
1	06/01	6th period Ryuichi Nishinakamura 【eE-0】		Overview & Kidney development	
2	06/08	6th period Toru Takeo 【eE-0】		Reproductive engineering	
3	06/15	5th period Masatake Araki 【eEJ-0】		Production of genome edited mouse line	
4	06/22	5th period Hitoshi Niwa 【eE-0】		Molecular basis of embryonic stem cells I	
5	06/29	5th period Hitoshi Niwa 【eE-0】		Molecular basis of embryonic stem cells II	
6	07/06	5th period Takumi Era 【eE-0】		iPS cells, their applications for the medicine	
7	07/13	5th period Hiroaki Okae 【eE-0】		Pregnancy in mammals	
8	07/20	5th period Asako Shido 【eE-0】		Embryogenesis and organ morphogenesis	
9	07/27	5th period Takaichi Fukuda 【eE-0】		Ontogeny and phylogeny	
10	08/10	5th period Shigeyuki Esumi 【eE-0】		Anatomy of digestive tracts and lung	
11	08/24	5th period Akio Kobayashi 【eE-0】		Development of the urogenital system	
12	08/31	5th period Yusuke Ono 【eE-0】		Muscle development and regeneration	
13	09/07	5th period Akira Nakamura 【eE-0】		germ cell formation: preformation and epigenesis	
14	09/14	5th period Keiichiro Ishiguro 【eE-0】		germ cell development in mammals	
15	09/21	5th period Masaki Okano 【eE-0】		Epigenetics in development	
Estimated out-of-class study time		60 hrs			
Required Textbook(テキスト)					
Reading List(参考文献)		・ “Developmental Biology, 12th edition” by Barresi MJF& Gilbert S 2019. ・ “Essential Developmental Biology, 4th edition” by Slack JMW & Dale L,Blackwell Publishing 2021 ・ “Manipulating the Mouse Embryo: A Laboratory Manual, 4th edition” by Nagy A., Gertsenstein M., Vintersten K., Behringer R., Cold Spring Harbor Laboratory Press, 2014. ・ “Larsen’ s Human Embryology, 5th edition” by Shoenwolf GC, Bleyl SB, Brauer PR, Francis-West PH. Churchill Livingstone, 2014.			
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and quizzes, as well as the final report and active participation in class discussions.			
Language Used in Instruction(使用言語)		English			
Textbook/Material		Combination of Japanese and English			

Language(教科書・資料の言語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable

Course Coding(科目ナンバ－)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-009-82-2	2023whole year	Graduate School of Medical Sciences (24080)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Current Theory of Medical Diagnosis(C1 Current Theory of Medical Diagnosis)			HIRAI Toshinori, MATSUI Hirotaka, MIKAMI Yoshiki, KOJIMA Akihiro, KOMOHARA Yoshihiro, UEDA Mitsuharu, Jiyouno Hirofumi, Misumi Youhei, BABA Masaya, SATO Yonosuke		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……45% 2.Profound inter-disciplinary knowledge ……45% 3.Global perspective and ability to take initiative action ……5% 4.Social leadership drive ……5%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint files will be used for giving the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures will be considered for those who are regularly absent due to unavoidable reasons.				
Course Goals(授業の目的)	The lecture series “Current Theory of Medical Diagnosis” afford fundamental and current general views of modern medical diagnostic techniques and their application in practical medicine and medical research.				
Course Learning goals(学修目標)	【A level (A水準)】 Students are expected to understand cutting-edge advanced method for disease diagnosis. Students are also expected to find devise a method to discover unsolved problems and lead to solutions. 【C level (C水準)】 Students are also expected to find devise a method to discover unsolved problems and lead to solutions.				
Course Outline(授業の概要)	In the field of Pathology, current morphology and its application for cancer diagnosis will be introduced. In addition, molecular approaches for a research in cancer cell differentiation, proliferation and invasion, blood coagulation system and immune reaction (especially on macrophage) will be shown. In the field of Laboratory Medicine, modern technique and method for the detection of gene mutations will be shown and discussed. In the field of Radiology, detailed implication of CT and MRI images and their application for researchers will be presented. In the field of Isotope Science, principles of RI tracer methods that are able to detect RI distribution in functional assay as well as in animals including human body will be presented. In the field of Neurology, recent advances in the neurological diagnosis will be given to the students.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Sato Y (Pathol Exp Med) 【eJ-0】	Tumor diagnosis with immunohistochemistry.		
2		Baba M (Pathol Exp Med) 【eJ-0】	Molecular pathological diagnosis of malignancies.		
3		Mikami Y (Pathol Diagnosis) 【eJ-0】	Histopathologic approach to diagnostic oncology: a logic for interpretation of morphology.		
4		Ueda M (Neurology) 【eJ-L0】	Recent advances in diagnostic methods for intractable neurological diseases		
5		Misumi Y (Neurology) 【eJ-0】	Advanced diagnostic approaches for rare and inherited diseases		
6		Komohara Y (Cell Pathol) 【eJ-0】	Roles of macrophages in tumor microenvironment		
7		Komohara Y (Cell Pathol) 【eJ-0】	Roles of macrophages in cancer immunology		
8		Matsui H(Laboratory Medicine) 【eJ-0】	Application of next generation sequencing for clinical diagnosis		
9		Matsui H (Laboratory Medicine) 【eJ-0】	Practice and prospect of clinical diagnostic medicine		
10		Jono H (Clin Pharm Sci) 【eJ-0】	Drug discovery research based on basic and clinical evidence		
11		Hirai T (Diag Radiology) 【eJ-0】	Forefront of MR imaging and research approaches		
12		Hirai T (Diag Radiology) 【eJ-0】	Forefront of CT imaging and research approaches		
13		Kojima A (RI Science) 【eJ-0】	RI tracer methods: basics and application of radioisotope measurements.		
14		Kojima A (RI Science) 【eJ-0】	RI molecular imaging.		
15	03/08	4th period Hirai T (Diag Radiology)	Makeup class for students who did not attend previous classes		
Estimated out-of-class study time	This course consists of content that requires 90 hours of study. Since the classes will be 30 hours long (2 hours x 15 sessions), 60 hours worth of prior and post-work studies (including assignments, etc.) will be required to deeply understand the classes.				
Required Textbook(テキスト)	Each instructor will specify as needed.				
Reading List(参考文献)	Each instructor will specify as needed.				
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on active class participation, paper summaries and the final reports. Even if the attendance in this course is very poor or none, the students can obtain credits for this course through e-learning system that are prepared in some classes, or a supplemental class. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics and be scored from 0 to 100.				

Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English (We will use documents and materials in English whenever possible.)
Course Based on Practical Work Experience(実務経験を 活かした授業)	Applicable (Faculty members engaged in the clinical practice of Pathology, Radiology and Laboratory medicine will lecture disease diagnostics from the basics to actual levels in an omnibus style.)

Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-010-82-2	2023whole year	Graduate School of Medical Sciences (24090)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Advanced Therapeutics(C2)			SAKAGAMI Takuro, Kanba Tomomi, Murakami Daizou, MIYAMARU Satoru, FUKUSHIMA Satoshi, NAOE Hideaki, ISE Momoko, Hibi Taizou, TANAKA Yasuhito		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……80% 2.Profound inter-disciplinary knowledge ……20%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint will be used in the lectures, and active participation in the discussion is encouraged.				
Course Goals(授業の目的)	Basic concept of molecular targeting and clinical application using antibody, peptide will be reviewed. Because the relation between immune disorders and pathogenesis has been revealed, immune modulation serve as a therapeutic strategy for viral infectious diseases, auto-immune diseases, and cancer. This course provides a rationale, current evaluation and problems of immune-modulation therapy. On the other hand, this course will introduce the basic research and progress to the establishment of organ transplantation, cell transplantation and artificial organs, and also focus on the current efficacy and limitations. In addition, progress in endoscopic treatments will be reviewed. Future therapeutic strategies will be also discussed.				
Course Learning goals(学修目標)	【A level (A水準)】 To understand a rationale, current evaluation and problems of immune-modulation therapy. In addition, to comprehend the basic research and progress to the establishment of organ transplantation, cell transplantation and artificial organs, and also to know the current efficacy and limitations. Finally, progress in endoscopic treatments will be recognized. 【C level (C水準)】				
Course Outline(授業の概要)	Recent advances in molecular biology and medical engineering provide a new era in the treatment of various diseases. In this regard, the molecules, which play central roles in the pathogenesis of chronic inflammation and carcinogenesis, have been identified, leading to the development of molecular targeting therapies. In addition, it has been described how immune systems of the body contribute to pathogenesis of diseases, and immune-modulation has been employed in the clinical setting. Furthermore, organ transplantation, cell transplantation and artificial organs have been introduced to complement organ failures. On the other hand, progresses in endoscopic machinery have established endoscopic treatment, and serve as less invasive treatments. This course will focus on progress in treatments and future orientation of medicine.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Naoe Hideaki 【eJ-0】	Progress in endoscopic treatment and diagnosis of gastrointestinal diseases		
2		Tanaka Yasuhito 【eJ-0】	State-of the art in diagnosis and treatment of hepatic disease		
3		Tanaka Yasuhito 【eJ-0】	Molecular targeting therapy in gastrointestinal & hepatic diseases		
4		Sakagami Takuro 【eJ-0】	Progress in diagnosis and treatment of respiratory diseases		
5		Sakagami Takuro 【eJ-0】	Topics of allergic respiratory diseases		
6		Sakagami Takuro 【eJ-0】	Topics of diagnosis and treatment of lung cancer		
7		Miyamaru Satoru 【eJ-0】	The diagnosis and management of dysphagia		
8		Ise Momoko 【eJ-0】	Treatment using cochlear implant for severe sensorineural hearing loss		
9		Murakami Daizo 【eJ-0】	Endoscopic treatment of head and neck diseases		
10		Hibi Taizo 【eJ-0】	Organ transplantation; the past and the present		
11		Hibi Taizo 【eJ-0】	Liver transplantation; basis and clinical application		
12		Kamba Tomomi 【eJ-0】	Current therapeutic strategy for urogenital cancers		
13		Kamba Tomomi 【e-0】	Endoscopic treatments for urinary diseases		
14		Fukushima Satoshi 【eJ-0】	Molecular targeting therapy for autoimmune diseases in skin		
15		Fukushima Satoshi 【eJ-0】	Immune therapy in skin cancer		
Estimated out-of-class study time					
Required Textbook(テキスト)		Textbooks are not specified, and handouts will be distributed.			
Reading List(参考文献)		1) Molecular Cell Biology, sixth edition, by Lodish H, et al. W.H.Freeman, 2008 2) Carithers RL Jr. Liver transplantation. American Association for the Study of Liver Diseases. Liver Transpl 2000 Jan;6 (1):122-35.			
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		Grading will be based on active class participation, understanding, paper summaries, and the final report.The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in			

Assessment Methods and Criteria(評価方法・基準)	class to be scored from 0 to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions
Textbook/Material Language(教科書・資料の言語)	Japanese
Course Based on Practical Work Experience(実務経験を活かした授業)	Applicable

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-011-82-2	2023whole year	Graduate School of Medical Sciences (24100)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Metabolic and Circulatory Regulations(C3)			Mukouyama Masashi, GOTOH Tomomi, SUGITA Michiko, Oike Yuuichi, ADACHI Masataka, TSUJITA Kenichi, YAMAMOTO Eiichirou, KUWABARA Takashige, HIRATA Naoyuki, KONDO Tatsuya, Matsumura Takeshi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……30% 2.Profound inter-disciplinary knowledge ……30% 3.Global perspective and ability to take initiative action ……30% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint/Zoom will be used in the lectures, and active participation in the discussion is encouraged. Extra classes and e-learning are considered for those who are not able to attend regular classes for unavoidable reasons. Please be sure to refer to the syllabus change as it will be announced on the website of the Graduate school of Medical Sciences.				
Course Goals(授業の目的)	Metabolic and Circulatory Regulations aim at learning the following items: (1) the pathogenesis of acute coronary syndrome and related factors, (2) the molecular mechanisms and therapeutic strategies of chronic heart failure, (3) the pathogenesis of metabolic disorders including diabetes mellitus and diabetic vascular complications, and its therapeutic strategy, (4) the molecular mechanisms of actions and secretion of insulin, (5) the molecular mechanisms and therapeutic strategy for metabolic syndrome and the development of obesity, (6) the relation between the progression of atherosclerosis or obesity, and inflammatory cells, (7) the molecular basis of renal physiology, and the functional differentiation/regulation of each segment of the nephron, (8) the pathogenesis of major renal diseases and the underlying mechanisms causing the pathological conditions, (9) the influence and mechanisms of surgical stress to the metabolism and circulation, and the therapeutic strategy for controlling these influences.				
Course Learning goals(学修目標)	<p>【A level (A水準)】 In this lecture, you are expected not only to learn the followings but also to apply them to research study or clinical activity: 1. Mechanisms of atherosclerosis evaluated by coronary imaging and the therapeutic strategies. 2. Basic mechanisms of myocardial ischemia/reperfusion injury and cardiac remodeling in experimental acute myocardial infarction. 3. Molecular mechanisms and therapeutic strategies of chronic heart failure; 4. Pathogenic mechanisms of diabetes mellitus, diabetic complications, and the actions and secretion of insulin; 5. Molecular mechanisms and therapeutic strategy for metabolic syndrome and obesity, one of the main pathogenesis of atherosclerotic diseases. 6. Molecular basis of water-electrolyte balance by channels and transporters, and the regulation along the nephron. 7. Regulation and dysregulation of renal blood flow and blood pressure, and the pathophysiological mechanisms of proteinuria and renal dysfunction. 8. Various influences of surgical stress (i.e. activation of the sympathetic nervous system, pain, inflammatory reactions, etc.) to the metabolism and circulation, and the therapeutic strategy based on understanding these influences.</p> <p>【C level (C水準)】 You are required to roughly understand each item listed above; otherwise you are regarded not having reached to the level to apply them to research study or clinical activity.</p>				
Course Outline(授業の概要)	1. Mechanisms of atherosclerosis evaluated by coronary imaging and the therapeutic strategies. 2. Basic mechanisms of myocardial ischemia/reperfusion injury and cardiac remodeling in experimental acute myocardial infarction. 3. Molecular mechanisms and therapeutic strategies of chronic heart failure; 4. Pathogenic mechanisms of diabetes mellitus, diabetic complications, and the actions and secretion of insulin; 5. Molecular mechanisms and therapeutic strategy for metabolic syndrome and obesity, one of the main pathogenesis of atherosclerotic diseases. 6. Molecular basis of water-electrolyte balance by channels and transporters, and the regulation along the nephron. 7. Regulation and dysregulation of renal blood flow and blood pressure, and the pathophysiological mechanisms of proteinuria and renal dysfunction. 8. Various influences of surgical stress (i.e. activation of the sympathetic nervous system, pain, inflammatory reactions, etc.) to the metabolism and circulation, and the therapeutic strategy based on understanding these influences.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Kenichi Matsushita 【eE-0】	Mechanism of myocardial ischemia/reperfusion injury		
2	10/13	Fri. 5th period Eiichiro Yamamoto 【eE-L】	Molecular mechanisms and therapeutic strategies of chronic heart failure		
3		Kenichi Tsujita 【eE-0】	Mechanisms of atherosclerosis and therapeutic strategies		
4		Michiko Sugita 【eE-0】	Types and influences of operative stress		
5		Tomomi Gotoh 【eE-0】	NO and nitrogen metabolism disorders		
6		Tatsuya Kondo 【eJ-0】	Insulin and its actions—their molecular basis		
7		Takeshi Matsumura 【eE-0】	Diabetic complications and their therapeutic approaches		
8		Naoyuki Hirata 【eE-0】	Mechanisms and therapeutic strategies of perioperative organ injury		

9		Naoyuki Hirata 【eE-0】	Mechanisms and therapeutic strategies of Postoperative cognitive decline
10		Masataka Adachi 【eE-0】	Renal potassium handling
11		Takashige Kuwabara 【eE-0】	Structure and function of nephron
12		Masashi Mukoyama 【eE-0】	Sodium and water handling by the kidney
13		Tomomi Gotoh 【eE-0】	ER stress-related diseases
14		Takeshi Matsumura 【eE-0】	Pathogenesis and therapies of metabolic diseases
15		Yuichi Oike 【eE-0】	Clarification of molecular and cellular mechanisms underlying aging and its associated diseases
Estimated out-of-class study time		This course consists of contents which requires 90 hours of work. As the total of in-class hours becomes 30 hours (two hours x15 classes), additional 60 hours of pre-post study including some task will be required in order to improve comprehension of the course.	
Required Textbook(テキスト)		Textbooks are not specified, and handouts will be distributed.	
Reading List(参考文献)		<ul style="list-style-type: none"> ・ Braunwald' s Heart Disease: A Textbook of Cardiovascular Medicine, 12th edition, edited by Libby P, et al. Saunders, Philadelphia, 2021. ・ Miller' s Anesthesia, 9th edition, edited by Miller RD. Elsevier Churchill Livingstone, Philadelphia, 2019. ・ Brenner & Rector' s The Kidney, 11th edition, Elsevier, Philadelphia, 2020. ・ Comprehensive Clinical Nephrology, 6th edition, Mosby, 2019. 	
Enrollment Conditions(履修条件)		no limitation	
Assessment Methods and Criteria(評価方法・基準)		Grading will be based on active class participation, paper summaries, and the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and tests as well as participation in class discussions	
Language Used in Instruction(使用言語)		English	
Textbook/Material Language(教科書・資料の言語)		English	
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable	

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-012-82-2	2023whole year	Graduate School of Medical Sciences (24110)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Reproductive and Developmental Medicine(C4 Reproductive and Developmental Medicine)			NAKAMURA Kimitoshi, Hibi Taizou, KONDO Eiji, Ooba Takashi, NAKAZATO Hitoshi, MITSUBUCHI Hiroshi, Matsumoto Shirou, IWAI Masanori, SAITOU Fumitaka, YAMAGUCHI Munekage, OZASA Shirou, ISONO Kaori, ANAN Kotaro, SAWADA Takaaki		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……30% 2.Profound inter-disciplinary knowledge ……30% 3.Global perspective and ability to take initiative action ……30% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	-----				
Course Goals(授業の目的)	The lecture of “Reproductive and developmental medicine” aims to understand followings: (1) Basic knowledge for physiology and pathology of human fertilization and pregnancy. (2) Medical interventions before and during pregnancy, and social issues related to these interventions. (3) Basic knowledge for physiology and pathology of development and growth of man. (4) Basic knowledge for disorders which affects children including genetic and neuromuscular diseases, pediatric surgery and organ transplantation.				
Course Learning goals(学修目標)	【A level (A水準)】 The participants will learn basic knowledge for developmental and growth medicine and issues of physiology, pathology, treatment, technology and ethical aspects in advanced medicine. They will also learn pregnancy, birth, newborn intensive care and assisted reproductive medicine, prenatal diagnosis and rare diseases, surgical diseases and organ transplantation. 【C level (C水準)】				
Course Outline(授業の概要)	This class will introduce the most recent and important progress in the field of reproductive and developmental medicine. The lecture related to pregnancy and delivery will discuss medical and social issues in addition to the physiology of reproductive system. We will discuss biological and medical aspect of the reproductive system, and social and ethical problems. The ethical problems of assisted fertilization including in vitro fertilization, ICSI (Intra Cytoplasmic Sperm Injection), oocyte donation, cryopreservation of embryos, cryopreservation of sperm will be discussed. The class for neonatal medicine, we introduce principal physiology of newborn infants and various pathological conditions of this period. The participant will learn many different disorders. One of the important topics of this course is normal development of brain function during childhood. The normal development of young brain is supported by surrounding environment of children which included social conditions. The participant will also learn neonatal surgical disorders and abdominal organ transplantation for children. We will discuss the social problems which affect healthy development of children in recent years.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1	10/05	5th Period. Hitoshi Nakazato	Hereditary Nephropathy		
2	10/12	5th Period. Masanori Iwai	Recent advanced neonatal intensive care in Japan and new therapeutic strategies for neonatal hypoxic ischemic encephalopathy (HIE). The first topic is the introduction of the neonatal intensive care unit for vulnerable babies. The second topic is new therapeutic strategies for neonatal HIE by erythropoietin through neurogenesis, vasculogenesis, oligodendrogenesis and remyelination.		
3	10/19	5th Period. Hiroshi Mitsubuchi	Congenital abnormalities and genetic counseling		
4	10/26	5th Period. Kimitoshi Nakamura	Inborn errors of metabolism		
5	11/02	5th Period. Kotaro Anan	Molecular basis and therapeutic strategies for pediatric disorders in children		
6	11/09	5th Period. Takashi Hamazaki	Enzyme replacement therapy and gene therapy for inherited diseases during childhood		
7	11/16	5th Period. Shiro Ozasa	The Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular disorders — Duchenne Muscular Dystrophy and Spinal Muscular Atrophy —		
8	11/30	5th Period. Shiro Matsumoto	Amino acid metabolism and Disorders		
9	12/07	5th Period. Takaaki Sawada	New diagnostics and treatments for rare pediatric diseases		
10		Takashi Ohba 【eJ-0】	Prenatal diagnosis, current status and the ethics		
11	12/21	5th Period. Eiji Kondoh	Management of preeclampsia		
12		Fumitaka Saito 【eJ-0】	Endometrial physiology, pathology and carcinogenesis		
13		Munekage Yamaguchi 【eJ-0】	Villous macrophages in the human placenta: a variety of functions and perinatal complications		
14	01/25	5th Period. Kaori Isono	Relationship between macrophages and microbiota in maintaining intestinal homeostasis		
15	02/01	5th Period. Taizo Hibi	Indications and outcomes of abdominal organ transplantation for children		
Estimated out-of-class					

study time	
Required Textbook(テキスト)	
Reading List(参考文献)	
Enrollment Conditions(履修条件)	
Assessment Methods and Criteria(評価方法・基準)	The participants should submit a report including what they learned through the contents of lecture, and will be evaluated by score.
Language Used in Instruction(使用言語)	Japanese and English
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable

Course Coding(科目ナンバ－)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-013-83-2	2023whole year	Graduate School of Medical Sciences (24120)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Advances in Oncologic Medicine(C5)			SUZUKI Makoto, ARAKI Norie, BABA Hideo, NAKAYAMA Hideki		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……45% 2.Profound inter-disciplinary knowledge ……35% 3.Global perspective and ability to take initiative action ……10% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons.				
Course Goals(授業の目的)	To understand advances in oncologic medicine, this course serves evidences and recent findings of medical oncology as follows:				
Course Learning goals(学修目標)	【A level (A水準)】 To understand advances in oncologic medicine, this course serves evidences and recent findings of medical oncology as follows: (1) Overview of tumor biology and genetics; (2) Recent advances in gastroenterological surgery; (3) Recent advances in oral and maxillofacial surgery; (4) Recent advances in thoracic surgery 【C level (C水準)】				
Course Outline(授業の概要)	This course overviews landmark findings in mechanism of tumor genesis and recent developments, and serves some of leading-edge research and our data. We focus on following topics: molecular mechanisms of tumor-related genes, cell cycle, cell death, cell differentiation; therapeutic agents based on tumor biology; molecular diagnostic tools, genome, transcriptome and proteomics; cancer stem cell. Many people suffer from gastroenterological cancers (esophageal, gastric, colon, pancreas, liver, billiary tract and gastrointestinal stromal tumor). We explain not only standard treatment for gastroenterological cancer but also cutting-edge treatment for refractory or metastatic, or recurrent gastroenterological cancer.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)		Brief Outline of Class(内容概略)	
1	10/03	(Tue) 4th period Araki Norie 【eEJ-L】		Tumor Genetics and biology (introduction)	
2	10/10	(Tue) 4th period Araki Norie 【eEJ-L】		Tumor Genetics and biology 1	
3	10/17	(Tue) 4th period Araki Norie 【eEJ-L】		Tumor Genetics and biology 2	
4		Baba Hideo 【eJ-0】		Gastroenterological surgery (introduction)	
5		Baba Hideo 【eE-0】		Gastroenterological surgery 1	
6		Baba Hideo 【eJ-0】		Gastroenterological surgery 2	
7		Baba Hideo 【eE-0】		Gastroenterological surgery 3	
8		Baba Hideo 【eE-0】		Gastroenterological surgery 4	
9		Baba Hideo 【eE-0】		Gastroenterological surgery 5	
10		Nakayama Hideki 【eJ-0】		Oral and maxillofacial tumors	
11		Nakayama Hideki 【eJ-0】		Diagnosis and treatment of oral cancer	
12		Nakayama Hideki 【eJ-0】		Challenges in oral cancer treatment	
13		Suzuki Makoto 【eE-0】		Thoracic surgery (introduction)	
14		Suzuki Makoto 【eJ-0】		Lung cancer -----	
15		Suzuki Makoto 【eE-0】		Medistinal tumor -----	
Estimated out-of-class study time					
Required Textbook(テキスト)		Textbooks are not specified.			
Reading List(参考文献)		“Natural obsessions:The search for the oncogene” by Angier. N, Houghton Mifflin Co, 1988. “Cancer: principles & practice of oncology, 7th ed” by DeVita VT, Lippincott Williams & Wilkins.2004 “The biology of cancer” by Weinberg RA Garland Science, 2007. “Clinical Oncology.” by Abeloff MD, Churchill Livingstone, . “ACS surgery: principles and practice” by Wilmore DW, WebMD. ・ “Thoracic Surgery, 2nd edition ” by Pearson FG, Churchill Livingstone, 2002			
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		Grading will be based on active class participation, paper summaries,and final report.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験を活かした授業)		Applicable			

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-014-83-2	2023whole year	Graduate School of Medical Sciences (24130)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO The Forefront of Clinical Oncology(C6)			OYA Natsuo, MUKASA Akitake, Yasunaga Jiyunichirou, MURAKAMI Ryuji, NOSAKA Kisato, YAMAMOTO Yutaka, Saitou Fumitaka, MOTOHARA Takeshi, IWANAGA Eisaku		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……70% 2.Profound inter-disciplinary knowledge ……10% 3.Global perspective and ability to take initiative action ……10% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	Video lectures or e-learning programs may be considered for those who are regularly absent for unavoidable reasons.				
Course Goals(授業の目的)	In Lecture Series “Riron” : C6 The Forefront of Clinical Oncology II, you learn basic concepts and novel techniques in the most advanced clinical oncology, including (1) radiation oncology, (2) breast and endocrine oncology, (3) gynecological oncology, (4) neurooncology, (5) hematological oncology.				
Course Learning goals(学修目標)	【A level (A水準)】 You learn basic concepts and novel techniques in the most advanced clinical oncology, including (1) radiation oncology, (2) breast and endocrine oncology, (3) gynecological oncology, (4) neurooncology, (5) hematological oncology. 【C level (C水準)】				
Course Outline(授業の概要)	(1) The forefront of radiation oncology, especially the development in 3-D conformal external beam radiotherapy techniques is lectured. (2) The forefront of breast and endocrine oncology is lectured, especially regarding surgery, chemotherapy, and molecular target therapy for breast cancer and thyroid cancer. (3) The forefront of gynecological oncology, especially the recent development and therapeutic modalities, is explained, including brachytherapy, external beam radiotherapy and chemoradiotherapy for uterine cervical cancer. (4) The forefront of neurooncology is explained especially regarding the molecular biology in malignant brain tumors. (5) The forefront of hematological oncology is lectured especially regarding the mechanisms in tumor development and suppression.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Natsuo Oya [eJ-0]	“Radiation biology and physics”		
2		Natsuo Oya [eJ-0]	“Stereotactic radiotherapy and intensity-modulated radiotherapy”		
3		Ryuji Murakami [eJ-0]	“Image-guided radiotherapy and adaptive radiotherapy”		
4		Yutaka Yamamoto [eJ-0]	“Biological features of breast cancer”		
5		Yutaka Yamamoto [eJ-0]	“Paradigm shift in breast cancer treatment”		
6		Yutaka Yamamoto [eJ-0]	“Molecular target therapy for breast cancer”		
7		Takeshi Motohara [eJ-0]	“Epidemiology of gynecological malignancies”		
8		Fumitaka Saito [eJ-0]	“Paradigm shift of the treatment for gynecological malignancies”		
9		Takeshi Motohara [eJ-0]	“Radiation therapy for gynecological malignancies”		
10		Akitake Mukasa [eJ-0]	“Character of brain tumor”		
11		Akitake Mukasa [eJ-0]	“Brain tumor diagnosis”		
12		Akitake Mukasa [eJ-0]	“Brain tumor therapy”		
13		Eisaku Iwanaga [eJ-0]	“Hematological oncology I - leukocytes”		
14		Kisato Nosaka [eJ-0]	“Hematological oncology II - lymphocytes”		
15		Jun-chirou Yasunaga [eJ-0]	“Hematological oncology III - Hematological malignancies induced by viruses”		
Estimated out-of-class study time					
Required Textbook(テキスト)					
Reading List(参考文献)					
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		Grading will be based on active class participation, paper summaries, or the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100.Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions			
Language Used in Instruction(使用言語)		Japanese			
Textbook/Material		Japanese			

Language(教科書・資料の言語)	Japanese
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable

Course Coding(科目ナンバ-)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-015-83-2	2023whole year	Graduate School of Medical Sciences (24140)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Restorative Medicine(C7 Restorative Medicine)			FUKUI Toshihiro, MIYAMOTO Takeshi, FUKUSHIMA Satoshi, NISHIKAWA Takeshi, Yasunaga Jiyunichirou, KAWANO Hiroaki, NAKATA Hirotomo		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……50% 2.Profound inter-disciplinary knowledge ……30% 3.Global perspective and ability to take initiative action ……10% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint and/or OHP will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons.				
Course Goals(授業の目的)	The objectives of this course are for you to understand the following: (1) pathology and therapeutic strategies of sepsis, the mechanisms of organ failure developed from sepsis, (2) risk factors for coronary syndrome, the latest knowledge regarding cardiovascular diseases and their surgical treatment; (3) the latest knowledge regarding cardiovascular diseases and their surgical treatment; (4) the mechanisms of skin wound healing, differences in body surface blood flow distribution between anatomical locations, and plastic surgery procedures and regenerative medical techniques; (5) disorders of bone and joint function and the reconstruction thereof; (6) basic knowledge required to plan out and implement clinical studies.				
Course Learning goals(学修目標)	【A level (A水準)】 Who could understand and explain, (1) pathogenesis underlying and strategy to treat sepsis and organ failures due to sepsis; (2) risk factors for coronary syndrome; (3) latest knowledges regarding cardiovascular diseases and their surgical treatments; (4) mechanisms underlying dermal wound healing, distribution of body surface blood flow, techniques for plastic surgery and regenerative medicine; (5) mechanisms underlying and ways of treatment for bone and joint diseases; (6) basic knowledges for planning and conducting clinical studies.It is recommended for you to review the handout materials distributed in the lectures and your notebooks well. If you want to ask any questions to the lecturers, "Office Hour" is available for you. It is also recommended to review the lectures by using e-learning contents if available. 【C level (C水準)】 Who could understand, (1) pathogenesis underlying and strategy to treat sepsis and organ failures due to sepsis; (2) risk factors for coronary syndrome; (3) latest knowledges regarding cardiovascular diseases and their surgical treatments; (4) mechanisms underlying dermal wound healing, distribution of body surface blood flow, techniques for plastic surgery and regenerative medicine; (5) mechanisms underlying and ways of treatment for bone and joint diseases; (6) basic knowledges for planning and conducting clinical studies.				
Course Outline(授業の概要)	In this class, the current situation and problems of restorative medicine are explained in terms of both life support and vital function. With continued progress in the field of medicine, critical care medicine has produced a steady flow of successful results and its functional prognosis has also improved dramatically. We will introduce new definition and therapeutic strategies of international sepsis guidelines with outline of new clinical research. We will also provide the mechanisms of organ failure from sepsis in basic and clinical viewpoint. Moreover, we will provide lectures regarding risk factors for acute coronary syndrome, which needs urgent therapy, and the progress of surgical treatments for heart failure, ischemic heart diseases, and valvular heart diseases. Although disorders of the skin, bones, and joints are rarely directly life-threatening conditions, they greatly affect a patient's vital functions. We will explain the theory of skin wound healing and the latest molecular biological knowledge, and we will also provide lectures regarding the progress made in the area of skin flaps through studies of blood flow in human skin and discuss reconstructive medicine for the blood vessels, lymph vessels, and nerves in terms of the development of microsurgery.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Satoshi Fukushima [eJ-0]	Mechanism of Wound healing		
2		Satoshi Fukushima [eJ-0]	Reconstruction by local flap		
3		Satoshi Fukushima [eJ-0]	Reconstruction with microsurgery		
4		Takeshi Miyamoto [eJ-0]	Pathophysiology of bone metabolism		
5		Takeshi Miyamoto [eJ-0]	Physiology and biology of articular cartilage		
6		Takeshi Miyamoto [eJ-0]	Inflammatory arthritis		
7		Takeshi Nishikawa [eJ-0]	Hypothesis and Design of Clinical Researches		
8		Junichiro Yasunaga [eJ-0]	Hematopoiesis in the bone marrow and hematopoietic stem cell transplantation therapy		
9		Hirotomo Nakata [eJ-0]			
10		Hiroaki Kawano [eJ-0]	Risk factors for acute coronary syndrome and gender difference		
11		Toshihiro Fukui [eJ-0]	Surgical treatment of heart failure		
12		Toshihiro Fukui [eJ-0]	Surgical treatment of ischemic heart disease		
13		Toshihiro Fukui [eJ-0]	Surgery of valvular heart disease		
14		Takeshi Nishikawa [eJ-0]	Hypothesis and design from the perspective of diabetic complications researches		
15		Hiroaki Kawano [eJ-0]	X Y chromosome related disease		
Estimated out-of-class					

study time	
Required Textbook(テキスト)	Textbooks are not specified, and handouts will be distributed.
Reading List(参考文献)	
Enrollment Conditions(履修条件)	
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on active class participation, paper summaries, and the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers as well as participation in class discussions.
Language Used in Instruction(使用言語)	Japanese
Textbook/Material Language(教科書・資料の言語)	Japanese
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable

Course Coding(科目ナンバ-)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-016-83-2	2023whole year	Graduate School of Medical Sciences (24150)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Cancer therapeutics(C8 Cancer therapeutics)			SUZUKI Makoto, MUKASA Akitake, SAKAGAMI Takuro, OYA Natsuo, Kanba Tomomi, ORITA Yori-hisa, BABA Hideo, NAKAYAMA Hideki, NOSAKA Kisato, YAMAMOTO Yutaka, FUKUSHIMA Satoshi, MOTOHARA Takeshi, Hibi Taizou, MIYAMOTO Takeshi, TANAKA Yasuhito		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……60% 2.Profound inter-disciplinary knowledge ……35% 3.Global perspective and ability to take initiative action ……5%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	We deal with a student by intensive lecture of power point or e-learning.				
Course Goals(授業の目的)	In the current lecture, we lead to comprehend the fundamental knowledge of therapy for cancer such as surgery, radiotherapy, chemotherapy and immunotherapy and the historical change, standard treatment and future directions of cancer therapy. Furthermore, the aims of the current lecture are to understand thoroughly the leading-edge medical treatment for various types of cancer as follows: (1) gastroenterological tumor (2) respiratory tract tumor (3) brain and nervous system neoplasm (4) head and neck tumor (5) otolarygological neoplasia (6) breast endocrine tumor (7) genitourinary system tumor (8) gynecological tumor (9) orthopaedic and neuro-musculoskeletal tumor (10) skin tumor (11) hematopoietic tumor (12) pediatric tumors.				
Course Learning goals(学修目標)	【A level (A水準)】 To comprehend the fundamental knowledge of therapy for cancer such as surgery, radiotherapy, chemotherapy and immunotherapy and the historical change, standard treatment and future directions of cancer therapy. To understand thoroughly the leading-edge medical treatment for various types of cancer as follows: (1) gastroenterological tumor (2) respiratory tract tumor (3) brain and nervous system neoplasm (4) head and neck tumor (5) otolarygological neoplasia (6) breast endocrine tumor (7) genitourinary system tumor (8) gynecological tumor (9) orthopaedic and neuro-musculoskeletal tumor (10) skin tumor (11) hematopoietic tumor (12) pediatric tumors. 【C level (C水準)】				
Course Outline(授業の概要)	The aims of current lecture are to understand the up-to date treatment for the various types of cancer in addition to standard cancer therapy such as surgery, radiotherapy, chemotherapy and immunotherapy. In late years a guideline is devised every each organ, and maintain the balance of therapy is planned about the cancer.A number of clinical trials are promoted to attempt the standardization of the cancer therapy. You can learn how the standard treatments are confirmed from the results of various clinical trials.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Yasuhito Tanaka [eJ-0]	Medical treatment of the gastrointestinal cancer		
2		Hideo Baba [eJ-0]	Surgical cure of the digestive cancer		
3		Takuro Sakagami [eJ-0]	Medical treatment of the lung cancer		
4		Makoto Suzuki [eJ-0]	Surgical treatment of the lung cancer		
5		Hideki Nakayama [eJ-0]	The treatment of the Oral cancer The lecture will be performed on the effectiveness and clinical application of surgery, radiotherapy, chemotherapy, and immunotherapy in oral cancer patients.		
6		Yori-hisa Orita [eJ-0]	The treatment of the head and neck cancer		
7		Takeshi Miyamoto [eJ-0]	The treatment of the bone soft part tumor		
8		Yutaka Yamamoto [eJ-0]	Treatment of breast cancer		
9		Takeshi Motohara [eJ-0]	The treatment of the gynecologic malignant tumor		
10		Tomomi Kamba [eJ-0]	The treatment of genitourinary cancers		
11		Satoshi Fukushima [eJ-0]	Skin cancer therapy__		
12		Taizo Hibi [eJ-0]	Pediatric Solid Cancer Therapy		
13		Akitake Mukasa [eJ-0]	The treatment of the brain tumor		
14		Kisato Nosaka [eJ-0]	The treatment of the hematologic malignancies		
15		Natsuo Ohya [eJ-0]	Radiotherapy of the cancer		
Estimated out-of-class study time					
Required Textbook(テキスト)		We distribute in particular the print which we summarized the point of the lecture in without appointing it.			
Reading List(参考文献)		・ A new clinical oncology ・ Cancer principles & practice of oncology,V.T. DeVita, S.Hellman, S.A.Rosenberg,Lippincott Willams &Wilkins ・ Clinical Oncology, M.D.Abeloff, J.O. Armitage, J.E.Niederhuber,M.B.Kastan,W.G.McKenna, Elsevier ・ Cancer Medicine, Holland-Frei, AACR ・ The biology of Cancer, R.A.Weinberg, Garland Science ・ NCCN guideline			
Enrollment Conditions(履修					

条件)	
Assessment Methods and Criteria(評価方法・基準)	We evaluate the attendance situation to a lecture, lecturing questions and answers and the lecture understanding degree about the matter which we raised to the [the aim of the class] by reports about a theme shown at being finished.Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100.Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions.
Language Used in Instruction(使用言語)	Japanese
Textbook/Material Language(教科書・資料の言語)	Japanese
Course Based on Practical Work Experience(実務経験を活かした授業)	Applicable

Course Coding(科目ナンバ－)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-017-83-2	2023whole year	Graduate School of Medical Sciences (24160)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Paliative Care(C9)			SUGITA Michiko, HIRATA Naoyuki		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……30% 2.Profound inter-disciplinary knowledge ……40% 3.Global perspective and ability to take initiative action ……15% 4.Social leadership drive ……15%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Using e-learning system in Web site of Japan Society of Clinical Oncology				
Course Goals(授業の目的)	Most clinical professionals have been affected by caring for patients with palliative care needs. Such patients may challenge us at both a professional and at a personal level in areas where we feel our confidence or competence are challenged. This course serves as introductory for Palliative care medicine.				
Course Learning goals(学修目標)	【A level (A水準)】 - 【C level (C水準)】				
Course Outline(授業の概要)	In order to understand the principle of palliative care medicine, we discussed the followings: (1) oncology, (2) symptom management, (3) emotional issues in palliative medicine, (4) culture and spiritual aspects of palliative medicine, (5) contribution of palliative medicine of allied health professions.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1					
Estimated out-of-class study time					
Required Textbook(テキスト)		not specified			
Reading List(参考文献)		Oxford Textbook of Paliative medicine. 3rd. Edited by Doyle D, Hanks G, et al., Oxford University Press Oxford Handbook of Palliative care. Edited by Watson M, Lucas C, Hoy A, Back I, Oxford University Press			
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)					
Language Used in Instruction(使用言語)		Japanese (Japanese)			
Textbook/Material Language(教科書・資料の言語)		Japanese (Japanese)			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-018-83-2	2023whole year	Graduate School of Medical Sciences (24170)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO The Theory of Clinical Research(C10Learning of The Theory of Clinical Research)			YAMAMOTO Yutaka, HAMADA Akinobu, SUZUKI Makoto, MUKASA Akitake, Kanba Tomomi, BABA Hideo, MATSUI Kunihiro		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……45% 2.Profound inter-disciplinary knowledge ……35% 4.Social leadership drive ……20%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	PowerPoint presentation will be usually provided in the lectures. Video lectures or e-learning programs will be provided for those who are regularly absent for unavoidable reasons.				
Course Goals(授業の目的)	To comprehend necessary knowledge in order to conduct intervention studies/clinical trials				
Course Learning goals(学修目標)	【A level (A水準)】 1) To conduct scientifically rational and ethical research 2) To play a role as a project member in a large-scale or multicenter clinical study 3) To interpret research findings enough to apply into clinical practice 4) To broaden knowledge about clinical researches and standard treatments for malignancies 【C level (C水準)】 1) To comprehend scientific rationale clinical research 2) To comprehend methods to conduct clinical research 3) To comprehend development and strategies of anti-cancer drugs				
Course Outline(授業の概要)	You will learn about bases of research ethics, epidemiology, biostatistics, study design, and drug kinetics/dynamics needed for clinical trials. And also, you will learn about the biochemical characters and the treatments based on evidence of the clinical trial (EBM; evidence based medicine) in various kinds of cancers, including lung cancer, gastric cancer, colorectal cancer, liver cancer, breast cancer, urinary organ cancer and malignant brain tumor. In addition, the latest topics of the translational study and prospects of the molecular biology will be discussed.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Yamamoto Yutaka, eEJ-O	Basic of clinical research 1		
2		Matsui Kunihiro, eEJ-O	Details of ethical guideline for clinical research		
3		Yamamoto Yutaka, eJ-O, eE-O	Basic of clinical research 2		
4		Akinobu Hamada, eEJ-O	Pharmacokinetics/Pharmacodynamics of anti- tumor agents		
5		Kenji Tamura, eEJ-O	Pharmacokinetics/Pharmacodynamics of anti- tumor agents		
6		Yutaka Yamamoto, eEJ-O	Design and Assessment of clinical trails		
7		Makoto Suzuki, eE-O	Clinical trials on lung cancer (1)		
8		Makoto Suzuki, eE-O	Clinical trials on lung cancer (2)		
9		Hideo Baba, eE-O	Clinical trials on gastric cancer		
10		Hideo Baba, eE-O	Clinical trials on colorectal cancer		
11		Hideo Baba, eE-O	Clinical trials on hepatic cell carcinoma		
12		Yutaka Yamamoto, eEJ-O	Clinical trials on breast cancer (1)		
13		Yutaka Yamamoto, eEJ-O	Clinical Trials on breast cancer (2)		
14		Tomomi Kamba, eEJ-O	Clinical Trials on urinary organ cancer		
15		Akitake Mukasa, eEJ-O	Clinical Trials on malignant brain tumor		
Estimated out-of-class study time	60 hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).				
Required Textbook(テキスト)					
Reading List(参考文献)	Eanuel EJ. et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeutics” edited by Bowcock, HUMANA PRESS, 2004 Cheson BD,et al. Revised recommendations of the International Working Group for Diagnosis, Standardization of Response Criteria, Treatment Outcomes, and Reporting Standards for Therapeutic Trials in Acute Myeloid Leukemia. J Clin Oncol. 2003 Dec 15;21(24):4642-9. American Society of Clinical Oncology Clinical Practice Guideline, National Comprehensive Cancer Network Clinical (NCCN) Guidelines for the Treatment of Cancer by Site, which are available on the internet.				
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)	We evaluate the attendance at a lecture, lecturing questions and answers and the lecture understanding degree about the matter which we raised to the [the aim of the class] by reports about a theme shown at being finished. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions.				
Language Used in	Japanese and English				

Instruction(使用言語)	Japanese and English
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験を 活かした授業)	Applicable (Each instructor has experiences as a primary investigator and a collaborator of clinical research projects, or a member of review boards.)

Course Coding(科目ナンバ)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-008-81-2	2023whole year	Graduate School of Medical Sciences (24075)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Environmental and Sociomedical Sciences(B8)			Nishitani Youko, Katou Takahiko, MATSUI Kunihiko, SOEJIMA Hirofumi, Gi Chiyounen, Oomori Hisamitsu, Lu Xi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……25% 2.Profound inter-disciplinary knowledge ……25% 3.Global perspective and ability to take initiative action ……10% 4.Social leadership drive ……40%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	PowerPoint and/or OHP will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons.				
Course Goals(授業の目的)	The purpose of this course is to develop the logic of the broad field of Social Medicine from the viewpoints of preventive and environmental medicine (hygiene), public health, health medicine, forensic medicine and neuropsychiatry.				
Course Learning goals(学修目標)	【A level (A水準)】 Social Medicine is an important field of medical science in studying various aspects of the interaction between medicine and society in the human life cycle. The health of the humans is regulated in the ecosystem, and, as the medical social application, it is also supported by the comprehensive health and welfare system. In this course, students are expected to understand the relationship between the environment and health, the concept of total medical care service including disease prevention & health promotion, and individuals’ basic human rights. Students will also comprehensively learn the role of medicine and law in maintaining social safety. 【C level (C水準)】				
Course Outline(授業の概要)	There will be practical lectures in the Department of preventive and environmental medicine (hygiene) on the structure of the environment, the relationship between people and the environment, environmental indices and evaluation, and the setting and maintenance of environmental standards, and lectures in the Department of Public Health on the concept of health and the construction of a healthy society based on preventive medicine and epidemiology. In the Department of Forensic Medicine, there will be general lectures on the purposes of forensic medicine, as well as the causes of the death and its classification from the medical, legal and social perspectives, and forensic medicine’ s contribution to society. In the Department of Clinical Behavioral Medicine, students will learn about the epidemiology of mental diseases and the relationship between life-events, social support, personality, recognition pattern, nurture experience and mental disease.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Takahiko Katoh 【eE-0, eJ-0】	Meaning of social medicine		
2		Takahiko Katoh 【eE-0, eJ-0】	Epidemiology		
3	06/16	5th period Hisamitsu Omori 【eEJ-L】	Medical Screening		
4	06/23	5th period Yoko Nishitani 【eE-0, eJ-L】	Definition and purpose of forensic medicine		
5	06/30	5th period Hirofumi Soejima 【eEJ-L】	General Medicine: Atherosclerosis		
6	07/07	5th period Yoko Nishitani 【eE-0, eJ-L】	Forensic medicine & forensic science		
7		Xi Lu 【eE-0】	Medical Statistics		
8		Xi Lu 【eE-0】	Research Design of Epidemiology		
9	07/28	5th period Yoko Nishitani 【eE-0, eJ-L】	Social aspect of human death (1)		
10	08/04	5th period Yoko Nishitani 【eE-0, eJ-L】	Social aspect of human death (2)		
11	08/25	5th period Hirofumi Soejima 【eE-0, eJ-L】	Blood Coagulation and Fibrinolysis		
12	09/01	5th period Hirofumi Soejima 【eE-0, eJ-L】	Lifestyle and Coronary Artery Disease		
13	09/08	5th period Chang-Nian Wei 【eE-L, eJ-0】	Environment-human system		
14	09/15	5th period Chang-Nian Wei 【eE-L, eJ-0】	Environmental indices and evaluation		
15	09/22	5th period Kunihiko Matsui 【eJ-L】	General Medicine: Clinical studies, interpretation for results		
Estimated out-of-class study time					
Required Textbook(テキスト)		Textbooks are not specified, and handouts will be distributed.			
Reading List(参考文献)		・ “Public Health & Preventive Medicine” by Maxy-Rosenan-Last: (14 edit) Appleton & Lange. 1998, ・ “Forensic Pathology” by Bernard Knight, 2nded., Arnold, London, Sydney and Auckland, 1996.			
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		Grading will be based on active class participation, paper summaries, and the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions			
Language Used in Instruction(使用言語)		Japanese and English			

Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験を 活かした授業)	Applicable (A teacher with practical work experience in Public Health, Regional Medicine, or Forensic Medicine will lecture.)

3. Lecture Course (Graduate School of Pharmaceutical Sciences)

Subject Code

Subjects	Subject Code		Course Start Date	Room
	Medical Sciences	Pharmaceutical Sciences		
HIGO Advanced Organic Chemistry	24180	07005	Not offered	—
HIGO Advanced Biophysical Chemistry	24190	07010	Not offered	—
HIGO Advanced Drug Methodology	24200	07015	Not offered	—
HIGO Advanced Biopharmaceutics	24210	07020	Not offered	—
HIGO Advanced Biomedical Physiology	24220	07025	Not offered	—
HIGO Clinical Pharmacy Advanced Course	24230	07030	Not offered	—
HIGO Advanced Drug Delivery System	24240	07035	Not offered	—
HIGO Advanced Medical Sciences	24250	07040	Not offered	—
HIGO Advanced Practical Training of Pharmaceutical	24260	07045	Not offered	—
HIGO Advanced Pharmaceutical Biochemistry	24270	07050	Not offered	—
HIGO Advanced Organic Synthesis	24280	07055	Not offered	—
HIGO Advanced Natural Products Chemistry	24290	07060	Not offered	—
HIGO Advanced Molecular Embryology	24300	07065	Not offered	—
HIGO Advanced Developmental Genetics	24310	07070	Not offered	—
HIGO Paper Research on Pharmaceutical Health Care	24320	09005	Not offered	—
HIGO Pharmacoepidemiology	24330	09010	Not offered	—
HIGO Introduction of Healthcare Management	24340	09015	Not offered	—
HIGO Advanced Medical and Pharmaceutical Sciences	24350	09020	Not offered	—
HIGO Advanced Pharmaceutical Development and Production	24360	09025	Not offered	—
HIGO Special lectures by clinical professors concerning pharmacy specialists	24370	09030	Not offered	—
HIGO Translational Basic Studies	24380	09035	Not offered	—

4. Lecture Course (Social and Cultural Sciences)

Subject Code

授業科目	Subject Code		Course Start Date	Room
	Medical Sciences	Pharmaceutical Sciences		
HIGO Principles of Social and Cultural Sciences	24390	07200	Not offered	—

HIGO Principles of Social and Cultural Sciences 【24390】

※Not offered

5. Seminar, Practice, Course under research guidance

Subject Code
HIGO Program Advanced Course

Subjects	Subject Code		Course Start Date	Room
	Medical Sciences	Pharmaceutical Sciences		
HIGO Governmental Seminar Series II	24430	08300	Posted on HIGO website	TBD
HIGO Business Seminar Series II	24440	08305	Posted on HIGO website	TBD
HIGO Chinese course II	24480	08310	Not Offered	—
HIGO English course II	24490	08315	Not Offered	—
HIGO Japanese course II	24500	08320	Not Offered	—
HIGO Governmental Internship II	24540	08325	TBD	—
HIGO Business Internship II	24550	08330	TBD	—
HIGO Overseas Internship II	24560	08335	Posted on HIGO website	TBD
HIGO Research presentation	24570	08340	—	—
HIGO Public Policy I	24580	08345	Not Offered	—
HIGO Public Policy II	24590	08350	Not Offered	—
HIGO Technology and Organizational Management I	24610	08360	Not Offered	—
HIGO Technology and Organizational Management II	24620	08365	Not Offered	—
HIGO Cross-cultural Communication I	24640	08375	Not Offered	—
HIGO Cross-cultural Communication II	24650	08380	Not Offered	—
HIGO Social and Cultural Sciences tutorial	24665	08388	—	—
HIGO Cutting-Edge Seminar Series II	24680	08390	Posted on HIGO website	IMEG 1st Conference room
HIGO Cutting-Edge Research Project II	24700	08395	—	—

HIGO Program Four-year Course

Subjects	Subject Code		Course Start Date	Room
	Medical Sciences	Pharmaceutical Sciences		
HIGO Practical Training	24400	09305	Not Offered	—
HIGO Governmental Seminar Series	24410	09310	Posted on HIGO website	TBD
HIGO Business Seminar Series	24420	09315	Posted on HIGO website	TBD
HIGO Chinese course	24450	09320	Not Offered	—
HIGO English course	24460	09325	Not Offered	—
HIGO Japanese course	24470	09330	Not Offered	—
HIGO Governmental Internship	24510	09335	TBD	—
HIGO Business Internship	24520	09340	TBD	—
HIGO Overseas Internship	24530	09345	Not Offered	—
HIGO Research presentation	24570	08340	—	—
HIGO Public Policy I	24580	08345	Not Offered	—
HIGO Public Policy II	24590	08350	Not Offered	—
HIGO Technology and Organizational Management I	24610	08360	Not Offered	—
HIGO Technology and Organizational Management II	24620	08365	Not Offered	—
HIGO Cross-cultural Communication I	24640	08375	Not Offered	—
HIGO Cross-cultural Communication II	24650	08380	Not Offered	—
HIGO Social and Cultural Sciences tutorial	24665	08388	—	—
HIGO Leadership Training Course	24710	09360	TBD	—
HIGO Cutting-Edge Seminar Series	24670	09350	Posted on HIGO website	IMEG 1st Conference room
HIGO Cutting-Edge Research Project	24690	09355	Not Offered	—

Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-128-99-2	2023whole year	Graduate School of Medical Sciences (24430)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Governmental Seminar Series II()			IRIE Tetsumi, UMEDA Kahoko, HARI PRASAD DEVKOTA		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability・・・20% 2.Profound inter-disciplinary knowledge・・・30% 3.Global perspective and ability to take initiative action・・・20% 4.Social leadership drive・・・30%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Class discussions will be driven by questions and answers and use PowerPoint, an overhead projector etc. Students will attend the seminars and write reports. The reports should include a summary of the lectures and the students' own thoughts on the topics.				
Course Goals(授業の目的)	The field of health and life sciences needs leaders equipped with a unique expertise and global perspective that will enable them to find the root of the problems facing local and global (glocal) communities and lead industry-academia-government initiatives that will bridge Japan and the surrounding region with the rest of the world. Students seeking to fill the shoes of this kind of leader must have a solid academic footing in the medical, pharmaceutical and life sciences as well as an extensive knowledge of everything from public health and welfare to environmental resources, sustainability, biodiversity, environmental ethics, and more. In this course, students will attend seminars that address issues related to health and life sciences, both at personal and global levels, from a glocal viewpoint. Through these seminars, students will acquire latest knowledge in the fields that are not covered by conventional graduate-level educational courses.				
Course Learning goals(学修目標)	【A level (A水準)】 Students will be able to acquire and apply a wide range of knowledge on issues in health and life sciences, from individual life to global scale, including not only medicine, pharmacology, and life sciences, but also welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethics. 【C level (C水準)】 Students will be able to acquire a wide range of knowledge on issues in health and life sciences, from individual life to global scale, including not only medicine, pharmacology, and life sciences, but also welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethics.				
Course Outline(授業の概要)	Lecturers from the Kumamoto prefectural government, Kumamoto municipal government, national and other government agencies will be invited to discuss topics in medical and pharmaceutical sciences as well as medical and pharmaceutical policy, welfare, environment, public health, health risk management, environmental resources, sustainability, biodiversity, environmental ethics, etc. All lectures will either be in English or interpreted into English when given in Japanese. Seminars will be held 8 times a year. Students must attend at least 8 seminars in total. ○Governmental Offices and Organization (AY2022) - AOZORA, Nonprofit Corporation - Seisa University - Hitotsubashi University - Osaka Ohtani University - Kobe University - KOHYAMA Seishi Office - Ariake surveying development ci., ltd - National Center for Global Health and Medicine It should be noted that, if the Government offices and organizations that receive charge of the lecture has been added or changed, so you posted on the HIGO program home page, be sure to see at any time. http://higoprogram.jp/en/category/gyousei/				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		See the HIGO Program home page.	See the HIGO Program home page.		
Estimated out-of-class study time	This course consists of content that requires 45 hours of study. Since the class is 16 hours (2h x 8 frames), 29 hours of pre- and post-study (including assignments) is necessary to understand the class. It is necessary to deepen.				
Required Textbook(テキスト)	None specified				
Reading List(参考文献)	None specified				
Enrollment Conditions(履修条件)	You should participate in the seminar as long as there is no special reason. If you want to be absent a seminar by the special reason, you must submit the absence reason statement to Higo program office. In that case, you can see the movie of the lecture in Moodle by e-learning.				
Assessment Methods and Criteria(評価方法・基準)	Students are required to attend 8 seminars and submit 2 reports. Students' level of understanding in the areas specified in the course objectives will be evaluated on the basis of questions and answers during class discussions as well as their reports on the topics given after each seminar session.				
Language Used in Instruction(使用言語)	Japanese and English				
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English				
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable				

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-129-99-2	2023whole year	Graduate School of Medical Sciences (24440)	1, 2, 3, 4	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Business Seminar Series II(Business seminar)			MORIOKA Hiroshi, MARUYAMA Toru, UMEDA Kahoko, DEVKOTA HARI		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability・・・20% 2.Profound inter-disciplinary knowledge・・・20% 3.Global perspective and ability to take initiative action・・・30% 4.Social leadership drive・・・30%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Class involve question-and-answer-focused discussion using PowerPoint, overhead projector etc. Students will attend the seminars and write reports. The reports should include a summary of the lectures and the student's own thoughts on the topics. In the case of Japanese lecturer, principle, lectures in Japanese using text described in Japanese were performed. In the case of foreign teachers, the English lectures using the text described in English.				
Course Goals(授業の目的)	The field of health and life sciences needs leaders equipped with a unique expertise and global perspective that will enable them to find the root of the problems facing local and global (global) communities and lead industry-academia-government initiatives that will bridge Japan and the surrounding region with the rest of the world. This course is designed to provide students with a corporate world view and cultivate a sensitivity to local needs as well as the ability to respond to those needs as a responsible corporate citizen. Leading corporate executives, researchers, developers, and other guest lectures will be invited from across Japan, to share their experiences and show students how they can give back to society through the health and life sciences.				
Course Learning goals(学修目標)	【A level (A水準)】 Attend seminars by managers, researchers, and developers of local and major domestic companies to acquire and apply knowledge about corporate philosophy, compliance, management, and social and community contributions. 【C level (C水準)】 Attend seminars by managers, researchers, and developers of local and major domestic companies to acquire knowledge about corporate philosophy, compliance, management, and social and community contributions.				
Course Outline(授業の概要)	Lecturers invited from the companies such as following will discuss the medical and pharmaceutical sciences as they related to a diverse range of areas that span everything from corporate philosophy to compliance, corporate social responsibility, community outreach, the local economy, human resources development, internationalization, the environment, sustainability, management, public relations, and more. In the case of Japanese speakers, lectures will be given in Japanese, but English interpretation will be provided in such cases. Seminars will be held 8 times per year. Students must attend at least 15 seminars in total. ○Companies and organizations (AY2022) - D Three - Morisho Co.,Ltd. - ONO PHARMACEUTICAL CO., LTD. - Kyushu Sangyo University - Leave a Nest Co., Ltd - Kumamoto Nichinichi Shimbun - HINOKUNI Salamanders - KUMAMOTO DMC Co., Ltd It should be noted that, if the companies and organizations that receive charge of the lecture has been added or changed, so you posted on the HIGO program home page, be sure to see at any time. http://higoprogram.jp/en/category/kigyoku/				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		See the HIGO program home page	See the HIGO program home page		
Estimated out-of-class study time					
Required Textbook(テキスト)		None specified, but handouts outlining the seminar will be distributed.			
Reading List(参考文献)		None specified.			
Enrollment Conditions(履修条件)		You should participate in the seminar as long as there is no special reason. If you want to be absent a seminar by the special reason, you must submit the absence reason statement to Higo program office. In that case, you can see the movie of the lecture in Moodle by e-learning.			
Assessment Methods and Criteria(評価方法・基準)		Students are required to attend 15 seminars and submit 3 reports. Students' level of understanding in the areas specified in the course objectives will be evaluated on the basis of questions and answers during class discussions as well as their reports on the topics given after each seminar session.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

HIGO Chinese Course II 【24480】

※Not offered

HIGO English course II 【24490】

※Not offered

HIGO Japanese Course II 【24500】

※Not offered

Course Coding(科目ナンバ－)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-139-99-2	2023whole year	Graduate School of Medical Sciences (24540)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Governmental Internship II()			IRIE Tetsumi, HARI PRASAD DEVKOTA, MITCHELL ANDREW NEIL		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability・・・20% 2.Profound inter-disciplinary knowledge・・・35% 3.Global perspective and ability to take initiative action・・・15% 4.Social leadership drive・・・30%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	This course provides omnibus experiential training at government agencies, universities and companies that are collaborating with industry, government and academia. After the field experience, students will make presentations and have discussions to deepen their understanding of what they have learned.				
Course Goals(授業の目的)	The field of health and life sciences needs leaders equipped with a unique expertise and global perspective that will enable them to find the root of the problems facing local and global (glocal) communities and lead industry-academia-government initiatives that will bridge Japan and the surrounding region with the rest of the world. Students seeking to fill the shoes of this kind of leader must have a solid academic footing in the medical, pharmaceutical and life sciences as well as an extensive knowledge of everything from public health and welfare to environmental resources, sustainability, biodiversity, environmental ethics, and more. In this course, students will participate in discussions that address issues related to health and life sciences that affect both individuals and the global community. Discussions will focus on the current status of these problems, what needs to be done to solve them, and the outlook for the future. These discussions will go beyond conventional graduate-level educational courses to provide students with the latest information from the field and immerse them in topics covered from a glocal perspective.				
Course Learning goals(学修目標)	【A level (A水準)】 Through hands-on experience in solving social issues, students will acquire knowledge and practical skills in welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethics. 【C level (C水準)】 Through hands-on experience in solving social issues, students will acquire knowledge in welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethics.				
Course Outline(授業の概要)	With the cooperation of government agencies, universities, and companies in industry-government-academia collaboration, students will experience and learn how to solve a wide range of social issues, such as health and life sciences, regional development, and foreign workers. In addition, practical training will be conducted in English, but English interpretation will be provided when the training is conducted in Japanese. If there are any changes, such as the addition or change of the government office or organization in charge of the practical training, or if the training is to be conducted in cooperation with multiple companies, we will notify you by e-mail, so please check back often.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Internship overview and pre-study, lecture, site visit, experience, exchange, group work, post-study and presentation of results	After a preliminary overview, students will visit government agencies etc., to learn about the history, current situation, laws, and approaches to the issues related to the social issues to be addressed in the internship. Students will visit actual workplaces, gain work experience, and interact with people from related organizations. In the final presentation, students summarize and present the content of their studies, impressions etc		
Estimated out-of-class study time		This course consists of content that requires 45 hours of study. Since the class is for 30 hours, 15 hours worth of pre- and post-study (including assignments) is required to deepen the understanding of the class.			
Required Textbook(テキスト)		Not specified. Handout on the outline of internship will be distributed.			
Reading List(参考文献)		Not specified.			
Enrollment Conditions(履修条件)		Approval by faculty supervisor and HIGO Administrative Committee is required.			
Assessment Methods and Criteria(評価方法・基準)		The degree of acquisition of practical skills through the internship will be evaluated based on the on-the-job experience, positive attitude toward presentation and discussion, and the contents of the e-portfolio report.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-140-99-2	2023whole year	Graduate School of Medical Sciences (24550)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Business Internship II(HIGO Business Internship II)			MORIOKA Hiroshi, MARUYAMA Toru, UMEDA Kahoko, HARI PRASAD DEVKOTA		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……50% 2.Profound inter-disciplinary knowledge ……20% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Students will intern at a selected company. The internship will be followed by student presentations and discussions in order to give the participants a better understanding of what they have learned.				
Course Goals(授業の目的)	The HIGO Program aims to foster glocal pioneers in the health and life sciences who understand local needs as well as the needs of people throughout Asia and are willing to work on solving local problems through glocal partnerships. In this course, students will put the knowledge gained through specialized lectures in medicine and pharmacology, the Governmental and Business seminars into practice while interning at a local company or a leading pharmaceutical company in Japan. The internship will give students access to first-hand information related to corporate philosophy, compliance, management, planning, operations, accounting, corporate social responsibility, community outreach, as well as local community needs. Students will learn to look at the world through a glocal lens as they develop the practical skills that will enable them to adapt to a changing environment.				
Course Learning goals(学修目標)	【A level (A水準)】 Students will be able to acquire and apply practical ability in a glocal perspective and techniques to adapt to various environmental changes. 【C level (C水準)】 Students will be able to acquire practical ability in a glocal perspective and techniques to adapt to various environmental changes.				
Course Outline(授業の概要)	Students will participate in a 30-hour (five-day) internship at one of the following selected companies. Training will be conducted in English and interpreted into English if given in Japanese. ○ Companies and organizations located in Kumamoto Prefecture DOJINDO Laboratories, KM Biologics ○ Preclinical services and pharmaceutical companies in Japan Shin Nippon Biomedical Laboratories Companies and organizations that accept interns are subject to change. Additions or changes of host organizations will be informed via e-mail.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Corporate philosophy, corporate compliance, planning, management, accounting, contribution to society, contribution to community, learning needs, career path	Lectures related to corporate philosophy and environment, career path formation, facility tours, interaction and exchange of opinions with employees, experimental training, examination of issues given by companies and preparation for presentation of results, final presentation about learning outcomes, etc. * If on-site internship is not possible due to COVID-19, etc., the event will be held online using ZOOM, etc.		
Estimated out-of-class study time		This course consists of content that requires 45 hours of study. Since the class is for 30 hours, 15 hours worth of pre- and post-study (including assignments) is required to deepen the understanding of the class.			
Required Textbook(テキスト)		Not specified. Handout on the outline of internship will be distributed.			
Reading List(参考文献)		Not specified.			
Enrollment Conditions(履修条件)		Approval by faculty supervisor and HIGO Administrative Committee is required.			
Assessment Methods and Criteria(評価方法・基準)		Students are required to submit a report via e-portfolio or as a hard copy. Students' level of understanding in the areas specified in the course objectives will be evaluated on the basis of questions and answers during the internship, active participation in presentations and discussions, as well as their reports submitted after the internship.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-141-99-1	2023whole year	Graduate School of Medical Sciences (24560)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Overseas Internship II()			OGURA Teru, DEVKOTA HARI, MITCHELL ANDREW NEIL		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability・・・10% 2.Profound inter-disciplinary knowledge・・・40% 3.Global perspective and ability to take initiative action・・・30% 4.Social leadership drive・・・20%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Experiential training at the above institutions. After the on-site experience, presentations and discussions will be held to deepen students' understanding of what they have learned.				
Course Goals(授業の目的)	In order to lead a healthy society as a "health and life science pioneer" in collaboration with the local community and the world, students need to develop not only broad and deep expertise in health and life sciences based on medicine, pharmacology, life sciences, etc., but also a bird's-eye view of the issues and needs of international and regional society (glocal society) while connecting the regional characteristics of Kyushu with a global perspective. This course is designed to provide students with a broad and deep knowledge of health and life sciences based on Kyushu's regional and global perspectives.				
Course Learning goals(学修目標)	【A level (A水準)】 Through early international work experience and training, students will be able to acquire and practice problem-setting and problem-solving skills in a glocal society, as well as internationally competitive communication and negotiation skills. 【C level (C水準)】 Through early international work experience and training, students will be able to acquire problem-setting and problem-solving skills in a glocal society, as well as internationally competitive communication and negotiation skills.				
Course Outline(授業の概要)	Students will participate in a 30-hour (five-day) internship at one of the following organizations. ○ Overseas offices of Kumamoto University Shanghai Office, Dalian Office, Korea KAIST Office, or Indonesia ITS Office ○ Educational institutions, companies and research organizations affiliated with Kumamoto University University of Georgia, St. John's University, University of Rochester, University of Texas (USA); Trinity College Dublin (Ireland); University of London (UK); Academia Sinica (Taiwan); Monash University (Australia); Ligand Pharmaceuticals, Inc. (USA); etc. ○ International administrative organizations United Nations, World Health Organization, etc. Training will be conducted in English and interpreted into English if given in Japanese.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		To be posted on the HIGO Program website	To be posted on the HIGO Program website		
Estimated out-of-class study time	This course consists of content that requires 45 hours of study. Since the class is for 30 hours, 15 hours worth of pre- and post-study (including assignments) is required to deepen the understanding of the class.				
Required Textbook(テキスト)	Not specified. Handout on the outline of internship will be distributed.				
Reading List(参考文献)	Not specified.				
Enrollment Conditions(履修条件)	Approval by faculty supervisor and HIGO Administrative Committee is required.				
Assessment Methods and Criteria(評価方法・基準)	The submission of an e-portfolio or report is required. The level of understanding of the items listed in [Course Objectives] will be evaluated based on the active attitude of the students during the question-and-answer session, presentation, and discussion at the hands-on training site, as well as a report on the theme presented after the hands-on training is completed.				
Language Used in Instruction(使用言語)	Japanese and English				
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English				
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable				

Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-154-99-1	2023whole year	Graduate School of Medical Sciences (24680)	1, 2, 3, 4	6	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Cutting-Edge Seminar Series II()			NISHINAKAMURA Ryuichi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……50% 2.Profound inter-disciplinary knowledge ……25% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……5%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	Students attend the seminars that are authorized by the course and write reports. The reports should include summary of the lectures and his/her own discussion about the topics. In principle, one-hour seminar is suitable for one report.				
Course Goals(授業の目的)	Health Life Science is an interdisciplinary science that is rapidly evolving as a new field of life science. This practice consists of lectures from researchers who work on health life science in Japan and overseas. Researchers committed to cutting-edge research will be invited and present latest developments of their own. Students are encouraged to attend the seminars to acquire up-to-date knowledge of the fields that may not be covered in the lectures.				
Course Learning goals(学修目標)	【A level (A水準)】 acquire up-to-date knowledge of the fields that may not be covered in the lectures, and skills to discuss scientifically in English. 【C level (C水準)】 acquire up-to-date knowledge of the fields that may not be covered in the lectures				
Course Outline(授業の概要)	Topics of the seminars may encompass full range of issues that are related to health life science, which covers all areas of medical and pharmaceutical medicine.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		participate in the weekly seminars	usually every Wed noon at the conference room of IMEG, but subject to change. See the web for the details.		
Estimated out-of-class study time	180 hrs				
Required Textbook(テキスト)					
Reading List(参考文献)					
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)	Students are obligated to attend 45 or more lectures and submit at least 9 reports. The attendance can be extended to three years (Graduate School of Pharmaceutical Sciences) or four years (Graduate School of Medical Sciences) at maximum. Grading will be based on the reports.				
Language Used in Instruction(使用言語)	English				
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English				
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable				

Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
YDL7-349-99-1	2023whole year	Graduate School of Medical Sciences (24700)	1, 2, 3, 4	10	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Cutting-Edge Research Project II(HIGO Cutting-Edge Research Project)			OGURA Teru, MORIOKA Hiroshi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability・・・50% 2.Profound inter-disciplinary knowledge・・・20% 3.Global perspective and ability to take initiative action・・・15% 4.Social leadership drive・・・15%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Students will engage in the literature search, experiment planning and its execution, research presentation and discussion for four years (three years for those who belong to the Graduate School of Pharmaceutical Sciences).				
Course Goals(授業の目的)	Students will conduct professional and advanced experiments in the medical and pharmaceutical science fields from the health-life science perspectives. In addition, they will discuss experiment data to promote more research plannings and their execution. Further, they will be encouraged to present their research findings at the domestic and international conferences and to publish them in international journals.				
Course Learning goals(学修目標)	【A level (A水準)】 Based on the principle of training pioneers in glocal health-life science, students will cultivate advanced research skills to conduct the excellent cutting-edge research activities in the specialized and related fields by engaging autonomously the cutting-edge research works in health-life science, medical science, drug discovery science and life science fields. 【C level (C水準)】 Based on the principle of training pioneers in glocal health-life science, students will cultivate advanced research skills to conduct the cutting-edge research activities in the specialized and related fields by engaging the cutting-edge research works in health-life science, medical science, drug discovery science and life science fields.				
Course Outline(授業の概要)	While catching up the latest research trends both at home and abroad, this course employs the project-based learning method. Based on the method, students will do the literature research, experiment planning and its execution, and research discussions in health-life science, medical and pharmaceutical sciences.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Advanced research on health-life sciences 1	Students will understand the domestic research trends and propose a research theme.		
Estimated out-of-class study time	For the research (thesis), the specific number of hours of prior and post-study is not specified, as credit is awarded on the basis of academic achievement. However, students are expected to study independently and actively in order to complete their research (thesis).				
Required Textbook(テキスト)	The students will be notified as necessary.				
Reading List(参考文献)	The latest original Japanese and English papers and reviews of the related fields.				
Enrollment Conditions(履修条件)	Students will require the skills of knowledge and experimentation of the tip of the related areas.				
Assessment Methods and Criteria(評価方法・基準)	Literature search and experimental planning (30%), the experimental performance (50%) and discussion (20%) were evaluated by an assessment of the overall capacity. Presentations at the domestic and international conferences and publishing in the academic journals will be added to the evaluation.				
Language Used in Instruction(使用言語)	Japanese and English				
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English				
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable				

HIGO Practical Training 【24400】

※Not offered

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-126-99-2	2023whole year	Graduate School of Medical Sciences (24410)	1	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Governmental Seminar Series()			IRIE Tetsumi, UMEDA Kahoko, HARI PRASAD DEVKOTA		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability・・・20% 2.Profound inter-disciplinary knowledge・・・30% 3.Global perspective and ability to take initiative action・・・20% 4.Social leadership drive・・・30%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Class discussions will be driven by questions and answers and use PowerPoint, an overhead projector etc. Students will attend the seminars and write reports. The reports should include a summary of the lectures and the students' own thoughts on the topics.				
Course Goals(授業の目的)	The field of health and life sciences needs leaders equipped with a unique expertise and global perspective that will enable them to find the root of the problems facing local and global (glocal) communities and lead industry-academia-government initiatives that will bridge Japan and the surrounding region with the rest of the world. Students seeking to fill the shoes of this kind of leader must have a solid academic footing in the medical, pharmaceutical and life sciences as well as an extensive knowledge of everything from public health and welfare to environmental resources, sustainability, biodiversity, environmental ethics, and more. In this course, students will attend seminars that address issues related to health and life sciences, both at personal and global levels, from a glocal viewpoint. Through these seminars, students will acquire latest knowledge in the fields that are not covered by conventional graduate-level educational courses.				
Course Learning goals(学修目標)	【A level (A水準)】 Students will be able to acquire and apply a wide range of knowledge on issues in health and life sciences, from individual life to global scale, including not only medicine, pharmacology, and life sciences, but also welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethics. 【C level (C水準)】 Students will be able to acquire a wide range of knowledge on issues in health and life sciences, from individual life to global scale, including not only medicine, pharmacology, and life sciences, but also welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethics.				
Course Outline(授業の概要)	Lecturers from the Kumamoto prefectural government, Kumamoto municipal government, national and other government agencies will be invited to discuss topics in medical and pharmaceutical sciences as well as medical and pharmaceutical policy, welfare, environment, public health, health risk management, environmental resources, sustainability, biodiversity, environmental ethics, etc. All lectures will either be in English or interpreted into English when given in Japanese. Seminars will be held 8 times a year. Students must attend at least 8 seminars in total. ○Governmental Offices and Organization (AY2022) - AOZORA, Nonprofit Corporation - Seisa University - Hitotsubashi University - Osaka Ohtani University - Kobe University - KOHYAMA Seishi Office - Ariake surveying development ci., ltd - National Center for Global Health and Medicine It should be noted that, if the Government offices and organizations in charge of the lecture has been added or changed, so you posted on the HIGO program home page, be sure to see at any time. http://higoprogram.jp/en/category/gyousei/				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Medical care, welfare, environment, public health, environmental resources, recycling society, biodiversity, environmental ethics, etc. As soon as concrete themes are decided, they will be posted on the HIGO Program website.	Introduction of the lecturer's organization and its business, examples of solutions to health or various social issues, career path of the lecturer, message to students, etc. As soon as concrete contents are decided, they will be posted on the HIGO Program website.		
Estimated out-of-class study time		This course consists of content that requires 45 hours of study. Since the class is 16 hours (2h x 8 frames), 29 hours of pre- and post-study (including assignments) is necessary to understand the class. It is necessary to deepen.			
Required Textbook(テキスト)		None specified			
Reading List(参考文献)		None specified			
Enrollment Conditions(履修条件)		You should participate in the seminar as long as there is no special reason. If you want to be absent a seminar for a special reason, you must submit the absence reason statement to the HIGO program office. In that case, you can see the movie of the lecture in Moodle via e-learning.			
Assessment Methods and Criteria(評価方法・基準)		Students are required to attend 8 seminar classes and submit 2 papers (via e-portfolio). Students will be graded on the basis of their papers.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験)		Not applicable			

を活かした授業)	Not applicable
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Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-127-99-2	2023whole year	Graduate School of Medical Sciences (24420)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Business Seminar Series(Business seminar)			MORIOKA Hiroshi, MARUYAMA Toru, UMEDA Kahoko, HARI PRASAD DEVKOTA		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability・・・20% 2.Profound inter-disciplinary knowledge・・・20% 3.Global perspective and ability to take initiative action・・・30% 4.Social leadership drive・・・30%					
Type of Class(授業の形態)		Other			
Teaching Method(授業の方法)		Class involve question-and-answer-focused discussion using PowerPoint, overhead projector etc. Students will attend the seminars and write reports. The reports should include a summary of the lectures and the student's own thoughts on the topics. In the case of Japanese lecturer, principle, lectures in Japanese using text described in Japanese were performed. In the case of foreign teachers, the English lectures using the text described in English.			
Course Goals(授業の目的)		The field of health and life sciences needs leaders equipped with a unique expertise and glocal perspective that will enable them to find the root of the problems facing local and global (glocal) communities and lead industry-academia-government initiatives that will bridge Japan and the surrounding region will the rest of he world. This course is designed to provide students with a corporate world view and cultivate a sensitivity to local needs as well as the ability to respond to those needs a responsible corporate citizen. Leading corporate executives, researchers, developers, and other guest lectures will be invited from across Japan, to share their experiences and show students how they can give back to society through the health and life sciences.			
Course Learning goals(学修目標)		【A level (A水準)】 Attend seminars by managers, researchers, and developers of local and major domestic companies to acquire and apply knowledge about corporate philosophy, compliance, management, and social and community contributions. 【C level (C水準)】 Attend seminars by managers, researchers, and developers of local and major domestic companies to acquire knowledge about corporate philosophy, compliance, management, and social and community contributions.			
Course Outline(授業の概要)		Lecturers invited from the companies such as following will discuss the medical and pharmaceutical sciences as they related to a diverse range of areas that span everything from corporate philosophy to compliance, corporate social responsibility, community outreach, the local economy, human resources development, internationalization, the environment, sustainability, management, public relations, and more. In the case of Japanese speakers, lectures will be given in Japanese, but English interpretation will be provided in such cases. Seminars will be held 8 times per year. Students must attend at least 8 seminars in total. ○Companies and organizations (AY2022) - D Three - Morisho Co.,Ltd. - ONO PHARMACEUTICAL CO., LTD. - Kyushu Sangyo University - Leave a Nest Co., Ltd - Kumamoto Nichinichi Shimbun - HINOKUNI Salamanders - KUMAMOTO DMC Co., Ltd It should be noted that, if the companies and organizations that are in charge of the lecture has been added or changed, so you posted on the HIGO program home page, be sure to see at any time. http://higoprogram.jp/en/category/kigyuu/			
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Corporate philosophy, corporate compliance, social and regional contributions, human resource development, internationalization, etc. As soon as concrete themes are decided, they will be posted on the HIGO Program website.	Introduction of the lecturer's organization and its business, examples of solutions to health or various social issues, career path of the lecturer, message to students, etc. As soon as concrete contents are decided, they will be posted on the HIGO Program website.		
Estimated out-of-class study time		This course consists of content that requires 45 hours of study. Since the class is 16 hours (2h x 8 frames), 29 hours of pre- and post-study (including assignments) is necessary to understand the class. It is necessary to deepen.			
Required Textbook(テキスト)		None specified, but handouts outlining the seminar will be distributed.			
Reading List(参考文献)		None specified.			
Enrollment Conditions(履修条件)		You should participate in the seminar as long as there is no special reason. If you want to be absent a seminar by the special reason, you must submit the absence reason statement to Higo program office. In that case, you can see the movie of the lecture in Moodle by e-learning.			
Assessment Methods and Criteria(評価方法・基準)		Students are required to attend 8 seminars and submit 2 reports. Students' level of understanding in the areas specified in the course objectives will be evaluated on the basis of questions and answers during class discussions as well as their reports on the topics given after each seminar session.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験)		Not applicable			

を活かした授業)	Not applicable
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HIGO Chinese Course 【24450】

※Not offered

HIGO English Course 【24460】

※Not offered

HIGO Japanese Course 【24470】

※Not offered

Course Coding(科目ナンバ-)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-136-99-2	2023whole year	Graduate School of Medical Sciences (24510)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Governmental Internship()			IRIE Tetsumi, HARI PRASAD DEVKOTA, MITCHELL ANDREW NEIL		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……20% 2.Profound inter-disciplinary knowledge ……35% 3.Global perspective and ability to take initiative action ……15% 4.Social leadership drive ……30%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	This course provides omnibus experiential training at government agencies, universities and companies that are collaborating with industry, government and academia. After the field experience, students will make presentations and have discussions to deepen their understanding of what they have learned.				
Course Goals(授業の目的)	The field of health and life sciences needs leaders equipped with a unique expertise and global perspective that will enable them to find the root of the problems facing local and global (glocal) communities and lead industry-academia-government initiatives that will bridge Japan and the surrounding region with the rest of the world. Students seeking to fill the shoes of this kind of leader must have a solid academic footing in the medical, pharmaceutical and life sciences as well as an extensive knowledge of everything from public health and welfare to environmental resources, sustainability, biodiversity, environmental ethics, and more. In this course, students will participate in discussions that address issues related to health and life sciences that affect both individuals and the global community. Discussions will focus on the current status of these problems, what needs to be done to solve them, and the outlook for the future. These discussions will go beyond conventional graduate-level educational courses to provide students with the latest information from the field and immerse them in topics covered from a glocal perspective.				
Course Learning goals(学修目標)	【A level (A水準)】 Through hands-on experience in solving social issues, students will acquire knowledge and practical skills in welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethics. 【C level (C水準)】 Through hands-on experience in solving social issues, students will acquire knowledge in welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethics.				
Course Outline(授業の概要)	With the cooperation of government agencies, universities, and companies in industry-government-academia collaboration, students will experience and learn how to solve a wide range of social issues, such as health and life sciences, regional development, and foreign workers. In addition, practical training will be conducted in English, but English interpretation will be provided when the training is conducted in Japanese. If there are any changes, such as the addition or change of the government office or organization in charge of the practical training, or if the training is to be conducted in cooperation with multiple companies, we will notify you by e-mail, so please check back often.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Internship overview and pre-study, lecture, site visit, experience, exchange, group work, post-study and presentation of results	After a preliminary overview, students will visit government agencies etc., to learn about the history, current situation, laws, and approaches to the issues related to the social issues to be addressed in the internship. Students will visit actual workplaces, gain work experience, and interact with people from related organizations. In the final presentation, students summarize and present the content of their studies, impressions etc.		
Estimated out-of-class study time		This course consists of content that requires 45 hours of study. Since the class is for 30 hours, 15 hours worth of pre- and post-study (including assignments) is required to deepen the understanding of the class.			
Required Textbook(テキスト)		Not specified. Handout on the outline of internship will be distributed.			
Reading List(参考文献)		Not specified.			
Enrollment Conditions(履修条件)		Approval by faculty supervisor and HIGO Administrative Committee is required.			
Assessment Methods and Criteria(評価方法・基準)		The degree of acquisition of practical skills through the internship will be evaluated based on the on-the-job experience, positive attitude toward presentation and discussion, and the contents of the e-portfolio report.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-137-99-2	2023whole year	Graduate School of Medical Sciences (24520)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Business Internship(HIGO Business Internship II)			MORIOKA Hiroshi, MARUYAMA Toru, UMEDA Kahoko, HARI PRASAD DEVKOTA		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……50% 2.Profound inter-disciplinary knowledge ……20% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Students will intern at a selected company. The internship will be followed by student presentations and discussions in order to give the participants a better understanding of what they have learned.				
Course Goals(授業の目的)	The HIGO Program aims to foster glocal pioneers in the health and life sciences who understand local needs as well as the needs of people throughout Asia and are willing to work on solving local problems through glocal partnerships. In this course, students will put the knowledge gained through specialized lectures in medicine and pharmacology, the Governmental and Business seminars into practice while interning at a local company or a leading pharmaceutical company in Japan. The internship will give students access to first-hand information related to corporate philosophy, compliance, management, planning, operations, accounting, corporate social responsibility, community outreach, as well as local community needs. Students will learn to look at the world through a glocal lens as they develop the practical skills that will enable them to adapt to a changing environment.				
Course Learning goals(学修目標)	【A level (A水準)】 Students will be able to acquire and apply practical ability in a glocal perspective and techniques to adapt to various environmental changes. 【C level (C水準)】 Students will be able to acquire practical ability in a glocal perspective and techniques to adapt to various environmental changes.				
Course Outline(授業の概要)	Students will participate in a 30-hour (five-day) internship at one of the following selected companies. Training will be conducted in English and interpreted into English if given in Japanese. ○ Companies and organizations located in Kumamoto Prefecture DOJINDO Laboratories, KM Biologics ○ Preclinical services and pharmaceutical companies in Japan Shin Nippon Biomedical Laboratories Companies and organizations that accept interns are subject to change. Additions or changes of host organizations will be informed via e-mail.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Corporate philosophy, corporate compliance, planning, management, accounting, contribution to society, contribution to community, learning needs, career path	Lectures related to corporate philosophy and environment, career path formation, facility tours, interaction and exchange of opinions with employees, experimental training, examination of issues given by companies and preparation for presentation of results, final presentation about learning outcomes, etc. * If on-site internship is not possible due to COVID-19, etc., the event will be held online using ZOOM, etc.		
Estimated out-of-class study time		This course consists of content that requires 45 hours of study. Since the class is for 30 hours, 15 hours worth of pre- and post-study (including assignments) is required to deepen the understanding of the class.			
Required Textbook(テキスト)		Not specified. Handout on the outline of internship will be distributed.			
Reading List(参考文献)		Not specified.			
Enrollment Conditions(履修条件)		Approval by faculty supervisor and HIGO Administrative Committee is required.			
Assessment Methods and Criteria(評価方法・基準)		Students are required to submit a report via e-portfolio or as a hard copy. Students' level of understanding in the areas specified in the course objectives will be evaluated on the basis of questions and answers during the internship, active participation in presentations and discussions, as well as their reports submitted after the internship.			
Language Used in Instruction(使用言語)		Japanese and English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

HIGO Overseas Internship 【24530】

※Not offered

Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-153-99-1	2023whole year	Graduate School of Medical Sciences (24670)	1	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Cutting-Edge Seminar Series()			NISHINAKAMURA Ryuichi		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……50% 2.Profound inter-disciplinary knowledge ……25% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……5%					
Type of Class(授業の形態)	Lecture				
Teaching Method(授業の方法)	Students attend the seminars that are authorized by the course and write reports. The reports should include summary of the lectures and his/her own discussion about the topics. In principle, one-hour seminar is suitable for one report.				
Course Goals(授業の目的)	Health Life Science is an interdisciplinary science that is rapidly evolving as a new field of life science. This practice consists of lectures from researchers who work on health life science in Japan and overseas. Researchers committed to cutting-edge research will be invited and present latest developments of their own. Students are encouraged to attend the seminars to acquire up-to-date knowledge of the fields that may not be covered in the lectures.				
Course Learning goals(学修目標)	【A level (A水準)】 acquire up-to-date knowledge of the fields that may not be covered in the lectures, and skills to discuss scientifically in English 【C level (C水準)】 acquire up-to-date knowledge of the fields that may not be covered in the lectures				
Course Outline(授業の概要)	Topics of the seminars may encompass full range of issues that are related to health life science, which covers all areas of medical and pharmaceutical medicine.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		participate in the weekly seminars	usually every Wed noon at the conference room of IMEG, but subject to change. See the web for the details.		
Estimated out-of-class study time	90 hrs				
Required Textbook(テキスト)					
Reading List(参考文献)					
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)	Students are obligated to attend 15 or more lectures and submit at least 3 reports. The attendance can be extended to three years (Graduate School of Pharmaceutical Sciences) or four years (Graduate School of Medical Sciences) at maximum. Grading will be based on the reports.				
Language Used in Instruction(使用言語)	English				
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English				
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable				

HIGO Cutting-Edge Research Project 【24690】

※Not offered

Course Coding(科目ナンバ－)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-702-99-1	2023intensive	Graduate School of Medical Sciences (24710)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Leadership Training Course(Leadership training course)			MORIOKA Hiroshi, DEVKOTA HARI, MITCHELL ANDREW NEIL		
Goals with their ratio(学修成果とその割合)					
2.Profound inter-disciplinary knowledge ……20% 3.Global perspective and ability to take initiative action ……40% 4.Social leadership drive ……40%					
Type of Class(授業の形態)	Seminar				
Teaching Method(授業の方法)	Practice and small group discussions				
Course Goals(授業の目的)	Students will learn self-leadership, team-leadership, global leadership and the practical skills in business and social activities.				
Course Learning goals(学修目標)	【A level (A水準)】 Students will learn self-leadership, team-leadership and global leadership through their theories and case studies. In addition, they will make and present their leadership development plan for their future actions. 【C level (C水準)】 Students will learn self-leadership, team-leadership and global leadership through their theories and case studies.				
Course Outline(授業の概要)	Understand the flow of leadership theory and the overall picture of leadership in a 3-day leadership program similar to that learned at MBA (business school), etc.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		Leadership theory, self leadership, team leadership, global leadership	Learn about leadership theory, self leadership, team leadership, global leadership through lectures, case studies and small group discussions		
Estimated out-of-class study time		This course consists of content that requires 45 hours of study. Since the class is for 21 hours (7hour × 3 days), 24 hours worth of pre- and post-study (including assignments) is required to deepen the understanding of the class.			
Required Textbook(テキスト)		World Class Leadership (World Scientific)			
Reading List(参考文献)		Not applicable.			
Enrollment Conditions(履修条件)		Students are advised to read “World Class Leadership” beforehand.			
Assessment Methods and Criteria(評価方法・基準)		Students will be evaluated according to their activities during the three-day leadership program (50%) and reports using e-portfolio (50%).			
Language Used in Instruction(使用言語)		English			
Textbook/Material Language(教科書・資料の言語)		Combination of Japanese and English			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-142-99-1	2023whole year	Graduate School of Medical Sciences (24570)	1, 2, 3, 4	1	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Research presentation(HIGO Research presentation)			OGAWA Minetaro, DEVKOTA HARI, MITCHELL ANDREW NEIL		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……30% 2.Profound inter-disciplinary knowledge ……30% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……20%					
Type of Class(授業の形態)	Seminar				
Teaching Method(授業の方法)	Students attend domestic or international conferences relating to health life science. In addition to discuss on the subjects presented by other researchers, students will present findings obtained from their own research in poster or oral sessions.				
Course Goals(授業の目的)	During the process of conducting research on health life science, it is necessary to present research findings and discuss with other scientists at domestic and international conferences. This practice aims at expanding capability to make a productive discussion on a subject presented by other researchers and to present and discuss own findings in an effective manner at an academic conference.				
Course Learning goals(学修目標)	【A level (A水準)】 Students are expected to acquire skills to make a productive discussion on a subject presented by other researchers and to present and discuss their own findings in an effective manner at an academic conference. 【C level (C水準)】 Students are expected to acquire skills to make a discussion on a subject presented by other researchers and to present and discuss their own findings at an academic conference.				
Course Outline(授業の概要)	Students attend domestic or international conferences relating to health life science. In addition to discuss on the subjects presented by other researchers, students will present findings obtained from their own research in poster or oral sessions. The instructors listed above appropriately support discussions and preparations of presentation. Students finally write a report that includes the state of achievement of the activities at the conferences. The reports should include summary of the presentations by others together with discussion that the student made on them, and also the summary of the student's own presentation together with discussion made on it. Although form and quantity are not specified, the achievement level of ability for presentation and discussion will be evaluated based on the reports.				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		student's research theme	student's research theme		
Estimated out-of-class study time		30 hours			
Required Textbook(テキスト)					
Reading List(参考文献)					
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)		Students are obligated to attend and make a presentation in domestic or international conferences relating to health life science. Length of the activities at the conferences should be 2 days or more in sum total. Students should present their own research findings at least once in any of the conferences they attend. Grading will be based on the final report.			
Language Used in Instruction(使用言語)		English			
Textbook/Material Language(教科書・資料の言語)		English			
Course Based on Practical Work Experience(実務経験を活かした授業)		Not applicable			

HIGO Public Policy I 【24580】

※Not offered

HIGO Public Policy II 【24590】

※Not offered

HIGO Technology and Organizational Management I 【24610】

※Not offered

HIGO Technology and Organizational Management II 【24620】

※Not offered

HIGO Cross-cultural Communication I 【24640】

※Not offered

HIGO Cross-cultural Communication II 【24650】

※Not offered

Course Coding(科目番号)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-152-99-1	2023whole year	Graduate School of Medical Sciences (24665)	1, 2, 3, 4	2	others
Course Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)		
HIGO Social and Cultural Sciences tutorial(Giving advice to a student or a group of students)			UENO Shinya, Andrew Mitchell, KAWAMURA Yoko, TANABE Juichiro SASAKI Hazuk		
Goals with their ratio(学修成果とその割合)					
1.Advanced expert knowledge, skill and research capability ……30% 2.Profound inter-disciplinary knowledge ……40% 3.Global perspective and ability to take initiative action ……20% 4.Social leadership drive ……10%					
Type of Class(授業の形態)	Other				
Teaching Method(授業の方法)	Giving advice to a student or a group of students				
Course Goals(授業の目的)	In this class, based on the knowledge of Social and Cultural Sciences students have learned, they complete the final report on a theoretical and /or practical problem concerning Social and Cultural Sciences. The volume of the report is more than 5000 words, and an abstract of about 300 words must be attached.				
Course Learning goals(学修目標)	【A level (A水準)】 Based on the knowledge of life and health sciences and socio-cultural sciences that they have learned so far, students will be able to accurately consider theoretical or practical issues related to socio-cultural sciences and write a final report that communicates the content of their study. 【C level (C水準)】 Students will be able to review and conduct necessary research on research topics, summarize their ideas, and put them together in a logical document.				
Course Outline(授業の概要)	Giving advice on completing the final report				
Details for Individual Classes(各回の授業内容)					
No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)		
1		social and cultural sciences tutorial	Examination of the theme of the final report		
2		social and cultural sciences tutorial	Examination of the theme of the final report		
3		social and cultural sciences tutorial	Examination of the theme of the final report		
4		social and cultural sciences tutorial	Determination of the theme of the final report		
5		social and cultural sciences tutorial	Advice on making the final report: Significance, Methodology		
6		social and cultural sciences tutorial	Advice on making the final report: :Data, literature collection		
7		social and cultural sciences tutorial	Advice on making the final report: Structure of the whole		
8		social and cultural sciences tutorial	Advice on making the final report: Relationships among chapters		
9		social and cultural sciences tutorial	Advice on making the final report: Consistency		
10		social and cultural sciences tutorial	Advice on making the final report: Originality		
11		social and cultural sciences tutorial	Making the manuscript		
12		social and cultural sciences tutorial	Making the manuscript		
13		social and cultural sciences tutorial	Making the manuscript		
14		social and cultural sciences tutorial	Making the manuscript		
15		social and cultural sciences tutorial	Completing and submitting the final report		
Estimated out-of-class study time	The specific number of hours of out-of-class study is not specified. However, independent and active study necessary to prepare reports is naturally required.				
Required Textbook(テキスト)	Textbooks are not specified, and handouts will be distributed.				
Reading List(参考文献)	Recommended readings are not specified, but will be suggested during the class.				
Enrollment Conditions(履修条件)					
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on a final report.				
Language Used in Instruction(使用言語)	Japanese and English				
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English				
Course Based on Practical Work Experience(実務経験を活かした授業)	Not applicable				