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
5th period	16:10 - 17:40	16:45 - 18:15	16:25-17:55
6th period	18:30 - 20:00	18:30 - 20:00	18:10-19:40

### Contents

### HIGO Program

1 . HIGO Courses, Credits and How to Apply
Graduate School of Medical Sciences
Advanced Course • • • • • • • • • • • • • • • • • • •
Four-year Course • • • • • • • • • • • • • • • • • • •
Graduate School of Pharmaceutical Sciences
Advanced Course • • • • • • • • • • • • • • • • • • •
Registration Application Form
Graduate School of Medical Sciences
Advanced Course • • • • • • • • • • • • • • • • • • •
Four-year Course · · · · · · · · · · · · · · · · · · ·
Graduate School of Pharmacy
Advanced Course • • • • • • • • • • • • • • • • • • •
2 Lasture Course (Creducto School of Medical Sciences)
2 . Lecture Course (Graduate School of Medical Sciences) Subject Code • • • • • • • • • • • • • • • • • • •
HIGO Medical Informatics and Medical Ethics • • • • • • • • • • • • • • • • • • •
HIGO Pathophysiology and structural biochemistry of biomolecules • • • • • • 1 8
HIGO Cell Biology · · · · · · · · · · · · · · · · · · ·
HIGO Hematopoietic and Immune Systems • • • • • • • • • • • • • • • • 2 1
HIGO Infection and Immune Control • • • • • • • • • • • • • • • • • • 2 3
HIGO Human brain functional Science • • • • • • • • • • • • • • • • 2 5
HIGO Neuroscience · · · · · · · · · · · · · · · · · · ·
HIGO Developmental and Regenerative Medicine • • • • • • • • • • • • 2 8
HIGO Current Theory of Medical Diagnosis • • • • • • • • • • • • • • • • • •
HIGO Advanced Therapeutics • • • • • • • • • • • • • • • • • • •
HIGO Metabolic and Circulatory Regulations • • • • • • • • • • • • • • • • • • •
HIGO Reproductive and Developmental Medicine · · · · · · · · · · · · · · 3 6
HIGO Advances in Oncologic Medicine • • • • • • • • • • • • • • • • • • •
HIGO The Forefront of Clinical Oncology · · · · · · · · · · · · · · · · · · ·
HIGO Restorative Medicine · · · · · · · · · · · · · · · · · · ·
HIGO Cancer therapeutics • • • • • • • • • • • • • • • • • • •
HIGO Cancer therapeutics4 3HIGO Paliative Care4 5
HIGO The Theory of Clinical Research • • • • • • • • • • • • • • • • • • •
HIGO The Theory of Clinical Research • • • • • • • • • • • • • • • • • • •
3 . Lecture Course (Graduate School of Pharmaceutical Sciences)
Subject Code · · · · · · · · · · · · · · · · · · ·
4 . Lecture Course (Social and Cultural Sciences)
Subject Code
Subject Code · · · · · · · · · · · · · · · · · · ·
nigo Frincipies of Social and Cultural Sciences • • • • • • • • • • • • • • • • 5 8

5 . Seminar, Practice, Course under research guidance	
Subject Code • • • • • • • • • • • • • • • • • • •	1
©Advanced Course	
HIGO Governmental Seminar Series II $\cdot \cdot \cdot$	2
HIGO Business Seminar Series II • • • • • • • • • • • • • • • • • •	
HIGO Chinese Course II • • • • • • • • • • • • • • • • • •	
HIGO English Course II • • • • • • • • • • • • • • • • • •	
HIGO Japanese Course II • • • • • • • • • • • • • • • • • •	
HIGO Governmental Internship II • • • • • • • • • • • • • • • • • •	
HIGO Business Internship II • • • • • • • • • • • • • • • • • •	8
HIGO Overseas Internship II • • • • • • • • • • • • • • • • • •	
HIGO Cutting-Edge Seminar Series II • • • • • • • • • • • • • • • • • •	0
HIGO Cutting-Edge Research Project II • • • • • • • • • • • • • • • • 7	1
©Four-year Course	
HIGO Practical Training • • • • • • • • • • • • • • • • • • •	2
HIGO Governmental Seminar Series · · · · · · · · · · · · · · · · · · ·	3
HIGO Business Seminar Series · · · · · · · · · · · · · · · · · · ·	
HIGO Chinese course • • • • • • • • • • • • • • • • • • •	
HIGO English course · · · · · · · · · · · · · · · · · · ·	
HIGO Japanese course • • • • • • • • • • • • • • • • • • •	9
HIGO Governmental Internship • • • • • • • • • • • • • • • • • • •	0
HIGO Business Internship • • • • • • • • • • • • • • • • • • •	1
HIGO Overseas Internship • • • • • • • • • • • • • • • • • • •	2
HIGO Cutting-Edge Seminar Series • • • • • • • • • • • • • • • • • • •	
HIGO Cutting-Edge Reserch Project · · · · · · · · · · · · · · · · · · ·	
◎Basic Course and Four-year Course	
HIGO Leadership Training course • • • • • • • • • • • • • • • • • • •	5
◎Advanced Course and Four-year Course	
HIGO Research presentation • • • • • • • • • • • • • • • • • • •	6
HIGO Public Policy I · · · · · · · · · · · · · · · · · ·	7
HIGO Public Policy II • • • • • • • • • • • • • • • • • •	8
HIGO Technology and Organizational Management I · · · · · · · · · 8	9
HIGO Technology and Organizational Management II • • • • • • • • • • • 9	0
HIGO Cross-cultural Communication I · · · · · · · · · · · · · · · · · ·	1
HIGO Cross-cultural Communication II • • • • • • • • • • • • • • • • • •	2
HIGO Social and Cultural Sciences tutorial • • • • • • • • • • • • • • • • • • •	

# 1. HIGO Courses, Credits and How to Apply

#### HIGO Program Advanced Course (Graduate School of Medical Sciences)

Subjects	Credi		How to take	Others
	Compulsory	Elective	credits	Others
HIGO Governmental Seminar Series II	1			
HIGO Business Seminar Series II	2			
HIGO Chinese course II		1	2 credits or	
HIGO English course II		1	more	
HIGO Japanese course II		1	*	
HIGO Governmental Internship II		1		
HIGO Business Internship II		1	3 credits or	
HIGO Overseas Internship II		1	more	
HIGO Research presentation		1		
HIGO Public Policy I		2		
Career HIGO Public Policy II		2		
Vision Devote HIGO Technology and Organizational Management I		2	4 credits	
HIGO Technology and Organizational Management I		2	4 creaits	
Course 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			

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

Subjects	Crec Compulsory		How to take credits	Others
HIGO Environmental and Sociomedical Sciences	2	LIGOCIVO		
HIGO Medical Informatics and Medical Ethics	_	2		
HIGO Pathophysiology and Structural Biochemistry of Biomolecules		2	t	
HIGO Cell Biology		2	t	
HIGO Hematopoietic and Immune Systems		2	t	
HIGO Infection and Immune Control		2	t	
HIGO Human Brain Functional Science		2	t	
HIGO Neuroscience		2	t	
HIGO Developmental and Regenerative Medicine		2	t	
HIGO Current Theory of Medical Diagnosis		2	t	Graduate School
HIGO Advanced Therapeutics		2	of Medical	
HIGO Metabolic and Circulatory Regulations		2	t	Sciences
HIGO Reproductive and Developmental Medicine		2	t	
HIGO Advances in Oncologic Medicine		2	t	
HIGO The Forefront of Clinical Oncology		2	t	
HIGO Restorative Medicine		2	ł	
HIGO Cancer therapeutics		2	ł	
HIGO Paliative Care		2	+	
HIGO The Theory of Clinical Research	1	2	ł	
HIGO Advanced Organic Chemistry	1	1	ł	
HIGO Advanced Biophysical Chemistry		1	3 credits or	
HIGO Advanced Drug Methodology		1	more X1	
HIGO Advanced Biopharmaceutics		1	ł	
HIGO Advanced Biopharmaceutics		1	+	
		1	+	
HIGO Clinical Pharmacy Advanced Course HIGO Advanced Drug Delivery System		1	ł	
		1	ł	
HIGO Advanced Medical Sciences		1	ł	
HIGO Advanced Practical Training of Pharmaceutical		1	ł	Graduate School
HIGO Advanced Pharmaceutical Biochemistry			+	of
HIGO Advanced Organic Synthesis		1	+	Pharmaceutical
HIGO Advanced Natural Products Chemistry		1	ł	Sciences
HIGO Advanced Molecular Embryology		1	ł	
HIGO Advanced Developmental Genetics		1	+	
HIGO Paper Research on Pharmaceutical Health Care		1	ł	
HIGO Pharmacoepidemiology		1	ł	
HIGO Introduction of Healthcare Management		1	+	
HIGO Advanced Medical and Pharmaceutical Sciences		1	+	
HIGO Advanced Pharmaceutical Development and Production		1	ļ	
HIGO Special lectures by clinical professors concerning pharmacy specialists		1	ļ	
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	
HIGO English course		1	more X2	
HIGO Japanese course		1		4
HIGO Governmental Internship		1	-	
HIGO Business Internship		1	3 credits or	
HIGO Overseas Internship		1	more	
HIGO Research presentation	1	1		4
HIGO Public Policy I		2		
Career HIGO Public Policy II		2		
Vision Develop HIGO Technology and Organizational Management I		2	4 credits or	
ment HIGO Technology and Organizational Management II		2	more	
Course 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			ļ
HIGO Cutting-Edge Research Project	10			

X1 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	Credi	ts	How to take	Othere
Subjects	Compulsory	Elective	credits	Others
HIGO Governmental Seminar Series II	1			
HIGO Business Seminar Series II	2			
HIGO Chinese course II		1	2 credits or	
HIGO English course II		1	more	
HIGO Japanese course II		1	X1	
HIGO Governmental Internship II		1	3 credits or	
HIGO Business Internship II		1	more	
HIGO Overseas Internship II		1		
HIGO Research presentation		1		
HIGO Public Policy I		2	4 credits	
Career HIGO Public Policy II		2		
Vision Develop HIGO Technology and Organizational Management I		2		
ment HIGO Technology and Organizational Management I		2		
Course HIGO Cross-cultural Communication I		2		
HIGO Cross-cultural Communication I		2		
HIGO Social and Cultural Sciences tutorial	2			
HIGO Cutting-Edge Seminar Series II	6			
HIGO Cutting-Edge Research Project II	10			

X1 Need to take language subjects conducted in language except for your mother tongue.

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

Dean, The Graduate School of Medical Sciences

)year/month/day

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)

Dean, The Graduate School of Medical Sciences

)year/month/day

Year entered:\_\_\_\_\_

(

Name : \_\_\_\_\_

Student number: \_\_\_\_\_

E-mail address:

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

Department		Supervisor	stamp
Course	Four-year Course		

[Compulsory subjects]

Subjects	Credit	Opening	Instructor	Other
HIGO Environmental and	0			
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	1	1-4 grade		
Series HIGO Business Seminar Series		1		
IIIGO Dusiness Seminar Series	1	1-4 grade		
HIGO Social and Cultural Sciences tutorial	2	1-4 grade		
HIGO Leadership Training	1	1-4 grade		
Course	-	1 i grado		
HIGO Cutting-Edge Seminar	2	1-4 grade		
Series		i i grade		
HIGO Cutting-Edge Research	10	1-4 grade		
Project	10	1 4 graue		
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		
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

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 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. -11-

2. Lecture Course (Graduate School of Medical Sciences)

#### Subject Code

Subjects	Subjec	t Code	Course Start Date	Room
Subjects	Medical Sciences	Pharmaceutical Sciences	Course Start Date	Room
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

	Coding(科 ンバー)		mester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student ır(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	-000-81-2	-2 2023whole year		Graduate School of Medical Sciences (24000)		1	2	others		
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)		
HIGO N	ledical Infor	matics an	nd Medical E	thics(A1 Medical Informatics and Medical E	Ethics)	KADOOKA		AOKA Shunji, NAKAMURA KU Koichiro		
				Goals with their ratio(学修成果とう	その割合	合)				
1.Advan and abil	iced expert k lity to take in	nowledg nitiative a	e, skill and r ction ····25	esearch capability ····25% 2.Profound inte % 4.Social leadership drive ····25%	er-disc	iplinary kno	wledge ····25	% 3.Global perspective		
Туре о	f Class(授業)	の形態)	Lecture and	Seminar						
Teachir	ng Method(扔 法)	受業の方	The course	is provided by lecture and discussion or e-	Learnii	ng using the	moodle or CIT	I Japan.		
Course	e Goals(授業)		arose from i health record countries, e informed co	ormatics and Medical Ethics aims at proper medical practice. In this course, you learn b rds, protection of computer-processed pers valuation of medical care and DPC, proble insent, principle of ethics. This course serve on medical informatics and medical ethics,	oasic c sonal c ms of a es as ir	oncepts use lata, health abortion, eut ntroductory	d in this filed, in care system in J thanasia and de for all students	ncluding electronic lapan and other eath with dignity,		
Course	Learning go 目標)	als(学修	[A level (A To be able t [C level (C	o handle or manage health information an	d ethi	cal problems	s arose from me	edical practice.		
Course	Outline(授業		are manage (1) electron ethical issue principle of (9)disaster ( Participants Collaborativ	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 wi be helpful to provide positive feed back to the next session.						
				Details for Individual Classes(各回の	)授業内	內容)				
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 6	eAPRIN [eEJ-0]	Rese	a Handling_F earch_RCR / flicts of Inte	, ,	R / Rules for Collaborative st_RCR		
3			4th period e	APRIN [eEJ-0]	Authorship_RCR / Plagiarism(Biomed Communicating Information to the Pu					
4			4th period e	APRIN [eEJ-0]	Peer Review(Biomedical)_RCR / M Managing Public Research Funds			/ Mentoring_RCR / ds_RCR		
5			4th period e	eAPRIN [eEJ-0]	Dev Insti	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 e	eAPRIN [eEJ-0]	Pop Rese	ulations_HS earch_HSR /	c and Genetic Analysis Studies in Human ons_HSR / Group Harm Arising from h_HSR / d Consent in Research HSR			
7			4th period eAPRIN 【eEJ-0】		Con	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]		Ster	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】		of La Anir Anir	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 <sup>-</sup> 0]	Faishi Nakamura and Koichiro Usuku 【eJ-	Hea	Health care system in Japan and in the world				
11			4th period <sup>-</sup> 0]	Faishi Nakamura and Koichiro Usuku 【eEJ	- Futu rese	are prospect arch and da	s of Electronic ta ware house	medical records, Clinical		
12			4th period S	Shunji Kasaoka 【eE-0】 【eJ-0】		mergency Medical Service System, Post-Cardiac Arrest Syndrome				
13			4th period S	Shunji Kasaoka 【eE-0】 【eJ-0】	Disa	ister Medicir	ne, Triage			
14				′asuhiro Kadooka	Step up Lecture for Research Ethics (1)					
15			4th period `	′asuhiro Kadooka	Step	o up Lecture	for Research E	thics (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

	e Coding(科 -ンバー)	Year/Semester m(年度・学其	/Ter Faculty Offering Course(時間割所属・時 割コード)		Eligible Student ear(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7	-001-79-2	2023whole ye	Graduate School of Medical Sciences (24010)	5	1	2	others		
		Course Tit	le(Theme)(科目名(講義題目))		Instructor(	s)(担当教員)			
	HIGO Path	ophysiology and	Structural Biochemistry of Biomolecules(B1)		BABA M Kunitos	asaya, YAMAGA hi, ARIMA Yuich	ATA Kazuya, YAMANAKA hiro, MIHARADA Kenichi		
			Goals with their ratio(学修成果	とその害	割合)				
1.Advan and abil	nced expert l lity to take ir	nowledge, skill	and research capability ····30% 2.Profound i ··30% 4.Social leadership drive ····10%	inter-di	sciplinary kno	wledge ····30	% 3.Global perspective		
Туре о	of Class(授業)	の形態) Lectur	e e e e e e e e e e e e e e e e e e e						
Teachir	ng Method(挑 法)	<sup>受業の方</sup> Power	Point will be used in the lectures, and active p	particip	ation in the di	scussion is enc	ouraged.		
Course	e Goals(授業)	の目的) が た や に わ に つ し 、 の し や に わ し 、 の し し の し の し つ し つ し つ し し つ し し つ し つ し つ し つ し つ し つ し つ つ	Inderstand the pathophysiology of hypertensi eutic strategy of these cardiovascular disease inderstand the basic knowledge of glucose/li blic syndrome, and lipid metabolism disorder lecular basis, various cellular functions, and r es will be learnt. understand the mechanisms for protein quali understand the role of hypoxia signaling path es	s. pid met oles of ty conti	tabolism and i ATPases, espe rol in cells and	ts dysregulation ecially AAA fami tits implication	n in diabetes mellitus, ly proteins, in human s in diseases		
Course	Learning go 目標)	als(学修 【C lev	el (A水準)] lerstand the detailed findings of the structure l application of biomolecule, and to be able t rel (C水準)] lerstand the structure, function, physiological ecule.	o apply	them to the s	tudy.			
Course	Outline(授業	iearn f are bic are rel from th family animal of func respon	(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						
	1		Details for Individual Classes(各国	回の授業	《内容)				
No.(回 )	Date(月	日)	Class Theme(授業テーマ)		Bri	ef Outline of Cl	ass(内容概略)		
1		ARIMA	Yuichiro [eEJ-0]	Pa	athophysiology	y of cardiovascı	ılar diseases (1)		
2		ARIMA	Yuichiro [eEJ-0]	Pa	athophysiology	y of cardiovascu	ılar diseases (2)		
3		ARIMA	Yuichiro [eJ-0]	Ну	pertension ar	nd hyperglycem	ia during pregnancy		
4		YAMA	GATA Kazuya 【eEJ-0】	Pa	athophysiology	y of glucose/lip	id metabolism (1)		
5		YAMA	GATA Kazuya 【eEJ-0】	Pa	athophysiology	y of glucose/lip	id metabolism (2)		
6		YAMA	GATA Kazuya 【eEJ-0】	Pa	athophysiology	y of glucose/lip	id metabolism (3)		
7		YAMAI	NAKA Kunitoshi 【eEJ-0】	AT	Pases related	to life of prote	ins		
8		YAMAI	NAKA Kunitoshi 【eEJ-0】	Va	arious functior	ns of AAA protei	ns		
9		YAMAI	NAKA Kunitoshi 【eEJ-0】	Ηι	uman diseases	caused by AAA	A proteins		
10		MIHAF	ADA Kenichi 【eJ-0】	Gr	owth factors a	and receptors ir	n cancer		
11		MIHAF	ADA Kenichi 【eJ-0】	Ce	ell signaling in	cancer			
12		MIHAF	ADA Kenichi [eJ-0]	M	olecular targe	ted therapy in c	cancer		
13		BABA	Masaya [eJ-0]		-	ng pathway and			
14			Masaya [eJ-0]			pathway and d			
15			Masaya [eJ-0]			aling and diseas			
	nated out-of- study time								
Require	ed Textbook ト)	(テキス Textbo	oks are not specified, and handouts will be d	istribut	ed in some cla	asses.			
►) Reading List(参考文献)		文献) Compa	er's Illustrated Biochemistry" by Robert K. M nnies, 2006 Jbook of Lipoprotein Testing" by Nader Rifa	-	-		odwell, The McGraw-Hill		
		- I MI							
Enrollm	nent Conditio 条件)	ons(履修							

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

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	5	Eligible Student r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7	0M7-002-79-2 2023whole ye			Graduate School of Medical Sciences (24020)		1	2	others	
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)	
			HIGO (	Cell Biology(B2)		Miki, O	NO Yusuke, TA	IZAWA Kazuhito, BUNDO TEISHI Satoshi, NAKAO jirou, 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%									
Туре о	of Class(授業の	の形態)	Lecture						
Teachir	ng Method(扨 法)	受業の方	Face-to face	e lecture & E-learning lecture					
Course	e Goals(授業)	の目的)	The student	s understand the various biological phenom disorders, molecular genetics, and stem cell	nena s s base	uch as deve ed on cellula	elopment/reger ar functions.	neration, cancer, aging,	
Course	Learning goa 目標)	als(学修	aging, psych understand [C level (C The student	s can understand the various biological phe niatric disorders, molecular genetics, and ste and discuss the latest topics.	em cel enome	lls at the mo	elecular level. Ir g development	addition, they can	
Course	Outline(授業	の概要)	The topics of genetics, an on their spe	of this course include development/regener Id stem cells. The teachers give lectures on l icialty.	ation, basic l	cancer, agii knowledge a	ng, psychiatric and current sta	disorders, molecular tus of each topic, based	
				Details for Individual Classes(各回の	授業内	]容)			
No.(回 )	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
1			Kazuhito To	mizawa 【eE-0, eJ-0】	Regu	lation in ph	ysiology and p	athophysiology	
2			Kazuhito To	mizawa 【eE-0, eJ-0】	Regulation by protein phosphorylation				
3			Shinjiro Hin	o【eE-0, eJ-0】	Cross talk between metabolism and epigenome				
4			Yusuke Onc	eE-0, eJ-0]	Stem cells and tissue regeneration/adaptation I				
5			Yusuke Onc	eE-0, eJ-0]	Stem cells and tissue regeneration/adaptation II				
6			Yutaka Nak	achi【eE-0, eJ-0】	Osteoblasts and Osteoclasts I				
7			Yutaka Nak	achi【eE-0, eJ-0】	Osteoblasts and Osteoclasts II				
8			Miki Bundo	[eE-0, eJ-0]	Sing	ctions			
9			Mitsuyoshi	Nakao 【eJ-O, eE-O】	Med	remarks)			
10			Mitsuyoshi	Nakao【eJ-O, eE-O】	Med	ical epigene	etics II		
11			Kazuya lwar	noto【eE-0, eJ-0】	Neur	roepigeneti	cs I		
12				noto【eE-0, eJ-0】		roepigeneti			
13				eishi (eEJ-0)		growth and	-		
14				eishi (eEJ-0)		ut Mitosis ar			
15				eishi (eEJ-0)		•	recombination		
	nated out-of- study time			consists of content that requires 90 hours c including assignments) is necessary to unde			e class is 30 hoເ	urs, 60 hours of pre- and	
Require	ed Textbook ト)	(テキス	Not specified.						
Reading List(参考文献)		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)						
Enrollm	ent Conditic 条件)	ons(履修	Should have	e the basic knowledge of cell biology.					
	ment Metho ia(評価方法・		the basis of	be based on the understanding of the cour papers and quizzes related to the topics de d on the average score of the papers and qu	alt wit	h in class to	be scored fror	n 0 to 100. Final grades	
Lar Instr	nguage Used ruction(使用言	l in 言語)	Japanese ar	nd English					
Tex Languag	ktbook/Mate ge(教科書・資 語)	rial 資料の言	Combinatio	n of Japanese and English					
Work E	Based on Pr xperience(実 活かした授う	務経験	Not applica	ble					

Course 目ナ	e Coding(科 -ンバー)	Year/Se m(年	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	Y	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		
		Co	ourse Title(Th		Instructor(s)(担当教員)					
HIGO	D Hematopo	ietic and	Immune Sys	tems(B3 Hematopoietic and Immune System	ns(B3 Hematopoietic and Immune Systems) ns(B3 Hematopoietic and Immune Systems) ns(B3 Hematopoietic and Immune Systems) ns(B3 Hematopoietic and Immune Systems) NoGAWA Minetaro, IRIE Atsushi, SUZL TAKIZAWA Hitoshi, NOMURA Tak			MI Hiroyuki, KOGA Saori, E Atsushi, SUZU Shinya,		
	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%										
	of Class(授業		Lecture							
	ng Method(#		ł							
	法)			cures. E-learning contents are available in s this lecture series is to understand the basi				•		
Course	e Goals(授業	の目的)	these syste	ms (malignancy, immunodeficiency, and imi			and immune s	systems, and disruption of		
Course	Learning go 目標)	als(学修	related dise 【C level (C	I the basics of hematopoietic and immune s eases and discuss about recent progress. :水準)] I the basics of hematopoietic and immune s			. ,			
Course	Outline(授業	(の概要)	(2) The orig (3) The anir (4) Aging ar (5) Cell-cel	this lecture series are to understand the fo chanisms how the homeostasis of hematopo gin of hematopoietic system and the mechan mal model bearing human hematopoietic sy nd tumorigenesis of hematopoietic system, l interaction in the immune system, chanism of antigen-recognition and the imm	nism ⁄sten	ns of developme m and applicati	ent of hemator	poietic stem cells.		
				Details for Individual Classes(各回の		-				
No.(回	Date(月	日)		Class Theme(授業テーマ)	T		of Outline of Cl	ass(内容概略)		
, 1			Minetaro O	gawa [eJ-0]	0	Ontogeny of hem	natopoietic svs	tem-1		
2				gawa (eJ-0)	_	• •				
3					Ontogeny of hematopoietic system-2 Ontogeny of hematopoietic system-3					
4										
5			Goro Sashi		Application of Humanized mice					
6					Molecular mechanism of myeloid malignancies			a malignancies		
7			Shinya Suzu		Regulation of Hematopoiesis			·. ·		
8				izawa [eE-0]	Role of inflammation on hematopoiesis			opoiesis		
9			Yorifumi Sa		T-cell and retroviral infection					
10				uchi (eEJ-0)	_	-		sma cell neoplasm		
11			Hiroyuki Os		_			ring viral infection		
12				mura [eEJ-0]	-	low cytometric				
13			Hiroyuki Os		_	•		nnate lymphoid cells		
14				mura (eEJ-0)	_	-cell responses				
15			Atsushi Irie	[eJ-0]	В	cell developme	ent and functio	n		
Estin	nated out-of- study time	class								
Requir	ed Textbook	(テキス	Textbooks are not specified, and handouts will be distributed.							
下) Reading List(参考文献)		<ul> <li>"The Immune System" by Peter Parham. Garland Publishing Inc. New York and London, 2007</li> <li>"Janeway's Immunobiology Seventh Edition" by Kenneth Murphy, Paul Travers, Mark Walport. Garland Science, Taylor &amp; Francis Group LLC. New York and Abingdon, 2008. The Immune System, 4th Edition [Peter Parham] Garland Science</li> <li>WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues. WHO, 2017.</li> <li>The Science of Stem Cells. Jonathan M. W. Slack. Wiley Blackwell, 2018</li> <li>Williams Hematology, 9th ed. MCGRAW-HILL EDUCATION. 2016</li> </ul>								
Enrollm	nent Conditio 条件)	ons(履修								
	ment Metho ia(評価方法		will be spec matter. The grades will	nt of the Objectives will be evaluated by act cified after the lectures. Grading will be base students' understanding will be evaluated be based on the average of the best 10 sco n in class discussions.	ed o on tł	on the student's the basis of the	understanding reports and br	g of the course subject ief examinations. Final		
	nguage Used ruction(使用 <sup>-</sup>		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

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	St	ligible tudent (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) HIGO Infection and Immune Control(B4 Infection and Immune Control) MATSUOKA Masao, SAWA Tomoh Yousuke, SUZU Shinya, NAKATA Hird Terumasa, TANAKA Yasuh								Seiji, OʻSHIUMI Hiroyuki, IOTOZONO Chihiro, AWA Tomohiro, Maeda NAKATA Hirotomo, IKEDA	
				Goals with their ratio(学修成果とそ	の割合	)			
1.Advano and abili	ced expert l ity to take ir	knowledg nitiative a	ge, skill and r ction ••••20	esearch capability ····30% 2.Profound inte % 4.Social leadership drive ····20%	er-discip	olinary kno	wledge ····30	% 3.Global perspective	
Type of	f Class(授業)	の形態)	Lecture						
Teachin	ng Method(挑 法)	受業の方	video lectur	will be used in the lectures, and active part es are considered for those who are regular ents will be informed of the individual lectu	ly abse	nt for unav	oidable reason		
Course	Goals(授業)	の目的)	important fo response, (2 managemer	his lecture series "Special Lecture I on Infe or basic and clinical research of infectious d 2) molecular pathogenesis of viral infection, nt of nosocomial/opportunistic infection, (5 iseases, (6) pathogenesis and treatment of i	iseases (3) imn ) diagno	:: (1) intera nune contr osis and tre	ction between ol and vaccine eatment of eme	pathogen and host research, (4)	
Course I	Learning go 目標)	als(学修	[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, contro 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	容)			
No.(回 )	Date(月	3日)		Class Theme(授業テーマ)		Brief Outline of Class(内容概略)			
1			Terumasa I	eda [eE-O]	Retro	virus life cy	/cle		
2			Tomohiro S	awa [eE-O]	Bacte	rial infection	on and pathoge	enesis	
3			Hiroyuki Os	hiumi 【eE-O】	Innate	e immune i	responses to pa	ithogens	
4			Chihiro Mot	ozono [eE-O]	Cellu	lar immune	e responses to p	oathogens	
5			Takeo Kuwa	ata 【eE-O】	Humo	oral immun	e responses to	pathogens	
6			Yosuke Mae	eda 【eE-O】	Patho confe		Mycobacteriur	n tuberculosis and HIV	
7			Masao Mats	uoka 【eE-O】	Emer	ging/re-em	erging infection	us diseases	
8			Shinya Suzu	(eE-O)	Retro	viruses-ho	st interaction		
9			Yorifumi Sa	to [eE-O]	Retro	viral infect	ions and latenc	у	
10			Masanori Ik	eda [eE-O]	Moleo	cular patho	genesis of hep	atitis viruses	
11			Yasuhito Ta	naka [eE-O]	Hepa	titis viruses	and Liver cand	cer	
12			Ryuji Kubot	a [eE-O]	Virus-	-induced n	eurological dise	eases	
13			Seiji Okada		-		search in infec		
14			-	atsui [eE-O]	Roles	of laborate	ory medicine fo	r infectious diseases	
15				akata (eE-O)	-		portunistic infe		
Estim	ated out-of- study time	-class	• This cour	se consists of content that requires hours ( hours of pre- and post-study (including ass	90 houi	rs) of study	. Since the clas	s is 30 hours (2h x 15	
Require	ed Textbook ト)	(テキス		are not specified, and handouts will be distri	ibuted.				
Readi	ing List(参考	文献)	"Atlas of A "Infectious	IDS" edited by Gerald L. Mandell and Doni Diseases and Medical Microbiology" 2nd	na Mild Edition	van. Curre 1, Abraham	nt Medicine, Ind I. Braude et al.	c. Philadelphia, 2001. , W.B. Saunders Compan	

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

	Coding(科 ンバー)	Year/Se m(年度	mester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	St	iligible tudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	-005-79-2	2023w	vhole year	Graduate School of Medical Sciences (24050)		1	2	others		
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)		
	HIGO Huma	an Brain F	Functional So	cience(B5 Human brain function science)		Ka: TAKEBA	zuya, BUNDO N YASHI Minoru,	oku Syuken, IWAMOTO Aiki, Sou Bunketsu, FUJISE Noboru, ESUMI IIMOTO Mamoru		
				Goals with their ratio(学修成果とそ	の割合	·)				
1.Advan	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%										
	f Class(授業)	,	Lecture	and /an OLD will be used in the lastures or	d a ativ		tion in the dise	ussian is an assurated		
Teachin	ng Method(扔 法)			and/or OHP will be used in the lectures, ar s or video lectures are considered for those						
Course	e Goals(授業)	の目的)	environmen memory, co neurons. In mental activ divergence	nplex structure, human brain is developed f tal information and uses the information di gnition, spirit and identity in its structure by this lecture series, 'Human brain function ity appears from 'gene expression', neur in the neuronal circuit. Students will unders psychiatric disorders.	rectly fo / increa al Scier ron eleo	or its body Ising numb Ince', stud Incel activ	response. Hum er of neurons a ents will be abl ity, informatior	an brain achieved nd number of subtypes of e to understand how n convergence and		
Course	Learning go 目標)	als(学修	[C level (C	stand the contents and points that the lectu						
Course	Outline(授業	(の概要)	and regiona synaptogen	cribe and discuss following issues: cellular a lization, neural differentiation and process esis. You will learn how environmental infor b learn genetic and neuronal bases of ment	of morp mation	ohogenesis is conveye	, histogenesis, d to human bra	circuit formation, and		
		ı		Details for Individual Classes(各回の	授業内	容)				
No.(回 )	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1			SHIMAMUR	A [eE-0,eJ-0]	Neura	al induction	ı			
2			SHIMAMUR	A [eE-0,eJ-0]	Regionalization of embryonic brain					
3			SHIMAMUR	IIMAMURA [eE-0,eJ-0] Regionally dist			inct histogenesis in brain			
4			ESUMI [eE	IMI [eEJ-0] Neuronal			nal diversity and network formation			
5			ESUMI 【eE	SUMI [eEJ-0] Neurona			onal network in the neocortex			
6				SONG [eE-0,eJ-0] Actio			ction potential			
7			SONG [eE	-0,eJ-0]	Synap	ose and syr	naptic transmis	ic transmission		
8			SONG [eE	-0,eJ-0]	Neuro	otransmitte	r			
9			SONG [eE	-0,eJ-0]	Synap	otic plastic	ty			
10			FUJISE 【eE	-0,eJ-0]	Neuro	Neurotransmitter and mental symptom				
11			IWAMOTO	[eE-0]	Gene	tics and epigenetics of psychiatric disorders				
12			BUNDO [e		-		ons and psychia	tric disorders		
13			HASHIMOT			al basis of o				
14			TAKEBAYAS		-		ches to mental			
15			BOKU [eJ-	0]	Neura	al basis of r	mental disorder			
	nated out-of- study time		60 hours							
	ed Textbook		Not specifie							
	ing List(参考		Not specifie	d						
	ent Conditic 条件)		attending 6	0% of lectures and taking short tests in eacl	n lectur	re				
Criteri	ment Metho ia(評価方法・	· 基準)	Rate of finis	hed e-Learning. Points earned by passing s	hort ex	aminations	5.			
Instr	nguage Usec ruction(使用)	言語)	Japanese ar	nd English (e-learning contents are either in	English	n, Japanese	, or mixture of	them.)		
Tex Languag	tbook/Mate ge(教科書・資 語)	erial 資料の言	Combinatio	n of Japanese and English (e-learning conte	ents are	e either in E	nglish or Japan	ese)		
Work E	Based on P xperience(実 活かした授業	፪務経験 ┃	Not applica	ble						

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	5	Eligible Student r(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	
		Co	urse Title(Th	Title(Theme)(科目名(講義題目)) Instructor(s)(拒				s)(担当教員)	
			HIGO N	euroscience(B6)		Norifu Yasuhiro	mi, ERA Takum , HAMASAKI Ta	JNO Hidenobu, SHIODA i, ORITA Yorihisa, Itou Idashi, INOUE Toshihiro, , YAMASHITA Satoshi	
				Goals with their ratio(学修成果とそ	の割合	ት)			
1.Advar	nced expert l	knowledg	ge, skill and r	esearch capability ····80% 2.Profound inte	er-disci	iplinary kno	wledge ····20	%	
	f Class(授業		Lecture						
Teachir	ng Method(挑 法)	受業の方	PowerPoint	will be used in the lectures.					
Course	e Goals(授業	の目的)	cortex, malf systems, an	se, you learn structure and function of sever ormation of the brain due to the abnormali d neurodegenerative disorders. Recent adv e medicine are discussed.	ies in	developmer	nt, pathophysic	logy in the sensory	
Course	Learning go 目標)	als(学修	therapeutic somatosens presented t [C level (C Students ca abnormaliti	n explain the structure and function of the approaches to the neural disorders using s ory, visual, and auditory systems and their t opics and explain their ideas to investigate	tem ce reatme the iss ructure al disc	ells and gene ents. Studer ues. e and functi orders using	e targeting, pat nts can also find on of the centr stem cells and	hophysiology in the d unresolved issues in the al nervous system and its gene targeting,	
Course Outline(授業の概要)			developmen function of Gene abnor treatment; ( treatment; (	(1) general structure of the brain; (2) Structure and function of the neocortex and hippocampus; (3) 'Pos development of somatosensory cortex; (4) Morphology and function of the visual cortex; (5) Morphology function of the basal ganglia; (6) Neural crest cells and pluripotency; (7) Nerve growth factor and apoptos Gene abnormality and the resultant congenital insensitivity to pain; (9) Deformity of central nervous syste treatment; (10) Pathophysiology and treatment of retinal diseases; (11) Glaucoma pathophysiology and treatment; (12) Hearing impairment and treatment; (13) Regenerative medicine for neurodegenerative dis (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	3日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
1			FUKUDA Ta	kaichi [eEJ-0]	General structure of the brain				
2			FUKUDA Ta	kaichi [eEJ-0]	Structure and function of the neocortex and hippocampus				
3			MIZUNO Hi	denobu [eEJ-0]	Post	omatosensory forex			
4			FUKUDA Ta	kaichi [eEJ-0]	Struc	cture and fu	nction of the v	sual system	
5			FUKUDA Ta	kaichi [eEJ-0]	Struc	cture and fu	nction of the b	0 0	
6			ERA Takumi	[eJ-0,eE-0]		elopment ar potency	nd differentiatio	on of neural crest cell,	
7			ERA Takum	[eJ-0,eE-0]	New syste	medical ap em using ste	plication to dis m cell	eases of the nervous	
8			TAKEMOTO	Makoto [eE-0]	Lear	ning, memo	ry, and emotio	า	
9			SHIODA No	rifumi [eE-0]			nucleic acid st ogical diseases	ructures as a therapeutic	
10			HAMASAKI	Tadashi [eEJ-0]	Defo	rmity of cer	ntral nervous sy	stem and treatment	
11			ITOU Yasuh	iro [eE-0]	Path	ology and t	reatment of ret	inal diseases	
12			INOUE Tosł	nihiro [eE-0]	Glau	coma patho	ophysiology and	d therapy	
13			ORITA Yorił	nisa [eJ-0]	Olfac	ction impair	ment and the t	reatment	
14			YAMASHITA	Satoshi [eE-0]	Rege	enerative me	edicine for neu	rodegenerative diseases	
15			YAMASHITA	Satoshi [eE-0]	State	e-of-the-art	therapies for P	arkinson's diseases	
Estim	nated out-of- study time	class							
Require	ed Textbook ト)	(テキス							
Read	Reading List(参考文献)								
Enrollm	ent Conditio 条件)	ons(履修							
Assess Criter	ment Metho ia(評価方法	ds and · 基準)	The student be scored fi	s' understanding will be evaluated on the b om 0 to 100. Final grades will be based on	asis of the av	quizzes rel erage of the	ated to the top a 10 highest sco	ics dealt with in class to pres out of 15 quizzes.	
Lar Instr	nguage Used ruction(使用)	d in 言語)	Japanese ar	nd English					
Tex Languag	ktbook/Mate ge(教科書・う	erial 資料の言	Combinatio	n 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.)

	Coding(科 ンバー)		emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	St	ligible tudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-007-79-2 2023		whole year	Graduate School of Medical Sciences (24070)		1	2	others		
		Co	ourse Title(Theme)(科目名(講義題目))				Instructor(	▲	
	Н	IIGO Dev	velopmental 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.Advan and abil	iced expert k ity to take in	knowled nitiative a	ge, skill and r action ••••20	esearch capability ····50% 2.Profound inte % 4.Social leadership drive ····5%	r-discip	olinary kno	wledge ····25	% 3.Global perspective	
Туре о	f Class(授業)	の形態)	Lecture						
Teachir	ng Method(挑 法)	受業の方	PowerPoint encouraged	will be used in the lectures, and active part l.	icipatio	on in the di	scussion is		
Course	e Goals(授業)	の目的)	developmer which have Developme	ntal and regenerative medicine aims at curir nt. In this course, you learn basic concepts a now become essential for any area of resea ntal and Regenerative Researcher Program, ntial knowledge on genetic engineering tech	nd tec rch. Th and wil	hniques us is course se Il also be u	ed in this filed, erves as introdu	including knockout mice, uctory for those in the	
Course	Learning go 目標)	als(学修	treatments 【C level (C	c concepts and techniques used in this filec based on the knowledge.					
Course	Outline(授業	きの概要)	(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	容)			
No.(回 )	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
1	06/0	)1	6th period	Ryuichi Nishinakamura 【eE-0】	Overv	view & Kidn	iey developmer	nt	
2	06/0	8	6th period	Toru Takeo【eE-0】	Reproductive engineering				
3	06/1	5	5th period	Masatake Araki 【eEJ-0】	Production of genome edited mouse line			nouse line	
4	06/2	2	5th period	Hitoshi Niwa【eE-0】	Molecular basis of embryonic stem cells I			tem cells I	
5	06/2	9	5th period	Hitoshi Niwa【eE-0】	Molecular basis of embryonic stem cells II			tem cells II	
6	07/0	6	5th period	Takumi Era 【eE-0】	iPS cells, their applications for the medicine			the medicine	
7	07/1	3	5th period	Hiroaki Okae 【eE-0】	Pregnancy in mammals				
8	07/2	20	5th period	Asako Shido 【eE-0】	Embryogenesis and organ morphogenesis			ohogenesis	
9	07/2	27	5th period	Takaichi Fukuda 【eE-0】	Ontogeny and phylogeny				
10	08/1	0	5th period	Shigeyuki Esumi 【eE-0】	Anatomy of digestive tracts and lung			l lung	
11	08/2	.4	5th period	Akio Kobayashi 【eE-0】	Development of the urogenital system			system	
12	08/3	1	5th period	Yusuke Ono 【eE-0】	Musc	le developi	ment and reger	neration	
13	09/0	)7	5th period	Akira Nakamura 【eE-0】	germ	cell format	ion: preformati	ion and epigenesis	
14	09/1	4	5th period	Keiichiro Ishiguro [eE-0]	germ cell development in mamma		mals		
15	09/2	21	5th period Masaki Okano [eE-0] Epigenetics in dev				evelopment		
Estimated out-of-class study time			60 hrs						
Required Textbook(テキス ト)									
Reading List(参考文献)		<ul> <li>"Developmental Biology, 12th edition" by Barresi MJF&amp; Gilbert S 2019.</li> <li>"Essential Developmental Biology, 4th edition" by Slack JMW &amp;Dale L.,Blackwell Publishing 2021</li> <li>"Manipulating the Mouse Embryo: A Laboratory Manual, 4th edition" by Nagy A., Gertsenstein M., Vintersten K., Behringer R., Cold Spring Harbor Laboratory Press, 2014.</li> <li>"Larsen' s Human Embryology, 5th edition" by Shoenwolf GC, Bleyl SB, Brauer PR, Francis-West PH. Churchill Livingstone, 2014.</li> </ul>							
Enrollm	ent Conditic 条件)	ons(履修							
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						
Tex	tbook/Mate	erial	Combinatio	n of Japanese and English					
			I						

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

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 叓・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Eligible Student r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	DM7-009-82-2 2023who		vhole year	Graduate School of Medical Sciences (24080)		1	2	others		
		Co	ourse Title(Theme)(科目名(講義題目))				Instructor(	s)(担当教員)		
HIGC	) Current Th	eory of N	Medical Diagnosis(C1 Current Theory of Medical Diagnosis			sis) 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.Advan and abil	iced expert k lity to take in	knowledg nitiative a	e, skill and r	esearch capability ····45% 2.Profound inte 4.Social leadership drive ····5%	r-disci	iplinary kno	wledge ····45	% 3.Global perspective		
	of Class(授業)		Lecture							
Teachir	ng Method(捂 法)	受業の方	PowerPoint Extra classe	files will be used for giving the lectures, and s or video lectures will be considered for th	d active ose wh	e participati 10 are regula	on in the discu arly absent due	ssion is encouraged. to unavoidable reasons.		
Course	e Goals(授業)	の目的)	The lecture modern me	series "Current Theory of Medical Diagnos dical diagnostic techniques and their applic	sis" at ation i	fford fundar in practical	nental and curr medicine and r	rent general views of nedical research.		
Course	Learning goa 目標)	als(学修	[A level (A Students are expected to	水準)] e expected to understand cutting-edge adva find devise a method to discover unsolved	anced proble	method for ems and lead	disease diagno d to solutions.	osis. Students are also		
			[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)		きの概要)	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	-					
No.(回 )	Date(月	日)		Class Theme(授業テーマ)	Brief Outline of Class(内容概略)					
1			Sato Y (Path	ol Exp Med) 【eJ-0】	Tumor diagnosis with immunohistochemistry.					
2			Baba M (Pa	hol Exp Med) 【eJ-0】		•		sis of malignancies.		
3			Mikami Y (P	athol Diagnosis) [eJ-0]	Histopathologic approach to diagnostic oncology: a logic for interpretation of morphology.					
4			Ueda M (Ne	urology) [eJ-LO]	Recent advances in diagnostic methods for intractable neurological diseases					
5			Misumi Y (N	eurology) [eJ-0]	Adva disea		nced diagnostic approaches for rare and inherite ses			
6				(Cell Pathol) [eJ-0]	Roles of macrophages in tumor microenvi					
7			Komohara Y	(Cell Pathol) 【eJ-0】	Roles of macrophages in cancer immunolog			0.		
8			Matsui H(La	aboratory Medicine) 【eJ-0】	Application of next generation sequencing for cl diagnosis					
9			Matsui H (La	aboratory Medicine)【eJ-0】	Pract	tice and pro	spect of clinica	al diagnostic medicine		
10			Jono H (Clir	Pharm Sci) 【eJ-0】	Drug evide		esearch based	on basic and clinical		
11			Hirai T (Dia	g 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 (R	Science) [eJ-0]	RI tracer methods: basics and application of radioisotope measurements.			application of		
14			Kojima A (R	Science) [eJ-0]	RI molecular imaging.					
15	03/0	8		Hirai T (Diag Radiology)	class	ses		did not attend previous		
Estim	nated out-of- study time	class	15 sessions	consists of content that requires 90 hours of , 60 hours worth of prior and post-work stu rstand the classes.	of stud dies (i	y. Since the ncluding as	classes will be signments, etc.	30 hours long (2 hours x ) will be required to		
Require	Required Textbook(テキス ト)		Each instructor will specify as needed.							
Read	Reading List(参考文献)		Each instructor will specify as needed.							
Enrollm	ent Conditio 条件)	ons(履修								
	Assessment Methods and Criteria(評価方法・基準)		in this cours are prepare the course s	be based on active class participation, pap e is very poor or none, the students can ob d in some classes, or a supplemental class. ubject matter. The students' understanding e topics and be scored from 0 to 100.	tain cr Gradin	edits for thi ng will be ba	s course throug sed on the stud	gh e-learning system that dent's understanding of		

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.)
	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.)

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Eligible Student (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-010-82-2 2023		vhole year	Graduate School of Medical Sciences (24090)	1		2	others			
Co			ourse 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						
	•			esearch capability ····80% 2.Profound inte	er-disci	plinary kno	wledge ····20	%		
	f Class(授業		Lecture							
Teachin	ng Method(挑 法)	マ末の方	PowerPoint	will be used in the lectures, and active par	ticipati	ion in the d	iscussion is end	couraged.		
Course Goals(授業の目的)		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)		als(学修	[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)		きの概要)	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(P				ass(内容概略)			
1			Naoe Hidea	ki [eJ-0]	Progress in endoscopic treatment and diagnosis of gastrointestinal diseases			ent and diagnosis of		
2			Tanaka Yasi	uhito [eJ-0]		State-of the art in diagnosis and treatment of hepatic disease				
3			Tanaka Yasi	uhito [eJ-0]	Molecular targeting therapy in gastrointestinal & he diseases			gastrointestinal & hepatic		
4			Sakagami T	akuro [eJ-0]	Progress in diagnosis and treatment of respiratory diseases			ment of respiratory		
5			Sakagami T		Topics of allergic respiratory diseases					
6			Sakagami T		Topics of diagnosis and treatment of l			_		
7			Miyamaru S	atoru [eJ-0]	The diagnosis and management of o Treatment using cochlear implant fo			,, ,		
8			lse Momoko	o [el-0]	sens	tment using orineural he	earing loss			
9			Murakami D	Paizo [eJ-0]	Endo	oscopic trea	tment of head	ent of head and neck diseases		
10			Hibi Taizo	[eJ-0]	Orga	n transplan	tation; the past	t and the present		
11			Hibi Taizo	[eJ-0]	-	•		l clinical application		
12			Kamba Tom			•		r urogenital cancers		
13			Kamba Tom	omi [e-0]		•	Itments for urin	•		
14			Fukushima		skin	_		r autoimmune diseases in		
15			Fukushima	Satoshi [eJ-0]	Immu	une therapy	in skin cancer	,		
Estim	ated out-of- study time	class								
Require	ed Textbook ト)	(テキス	Textbooks are not specified, and handouts will be distributed.							
Readi	ing 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.							
Enrollme	ent Conditio 条件)	ons(履修								
Assessr Criteri	ment Metho ia(評価方法,	ds and 基準)	Grading will students' ur	be based on active class participation, und iderstanding will be evaluated on the basis	lerstan of pap	ding, paper ers and qui	r summaries, an zzes related to	nd the final report.The 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

	Coding(科 ンバー)	Year/Semester/T m(年度・学期)	er 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 yea	Graduate School of Medical Sciences (24100)	1	2	others			
		Course Title			Instructor(	(s)(担当教員)			
		HIGO Metabolic a	nd Circulatory Regulations(C3)	Michiko, Kenic	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.Advan	iced expert k	knowledge, skill an	d research capability ·····30% 2.Profound inte 30% 4.Social leadership drive ····10%	er-disciplinary kn	owledge ····30	% 3.Global perspective			
	f Class(授業)								
Teachir	ng Method(掛 法)	受業の方 reasons. Please b	int/Zoom will be used in the lectures, and acti nd e-learning are considered for those who are e sure to refer to the syllabus change as it will l Sciences.	e not able to atte	nd regular class	ses for unavoidable			
Course	e Goals(授業)	の目的) Syndrom (3) the p its thera mechani between physiolo major re	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 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						
Course	Learning go 目標)	In this le clinical a 1. Mecha 2. Basic myocard 3. Molect 4. Patho 5. Molect pathoge 6. Molect nephron 7. Regula of protei 8. Variou reactions influence [C leve You are	<ul> <li>[A level (A水準)]</li> <li>In this lecture, you are expected not only to learn the followings but also to apply them to research study or clinical activity:</li> <li>Mechanisms of atherosclerosis evaluated by coronary imaging and the therapeutic strategies.</li> <li>Basic mechanisms of myocardial ischemia/reperfusion injury and cardiac remodeling in experimental acute myocardial infarction.</li> <li>Molecular mechanisms and therapeutic strategies of chronic heart failure;</li> <li>Pathogeneic mechanisms of diabetes mellitus, diabetic complications, and the actions and secretion of insulin;</li> <li>Molecular mechanisms and therapeutic strategy for metabolic syndrome and obesity, one of the main pathogenesis of atherosclerotic diseases.</li> <li>Molecular basis of water-electrolyte balance by channels and transporters, and the regulation along the nephron.</li> <li>Regulation and dysregulation of renal blood flow and blood pressure, and the pathophysiological mechanisms of proteinuria and renal dysfunction.</li> <li>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.</li> <li>[C level (C水準)]</li> <li>You are required to roughly understand each item listed above; otherwise you are regarded not having reached</li> </ul>						
Course	Outline(授業	の概要) の概要) の概要) 1. Mecha 2. Basic myocard 3. Molec 4. Patho 5. Molec nephron 7. Regula of protei 8. Variou reaction	<ul> <li>to the level to apply them to research study or clinical activity.</li> <li>1. Mechanisms of atherosclerosis evaluated by coronary imaging and the therapeutic strategies.</li> <li>2. Basic mechanisms of myocardial ischemia/reperfusion injury and cardiac remodeling in experimental acute myocardial infarction.</li> <li>3. Molecular mechanisms and therapeutic strategies of chronic heart failure;</li> <li>4. Pathogenic mechanisms and therapeutic strategy for metabolic syndrome and obesity, one of the main pathogenesis of atherosclerotic diseases.</li> <li>6. Molecular basis of water-electrolyte balance by channels and transporters, and the regulation along the nephron.</li> <li>7. Regulation and dysregulation of renal blood flow and blood pressure, and the pathophysiological mechanisms of proteinuria and renal dysfunction.</li> <li>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.</li> </ul>						
			Details for Individual Classes(各回の	)授業内容)					
No.(回 )	Date(月	日)	Class Theme(授業テーマ)	Br	ief Outline of Cl	lass(内容概略)			
1		Kenichi I	Aatsushita [eE-0]	Mechanism of	myocardial ische	emia/reperfusion injury			
2	10/1	3 Fri. 5th p	eriod Eiichiro Yamamoto 【eE-L】	Molecular mec chronic heart fa	hanisms and the	erapeutic strategies of			
3		Kenichi <sup>-</sup>	īsujita [eE-0]			and therapeutic			
4		Michiko	Sugita [eE-0]		iences of operat	tive stress			
5			Gotoh [eE-0]		en metabolism d				
6			Kondo [eJ-0]		actions-their mo				
7			Matsumura [eE-0]		lications and the				
				+ · ·					

9		Naoyuki Hirata 【eE-0】	Mechanisms and therapeutic strategies of Postoperative				
10		Masataka Adachi 【eE-0】	cognitive decline Renal potassium handling				
11		Takashige Kuwabara [eE-0]       Structure and function of nephron         Masashi Mukoyama [eE-0]       Sodium and water handling by the kidney					
12		Sodium and water handling by the kidney					
13	ER stress-related diseases						
14		Takeshi Matsumura [eE-0]     Pathogenesis and therapies of metabolic dise					
15		Yuichi Oike 【eE-0】	Clarification of molecular and cellular mechanisms underlying aging and its associated diseases				
Estim	nated out-of-class study time	This course consists of contents which requires 90 hour As the total of in-class hours becomes 30 hours (two ho including some task will be required in order to improve	urs x15 classes), additional 60 hours of pre-post study				
Require	ed Textbook(テキス ト)	Textbooks are not specified, and handouts will be distributed.					
Read	ing List(参考文献)	<ul> <li>Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine, 12th edition, edited by Libby P, et al. Saunders, Philadelphia, 2021.</li> <li>Miller's Anesthesia, 9th edition, edited by Miller RD. Elsevier Churchill Livingstone, Philadelphia, 2019.</li> <li>Brenner &amp; Rector's The Kidney, 11th edition, Elsevier, Philadelphia, 2020.</li> <li>Comprehensive Clinical Nephrology, 6th edition, Mosby, 2019.</li> </ul>					
Enrollm	ent Conditions(履修 条件)	no limitation					
	ment Methods and ia(評価方法・基準)	Grading will be based on active class participation, pape on the student's understanding of the course subject ma the basis of papers and quizzes related to the topics dea Final grades will be based on the average score of the p discussions	alt with in class to be scored from 0 to 100.				
Lar Instr	nguage Used in ruction(使用言語)	English					
Textbook/Material Language(教科書・資料の言 語)							
Work E	Based on Practical xperience(実務経験 活かした授業)	Not applicable					

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)           NAKAMURA Kimitoshi, Hibi Taizou, KONDO Eiji, Oba Takashi, NAKAZATO Hitoshi, MITSUBUCHI Medicine)           NAKAMURA Kimitoshi, Hibi Taizou, KONDO Eiji, Oba Takashi, NAKAZATO Hitoshi, Matsunot, SAITCU Fumitaka, YAMAGUCHI Musanori, SAITCU Fumitaka, YAMAGUCHI Musanori, Type of Class(授業の用的)           Course Goals(授業の目的)           The lecture of "Reproductive and developmental medicine" aims to understand followings: (1) Basic Involedge 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 affect schildren including genetic and neuronwuscular diseases, pediatric surgery and organ transplantation.		Coding(科 ンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student ar(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
HiGO Reproductive and Developmental Medicine(C4         Reproductive and Developmental Medicine(C4         Reproductive and Developmental Medicine(C4           HiGO Reproductive and Developmental Medicine(C4         Reproductive and Developmental Medicine(C4         NMAMURA Kimiosh, Hidi Turch, Matsunot, Simo, Van Koton, CANN K	RDM7-	-012-82-2	2023v	vhole year				2	others	
HiO Reproductive and Developmental Medicino?     Reproductive and Developmental Medicino?     Orbit Tickshi, MACAZO Filling, MITSBUCH       Link Construction     Coals with their and (\$			Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)	
Advanced expert Incode/age, skill and research capability30% 2.Profound inter-disciplinary knowledge	HIGO R	HIGO Reproductive and Developmental Medicine(C4 Reproductive and Developmental Medicine) SAITOU Fumitaka, YAMAGUCHI Munekag OZASA Shirou, ISONO Kaori, ANAN Kotar								
and ability to take initiative action ·····30% Asocial leadership drive ····10%         Treaching Method((葉東の3)         Course Goals((雲中015))					Goals with their ratio(学修成果と	その割	合)			
Teaching Method(提集の方 法)	1.Advan and abil	iced expert k lity to take in	knowledg hitiative a	ge, skill and ro ction ••••30	esearch capability ····30% 2.Profound in % 4.Social leadership drive ····10%	ter-dis	ciplinary kno	wledge ····30	% 3.Global perspective	
法の         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 counse counse (1) Basic knowledge for disorders which affects children including pathology in development and growth of nam. (4) Basic knowledge for disorders which affects children including pathology in developmental and growth medicine and insues of physiology and pathology to represent the counse of operations barger and organ transplantation.           Course Learning gool(5)         The lecture of "Reproductive developmental and growth medicine and insues of physiology. The present, technology and deviced spects in advanced medicine. They will also learn pregnancy. (2) Medica and the interview counse and assisted reproductive medicine. The view and developmental medicine, the interview counse and assisted reproductive medicine. The view and developmental medicine, the interview counse and assisted reproductive medicine. The view and the entry physiology of a mathology to the pregnancy and delivery will discuss medical and social issues in addition to the social and thick physiology. The physiology of neuronal development of physiology and physi	Туре о	of Class(授業)	の形態)	Other						
Course Goals(世界の目的         knowledge for physiology and pathology of human fertilization and pregname, (2) Medical interventions before previously and scala size related to their interventions. Effect of physiology and pathology of the interventions. To Basic knowledge for physiology and pethology fertilization. (2) Basic knowledge for physiology and pethology fertilization. (2) Basic knowledge for physiology and pethology fertilization. (2) Basic knowledge for physiology.           Course Learning goals(PB         The petricipants will learn basic knowledge for developmental and growth medicine. They will also learn pregname, (2) birth, newborn intensive care and assisted reproductive medicine. They will also learn pregname, (2) birth, newborn intensive care and assisted reproductive medicine. They will also learn pregname, (2) birth, newborn intensive care and assisted reproductive medicine. They will also learn pregname, (2) birth, newborn intensive care and assisted reproductive medicine. They will also learn pregname, (2) birth, newborn intensive care and assisted reproductive medicine. The seture reproductive medicine, prenetal diagnosis and rare diseases, surgical discuss middles and will be previded the previde the most reproductive medicare. The feature reproductive medicine for the important progress in the field of reproductive and developmental medicine, we not discuss the social and the social problems. The ethical problems of a sisted fertilization including in various pathological conditions of this period. The participant will learn many different discusses. The participant will also associate the previded the	Teachir		受業の方							
Course Learning goals(学科 目底)         The participants will learn basic knowledge for developmental and growth medicine. They will also learn preparacy, birth, newborn intensive care and assisted reproductive medicine, They will also learn preparacy, birth, newborn intensive care and assisted reproductive medicine, prenatal diagnosis and rare diseases, surgical if (Level (C,KR))           Course Outline(保集の概要)         This class will introduce the nost recent and important progress in the field of reproductive system, we will discuss biological and medical appet of the reproductive system, we will also also be appet of the reproductive system, we will also uses biological and medical appet of the reproductive system, we will also uses biological and medical appet of the reproductive system, we will also uses biological and medical appet of the reproductive system. Ye will also use biological and medical appet of the reproductive system, we will also uses biological and medical appet of the reproductive system. Ye will also in the participant will be more assisted fertilization including in information function diverse is normal development of sparse will be an enotical system and abdoms part open transplant and various parbological transplantation for children. We will discuss the social problems which affect healthy development of children in recent years.           No.(10)         Date(月日)         Class Theme(授業テーマ)         Brief Outline of Class(内容強)           1         10/05         Sth Period. Hitoshi Nakazato         Hereditary Nephropathy           2         10/12         Sth Period. Kimitoshi Nakazato         Hereditary Nephropathy (HE). The first topic is the unpreductive strategies for pendiatic diseases (Jing of phyopic is therepapeulic strategies for pendiatic diseases (Jing of	Course	e Goals(授業)	の目的)	knowledge and during pathology o	for physiology and pathology of human fe pregnancy, and social issues related to the f development and growth of man. (4) Bas	rtilizati ese inte sic kno	on and pregr erventions. (3 wledge for di	ancy. (2) Medie 8) Basic knowle sorders which a	cal interventions before dge for physiology and	
Course Outline(後年の第記)         Endition         The electore related to pregnancy and delivery will discuss medicial and social suces in addition to the physiology of reproductive system, and on social and the endities system, and on social and ethical appect of the reproductive system, and on social and ethical appect of the reproductive system, and on social and ethical appect of the reproductive system, and on social and ethical appect of the reproductive system.           Course Outline(後年の第記)         De class: on constal medicine, we introduce principal physiology of newborn infants and various pathological conditions of this period. The participation will also many different disorders. The participation will also the social conditions. The participation will also the system, and be ethics: on principal physiology of newborn infants and various pathological conditions. The participation will also the system and the system and social conditions. The participation will also the system, and the system and the system. The system and the s	Course	Learning goa 目標)	als(学修	The particip pathology, t birth, newbo diseases an	ants will learn basic knowledge for develor reatment, technology and ethical aspects orn intensive care and assisted reproduct d organ transplantation.	in adv	anced medic	ine. They will a	lso learn pregnancy,	
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 lwai         Recent advanced neonatal intensive care in Japan and new therapeutic strategies for neonatal hypoxic ischemic cneophalopathy (HIE). The first topic is the introduction of the neonatal intensive care unit for vulnerable bables. 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. Kotaro Anan         Molecular basis and therapeutic strategies for pediatric disorders in children           6         11/09         5th Period. Shiro Ozasa         The Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular Atrophy –           8         11/30         5th Period. Shiro Matsumoto         Amino acid metabolism and Disorders           9         12/07         5th Period. Takashi Sawada         New diagnostics and therapeutic Strategies for a pediatric diseases           11         12/21         5th Period. Shiro Ozasa         The Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular Atrophy –           11         12/07         5th Period. Shiro Matsumoto	Course	Outline(授業	(の概要)	medicine. T physiology of cocial and e Cytoplasmic discussed. The class fo conditions of course is no supported b learn neona	he lecture related to pregnancy and deliv of reproductive system. We will discuss bi- thical problems. The ethical problems of c Sperm Injection), oocyte donation, cryop r neonatal medicine, we introduce princip of this period. The participant will learn m ormal development of brain function durin by surrounding environment of children w tal surgical disorders and abdomanal org	ery will ologica assiste oreserv oal phy any difi g child hich in an tran	discuss med I and medica d fertilization ation of emb siology of ne ferent disord hood. The no cluded social splantation fi	ical and social I aspect of the including in vir ryos, cryoprese wborn infants a ers. One of the ormal developm I conditions. Th	issues in addition to the reproductive system, and tro fertilization, ICSI (Intra rvation of sperm will be ind various pathological important topics of this nent of young brain is the participant will also	
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 lwai         Recent advanced neonatal intensive care in Japan and new therapeutic strategies for neonatal hypoxic ischemic cneophalopathy (HIE). The first topic is the introduction of the neonatal intensive care unit for vulnerable bables. 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. Kotaro Anan         Molecular basis and therapeutic strategies for pediatric disorders in children           6         11/09         5th Period. Shiro Ozasa         The Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular Atrophy –           8         11/30         5th Period. Shiro Matsumoto         Amino acid metabolism and Disorders           9         12/07         5th Period. Takashi Sawada         New diagnostics and therapeutic Strategies for a pediatric diseases           11         12/21         5th Period. Shiro Ozasa         The Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular Atrophy –           11         12/07         5th Period. Shiro Matsumoto					Details for Individual Classes(各回	の授業	内容)			
210/125th Period. Masanori IwaiRecent advanced neonatal intensive care in Japan and new therapeutic strategies for neonatal hypoxic ischemic encephalopathy (HE). The first topic is the introduction of the neonatal intensive care unit for vulnerable babies. The second topic is new therapeutic strategies for neonatal HE by erythropoietin through neurogenesis, vasculogenesis, soligodendrogenesis and remyelination.310/195th Period. Hiroshi MitsubuchiCongenital abnormalities and genetic counseling Inborn errors of metabolism511/025th Period. Kimitoshi NakamuraInborn errors of metabolism611/095th Period. Kotaro AnanMolecular basis and therapeutic strategies for pediatric disorders in children611/095th Period. Takashi HamazakiEnzyme replacement therapy and gene therapy for inherited diseases during childron711/165th Period. Shiro OzasaThe Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular disorders — Duchenne Muscular Dystrophy and Spinal Muscular Atrophy —811/305th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [el-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eij KondohManagement of preeclampsia13Munekage Yamaguchi [el-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Taizo HibiIndications and outcomes of abdominal organ transplantation for children	No.(回 )	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
210/125th Period. Masanori IwaiRecent advanced neonatal intensive care in Japan and new therapeutic strategies for neonatal hypoxic ischemic encephalopathy (HE). The first topic is the introduction of the neonatal intensive care unit for vulnerable babies. The second topic is new therapeutic strategies for neonatal HE by erythropoietin through neurogenesis, vasculogenesis, soligodendrogenesis and remyelination.310/195th Period. Hiroshi MitsubuchiCongenital abnormalities and genetic counseling Inborn errors of metabolism511/025th Period. Kimitoshi NakamuraInborn errors of metabolism611/095th Period. Kotaro AnanMolecular basis and therapeutic strategies for pediatric disorders in children611/095th Period. Takashi HamazakiEnzyme replacement therapy and gene therapy for inherited diseases during childron711/165th Period. Shiro OzasaThe Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular disorders — Duchenne Muscular Dystrophy and Spinal Muscular Atrophy —811/305th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [el-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eij KondohManagement of preeclampsia13Munekage Yamaguchi [el-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Taizo HibiIndications and outcomes of abdominal organ transplantation for children	1	10/0	5	5th Period.	Hitoshi Nakazato	Hei	reditary Nepł	nropathy		
410/265th Period. Kimitoshi NakamuraInborn errors of metabolism511/025th Period. Kotaro AnanMolecular basis and therapeutic strategies for pediatric disorders in children611/095th Period. Takashi HamazakiEnzyme replacement therapy and gene therapy for inherited diseases during childhood711/165th Period. Shiro OzasaThe Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular disorders — Duchenne Muscular Dystrophy and Spinal Muscular Atrophy —811/305th Period. Shiro MatsumotoAmino acid metabolism and Disorders912/075th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [eJ-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eiji KondohManagement of preeclampsia12Fumitaka Saito [eJ-0]Endometrial physiology, pathology and carcinogenesis13Munekage Yamaguchi [eJ-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Taizo HibiIndications and outcomes of abdominal organ transplantation for children	2	10/1	2	5th Period.	Masanori Iwai	Rec nev isch intr vuli stra neu	cent advance v therapeutic nemic encepl oduction of t nerable babie ategies for ne urogenesis, va	d neonatal inte strategies for r halopathy (HIE) he neonatal int es. The second onatal HIE by e	neonatal hypoxic . The first topic is the tensive care unit for topic is new therapeutic rythropoietin through	
511/025th Period. Kotaro AnanMolecular basis and therapeutic strategies for pediatric disorders in children611/095th Period. Takashi HamazakiEnzyme replacement therapy and gene therapy for inherited diseases during childhood711/165th Period. Shiro OzasaThe Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular disorders - Duchenne Muscular Dystrophy and Spinal Muscular Atrophy -811/305th Period. Shiro MatsumotoAmino acid metabolism and Disorders912/075th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [eJ-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eiji KondohManagement of preeclampsia12Fumitaka Saito [eJ-0]Endometrial physiology, pathology and carcinogenesis13Munekage Yamaguchi [eJ-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Taizo HibiIndications and outcomes of abdominal organ transplantation for children	3	10/1	9	5th Period.	Hiroshi Mitsubuchi	Со	ngenital abno	ormalities and g	enetic counseling	
311/02Shi Period. Kotalo Analidisorders in children611/095th Period. Takashi HamazakiEnzyme replacement therapy and gene therapy for inherited diseases during childhood711/165th Period. Shiro OzasaThe Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular disorders — Duchenne Muscular Dystrophy and Spinal Muscular Atrophy —811/305th Period. Shiro MatsumotoAmino acid metabolism and Disorders912/075th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [eJ-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eiji KondohManagement of preeclampsia12Fumitaka Saito [eJ-0]Endometrial physiology, pathology and carcinogenesis13Munekage Yamaguchi [eJ-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Taizo HibiIndications and outcomes of abdominal organ transplantation for children	4	10/2	6	5th Period.	Kimitoshi Nakamura	Inb	orn errors of	metabolism		
611/09Sth Period. Takashi HalfaZakiinherited diseases during childhood711/165th Period. Shiro OzasaThe Molecular Pathogenesis and Therapeutic Strategies of Pediatric Neuromuscular disorders — Duchenne Muscular Dystrophy and Spinal Muscular Atrophy —811/305th Period. Shiro MatsumotoAmino acid metabolism and Disorders912/075th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [eJ-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eiji KondohManagement of preeclampsia12Fumitaka Saito [eJ-0]Endometrial physiology, pathology and carcinogenesis13Munekage Yamaguchi [eJ-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Taizo HibiIndications and outcomes of abdominal organ transplantation for children	5	11/0	2	5th Period.	Kotaro Anan				c strategies for pediatric	
711/165th Period. Shiro Ozasaof Pediatric Neuromuscular disorders - Duchenne Muscular Dystrophy and Spinal Muscular Atrophy -811/305th Period. Shiro MatsumotoAmino acid metabolism and Disorders912/075th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [eJ-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eiji KondohManagement of preeclampsia12Fumitaka Saito [eJ-0]Endometrial physiology, pathology and carcinogenesis13Munekage Yamaguchi [eJ-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Taizo HibiRelationship between macrophages and microbiota in maintaining intestinal homeostasis	6	11/0	9	5th Period.	Takashi Hamazaki					
912/075th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [eJ-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eiji KondohManagement of preeclampsia12Fumitaka Saito [eJ-0]Endometrial physiology, pathology and carcinogenesis13Munekage Yamaguchi [eJ-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Kaori IsonoRelationship between macrophages and microbiota in maintaining intestinal homeostasis1502/015th Period. Taizo HibiIndications and outcomes of abdominal organ transplantation for children	7	11/1	6	5th Period.	Shiro Ozasa	of F	Pediatric Neu	romuscular dis	orders – Duchenne	
912/075th Period. Takaaki SawadaNew diagnostics and treatments for rare pediatric diseases10Takashi Ohba [eJ-0]Prenatal diagnosis, current status and the ethics1112/215th Period. Eiji KondohManagement of preeclampsia12Fumitaka Saito [eJ-0]Endometrial physiology, pathology and carcinogenesis13Munekage Yamaguchi [eJ-0]Villous macrophages in the human placenta: a variety of functions and perinatal complications1401/255th Period. Kaori IsonoRelationship between macrophages and microbiota in maintaining intestinal homeostasis1502/015th Period. Taizo HibiIndications and outcomes of abdominal organ transplantation for children	8	11/3	0	5th Period.	Shiro Matsumoto	Am	ino acid meta	abolism and Dis	sorders	
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	9			5th Period.	Takaaki Sawada			and treatment	s for rare pediatric	
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	10			Takashi Ohl	ba [eJ-0]	Pre	natal diagno:	sis, current stat	us and the ethics	
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	11	12/2	:1	5th Period.	Eiji Kondoh	Ma	nagement of	preeclampsia		
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	12			Fumitaka Sa	aito [eJ-0]	Enc	dometrial phy	vsiology, pathol	ogy and carcinogenesis	
14     01/23     Sthrenou, Raon solid     maintaining intestinal homeostasis       15     02/01     5th Period. Taizo Hibi     Indications and outcomes of abdominal organ transplantation for children	13			Munekage \	′amaguchi [eJ-0]	Vill	ous macroph	ages in the hur	nan placenta: a variety of	
transplantation for children	14	01/2	5	5th Period.	Kaori Isono	Rel ma	ationship bet intaining inte	ween macroph stinal homeost	ages and microbiota in asis	
Estimated out-of-class	15	02/0	1	5th Period.	Taizo Hibi	Ind trar	ications and	outcomes of ab for children	odominal organ	
	Estim	nated 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

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty	Offering Cour 割コー	se(時間割所属・時間 −ド)	Eligible Student Year(開講年次	Credits(単位 ) )	Weekday and Period(曜 日・時限)		
RDM7-	-013-83-2	2023v	whole year	Grad	uate School of (241)	Medical Sciences 20)	1	2	others		
		Co	ourse Title(Th	eme)(科	目名(講義題目))	)		Instructor(	[s)(担当教員)		
		HIGC	) Advances ir	Oncolo	gic Medicine(C	25)	SUZ		KI Norie, BABA Hideo, MA Hideki		
					Goals with the	eir ratio(学修成果とそ	の割合)				
1.Advan and abil	nced expert k lity to take in	nowledg iitiative a	ge, skill and ro oction ••••10	esearch % 4.Soc	capability ···· ial leadership o	45% 2.Profound inter drive ····10%	r-disciplinary kr	nowledge ····35	% 3.Global perspective		
Туре о	of Class(授業)	の形態)	Lecture								
Teaching Method(授業の方 法)						ures, and active partic hose who are regularl			couraged. Extra classes or ns.		
Course	e Goals(授業)	の目的)	To understa oncology as			gic medicine, this cou	urse serves evic	ences and recen	t findings of medical		
Course	Learning goa 目標)	als(学修	oncology as	nd ádva follows: Recent a	(1) Overview of	gic medicine, this cou of tumor biology and § al and maxillofacial su	genetics; (2) Re	cent advances ir	n gastroenterological		
Course	Outline(授業	の概要)	some of lead related gene diagnostic t Many peopl gastrointest	ding-edg es, cell c ools, ger e suffer f inal stroi	e research and ycle, cell death nome, transcrip from gastroent mal tumor). We	d our data. We focus on , cell differentiation; otome and proteomics erological cancers (es	on following top therapeutic age s; cancer stem sophageal, gast ndard treatmen	bics: molecular m ents based on tur cell. ric, colon, pancro t for gastroentero	mor biology; molecular eas, liver, billiary tract and ological cancer but also		
				[	Details for Indiv	vidual Classes(各回の	受業内容)				
No.(回 )	Date(月	日)		Class	Theme(授業テ	マ)	В	rief Outline of Cl	lass(内容概略)		
1	10/0	3	(Tue) 4th pe	riod	Araki Norie	[eEJ-L]	Tumor Geneti	cs and biology (ir	ntroduction)		
2	10/1	0	(Tue) 4th p	eriod	Araki Norie	e 【eEJ-L】		cs and biology 1	,		
3	10/1	7	(Tue) 4th p	eriod	Araki Norie	[eEJ-L]	Tumor Geneti	cs and biology 2			
4			Baba Hideo	[eJ-0]			Gastroenterol	ogical surgery (in	troduction)		
5			Baba Hideo	[eE-0]	-		Gastroenterol	Gastroenterological surgery 1			
6			Baba Hideo	[eJ-0]	- -			ogical surgery 2			
7			Baba Hideo	[eE-0]			Gastroenterological surgery 3				
8			Baba Hideo					ogical surgery 4			
9			Baba Hideo		- -			ogical surgery 5			
10			Nakayama H		eJ-0]			llofacial tumors			
11			Nakayama H		[eJ-0]		Diagnosis and treatment of oral cancer				
12			Nakayama H				Challenges in oral cancer treatment				
13			Suzuki Make				Thoracic surgery (introduction)				
14			Suzuki Make	oto [eJ	-0]		Lung cancer				
15			Suzuki Make	_			Medistinal tun	10r			
	nated out-of- study time	class									
Require	ed Textbook ト)	(テキス	Textbooks are not specified.								
Read	ling 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					, 1988. & Wilkins.2004			
Enrollm	ent Conditic 条件)	ons(履修		_		· · · · · ·					
	ment Metho ia(評価方法・		Grading will	be base	d on active cla	ass participation, pape	er summaries,a	nd final report.			
Lar Instr	nguage Used ruction(使用言	l in 言語)	Japanese ar	d Englis	h						
	ktbook/Mate ge(教科書・資 語)		Combinatio	n of Japa	anese and Engl	lish					
Work E	Based on Pr xperience(実 :活かした授う	系務経験	Applicable								

	Coding(科 ンバー)	Year/Se m(年	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student ır(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	-014-83-2	2023	whole year	Graduate School of Medical Sciences (24130)	1 Cu	1	2	others		
		Co	ourse Title(Th	eme)(科目名(講義題目))	<u> </u>		Instructor(	s)(担当教員)		
		HIGO	The Forefrom	OYA Natsuo, MUKASA Akitake, Yasunaga Jiyunichirou, MURAKAMI Ryuji, NOSAKA Kisato YAMAMOTO Yutaka, Saitou Fumitaka, MOTOHA Takeshi, IWANAGA Eisaku						
				Goals with their ratio(学修成果とその割合)						
1.Advan and abil	iced expert l lity to take ir	knowledg nitiative a	ge, skill and r action ••••10	esearch capability ····70% 2.Profound inte % 4.Social leadership drive ····10%	er-disc	iplinary kno	wledge ····10	% 3.Global perspective		
Туре о	f Class(授業	の形態)	Lecture							
Teachir	ng Method(挑 法)	受業の方	Video lectu reasons.	res or e-learning programs may be consider	ed for	those who a	are regularly ab	sent for unavoidable		
Course	e Goals(授業	の目的)	techniques	eries "Riron": C6 The Forefront of Clinica in the most advanced clinical oncology, incl 3) gynecological oncology, (4) neurooncolog	luding	g (1) radiatio	n oncology, (2)	ncepts and novel I breast and endocrine		
Course	Learning go 目標)	als(学修		asic concepts and novel techniques in the n 2) breast and endocrine oncology, (3) gynec						
Course	Outline(授業	(の概要)	techniques surgery, che gynecologic brathythera of neuroon	front of radiation oncology, especially the d is lectured. (2) The forefront of breast and e emotherapy, and molecular target therapy fo cal oncology, especially the recent developn py, external beam radiotherapy and chemor cology is explained especially regarding the hematological oncology is lectured especia h.	endoci or brea nent a radiotl molec	rine oncolog ast cancer au Ind therapeu herapy for u cular biology	y is lectured, e nd thyroid cand itic modalities, terine cervical n malignant b	specially regarding cer. (3) The forefront of is explained, including cancer. (4) The forefront orain tumors. (5) The		
				Details for Individual Classes(各回の	授業内	內容)				
No.(回 )	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1			Natsuo Oya	[eJ-0]	"Ra	adiation biol	ogy and physic	s"		
2			Natsuo Oya	[eJ-0]	"Sterraide	ereotactic ra otherapy"	adiotherapy and	d intensity-modulated		
3			Ryuji Murak	ami [eJ-0]	"Im radio	nage-guided otherapy"	radiotherapy a	nd adaptive		
4			Yutaka Yam	amoto [eJ-0]	"Bi	ological feat	ures of breast	cancer"		
5			Yutaka Yam	amoto [eJ-0]	"Pa	aradigm shift	in breast canc	er treatment"		
6			Yutaka Yam	amoto [eJ-0]	"M	olecular targ	get therapy for	breast cancer"		
7			Takeshi Mo	tohara [eJ-0]	"Ep	oidemiology	of gynecologic	al malignancies"		
8			Fumitaka Sa	aito [eJ-0]	"Pa mali	aradigm shift gnancies"	of the treatme	ent for gynecological		
9			Takeshi Mo	tohara [eJ-0]	"Ra	adiation ther	apy for gyneco	logical malignancies"		
10			Akitake Mul	kasa [eJ-0]	"Cł	haracter of b	orain tumor"			
11			Akitake Mu	kasa [eJ-0]	"Br	rain tumor di	agnosis"			
12			Akitake Mu	kasa [eJ-0]	"Br	rain tumor th	erapy"			
13			Eisaku Iwan	aga [eJ-0]	"He	ematologica	l oncology I - le	eukocytes"		
14			Kisato Nosa	ka [eJ-0]	"He	ematologica	l oncology II - ly	ymphocytes"		
15			Jun-chirou `	Yasunaga (eJ-0)	"He mali	ematologica gnancies inc	l oncology III - luced by viruse	Hematological		
Estim	nated out-of- study time	class								
Require	ed Textbook ト)	(テキス								
Reading List(参考文献)										
Enrollm	ent Conditic 条件)	ons(履修								
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 students' understanding will be evaluated on the basis of papers and quizzes related to the topics de class to be scored from 0 to 100.Final grades will be based on the average score of the papers and quizzes related to the topics de well as participation in class discussions					the topics dealt with in					
Lar Instr	nguage Used ruction(使用)	d in 言語)	Japanese							
Tex	(tbook/Mate	erial	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

	e Coding(科 - ンバー)		emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student 'ear(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)
RDM7	-015-83-2	2023v	vhole year	Graduate School of Medical Sciences (24140)		1	2	others
		Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)
	н	GO Resto	orative Medic	cine(C7 Restorative Medicine )		Takes	ni, FUKUSHIMA asunaga Jiyuni	ro, MIYAMOTO Satoshi, NISHIKAWA chirou, KAWANO Hiroaki, Hirotomo
				Goals with their ratio(学修成果と	その害	割合)		
				esearch capability ·····50% 2.Profound int % 4.Social leadership drive ····10%	er-di	isciplinary know	wledge ····309	% 3.Global perspective
Туре о	of Class(授業	の形態)	Lecture					
Teachir	ng Method(排 法)	受業の方		and/or OHP will be used in the lectures, a s or video lectures are considered for thos				
Course	e Goals(授業	の目的)	sepsis, the r knowledge cardiovascu body surfac regenerative	ves of this course are for you to understand nechanisms of organ failure developed fro regarding cardiovascular diseases and the lar diseases and their surgical treatment; ( e blood flow distribution between anatom e medical techniques; (5) disorders of bon edge required to plan out and implement	m ser r sur 4) th ical lo e anc	psis, (2) risk fa gical treatmen ne mechanisms ocations, and p d joint function	ctors for coron t; (3) the latest of skin wound blastic surgery	ary syndrome, the latest knowledge regarding healing, differences in procedures and
Course	Learning go 目標)	als(学修	due to seps their surgica flow, techni for bone an for you to re questions to using e-lear [C level (C Who could (2) risk facto treatments; techniques	understand and explain, (1) pathogenesis is; (2) risk factors for coronary syndrome; ( al treatments; (4) mechanisms underlying of ques for plastic surgery and regenerative n d joint diseases; (6) basic knowledges for eview the handout materials distributed in b the lecturers, "Office Hour" is available fo ning contents if available.	3) lat derma nedic blann the le r you nd st edge heal ine; (	test knowledge al wound heali cine; (5) mecha- ning and condu- ectures and yo a. It is also reco trategy to treat es regarding ca ling, distributic (5) mechanism	is regarding can ng, distributior inisms underlyi icting clinical s ur notebooks w mmended to re sepsis and org rdiovascular di n of body surfa s underlying ar	rdiovascular diseases and of body surface blood ng and ways of treatment tudies. It is recommended vell. If you want to ask any eview the lectures by an failures due to sepsis; seases and their surgical ace blood flow, id ways of treatment for
Course	Outline(授業	きの概要)	support and With contin results and therapeutic the mechan Moreover, v therapy, and diseases. Although di a patient's v knowledge, studies of b	, the current situation and problems of res l vital function. ued progress in the field of medicine, critic its functional prognosis has also improved strategies of international sepsis guideline isms of organ failure from sepsis in basic a we will provide lectures regarding risk factor d the progress of surgical treatments for he sorders of the skin, bones, and joints are ra- ital functions. We will explain the theory o and we will also provide lectures regarding lood flow in human skin and discuss recon- in terms of the development of microsurge	cal ca dram es wit nd cl ors for eart fa arely f skin g the struc	are medicine h natically. We w th outline of ne linical viewpoii r acute corona ailure, ischemi directly life-the wound healin progress made	as produced a ill introduce ne w clinical resea nt. ry syndrome, w c heart disease reatening cond g and the lates e in the area of	steady flow of successful w definition and arch. We will also provide thich needs urgent s, and valvular heart itions, they greatly affect t molecular biological skin flaps through
				Details for Individual Classes(各回(	の授業	業内容)		
No.(回 )	Date(月	3日)		Class Theme(授業テーマ)		Brie	of Outline of Cla	ass(内容概略)
1			Satoshi Fuk	ushima [eJ-0]	М	lechanism of W	ound healing	
2				ushima (eJ-0)	_	econstruction l		
3				ushima (eJ-0)	_	econstruction v	0	
4			Takeshi Miy		_	athophysiology		
5			Takeshi Miy		-	hysiology and k		ılar cartilage
6			Takeshi Miy		_	flammatory art		
7			Takeshi Nis		-	ypothesis and ematopoiesis i		cal Researches rrow and hematopoietic
8			Junichiro Ya		ste	em cell transpl	antation therap	ру
9			Hirotomo N		Ri	isk factors for a	cute coronary	syndrome and gender
10			Hiroaki Kaw		di	ifference		
11			Toshihiro Fi	· ·	-	ugical treatmer		
12			Toshihiro Fi		_	urgical treatme		
13			Toshihiro Fi		_	urgery of valvul		e e perspective of diabetic
14			Takeshi Nis		со	omplications re	searches	
15 Fatim		alse	Hiroaki Kaw	rano [eJ-0]	X	Y chromosome	e related diseas	se
Estim	nated 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(和 目ナンバー)	科 Year/S m(年	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Eligible tudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-016-83-2	2 2023	whole year	Graduate School of Medical Sciences (24150)		1	2	others		
	C	ourse Title(Th	ieme)(科目名(講義題目))		Instructor(s)(担当教員)				
	HIGO Ca	ncer therape	utics(C8 Cancer therapeutics)	ics(C8 Cancer therapeutics)			SUZUKI Makoto, MUKASA Akitake, SAKAGAMI Takuro, OYA Natsuo, Kanba Tomomi, ORITA Yorihisa, 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 <sup>-</sup>	その割合	(1				
1.Advanced expe and ability to take	rt knowled e initiative a	ge, skill and r action ••••5%	esearch capability ····60% 2.Profound int %	er-disci	plinary kno	wledge ····35	% 3.Global perspective		
Type of Class(授	業の形態)	Lecture							
Teaching Methoo 法)	d(授業の方	We deal wit	h a student by intensive lecture of power p	oint or	e-learning.				
Course Goals(授	業の目的)	radiotherap directions of leading-edg respiratory neoplasia (6	nt lecture, we lead to comprehend the fund y, chemotherapy and immunotherapy and if cancer therapy. Furthermore, the aims of the medical treatment for various types of ca tract tumor (3) brain and nervous system no b) breast endocrine tumor (7) genitourinary culoskeletal tumor (10) skin tumor (11) hem	the hist the cur ncer as eoplasn system	orical chan rent lecture follows: (1) n (4) head a tumor (8) g	ge, standard tro are to underst ) gastroenterolo nd neck tumor gynecological t	eatment and future tand thoroughly the ogical tumor (2) · (5) otolarygological umor (9) orthopaedic and		
Course Learning 目標)	goals(学修	and immun To understa gastroenter tumor (5) o	nend the fundamental knowledge of therap otherapy and the historical change, standa and thoroughly the leading-edge medical tr ological tumor (2) respiratory tract tumor (3 colarygological neoplasia (6) breast endocr thopaedic and neuro-musculoskeletal tum	rd treat eatmen 3) brain ine tum	ment and fu t for various and nervou or (7) genit	ature directions s types of cance as system neop ourinary system	s of cancer therapy. er as follows: (1) lasm (4) head and neck n tumor (8) gynecological		
Course Outline(扌	受業の概要)	to standard guideline is number of o	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	e(月日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1		Yasuhito Ta	naka [eJ-0]	Med	cal treatme	nt of the gastro	pintestinal cancer		
2		Hideo Baba	[eJ-0]	Surg	cal cure of	the digestive ca	ancer		
3		Takuro Saka	agami [eJ-0]	Med	cal treatme	nt of the lung c	cancer		
4		Makoto Suz	uki [eJ-0]	Surg	ical treatme	nt of the lung o	cancer		
5				Surgical treatment of the lung cancer 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					
		Hideki Naka	ayama [eJ-0]	The l	ecture will l cal applicati notherapy, a	be performed c on of surgery, i	er on the effectiveness and radiotherapy,		
6		Hideki Naka Yorihisa Ori		The l clinic chen patie	ecture will l cal applicati notherapy, a nts.	be performed c on of surgery, i	er on the effectiveness and radiotherapy, erapy in oral cancer		
6 7			ta [eJ-0]	The l clinic chen patie The t	ecture will l cal applicati notherapy, a nts. creatment o	be performed c on of surgery, r and immunothe	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer		
		Yorihisa Ori	ta [eJ-0] ramoto [eJ-0]	The l clinic chen patie The t	ecture will l cal applicati notherapy, a nts. creatment o	be performed c on of surgery, r and immunothe f the head and f the bone soft	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer		
7		Yorihisa Ori Takeshi Miy	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0]	The l clinic chen patie The t The t	ecture will l cal applicati notherapy, a nts. rreatment o creatment o cment of bre	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer		
7 8		Yorihisa Ori Takeshi Miy Yutaka Yam	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0]	The l clinic chen patie The t The t Treat	ecture will l cal applicati notherapy, a nts. creatment o creatment o creatment of bre creatment o	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor		
7 8 9		Yorihisa Ori Takeshi Miy Yutaka Yam Takeshi Mo	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0] mba [eJ-0]	The l clinic chen patie The t The t Treat The t	ecture will l cal applicati notherapy, a nts. creatment o creatment o creatment of bre creatment o	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer f the gynecolog f genitourinary	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor		
7 8 9 10		Yorihisa Ori Takeshi Miy Yutaka Yam Takeshi Mo Tomomi Ka	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0] mba [eJ-0]	The l clinic chen patie The t The t The t The t Skin	ecture will al applicati notherapy, a nts. rreatment o creatment of creatment o creatment o creatment o cancer ther	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer f the gynecolog f genitourinary	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor cancers		
7 8 9 10 11		Yorihisa Ori Takeshi Miy Yutaka Yam Takeshi Mo Tomomi Ka Satoshi Fuk	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0] mba [eJ-0] ushima [eJ-0] [eJ-0]	The l clinic chen patie The t The t The t The t Skin Pedia	ecture will l cal application otherapy, a nts. creatment of creatment of creatment of creatment of creatment of cancer ther atric Solid C	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer f the gynecolog f genitourinary apy	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor cancers		
7 8 9 10 11 12		Yorihisa Ori Takeshi Miy Yutaka Yam Takeshi Mo Tomomi Ka Satoshi Fuk Taizo Hibi	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0] mba [eJ-0] [eJ-0] (asa [eJ-0]	The l clinic chen patie The t The t The t Skin Pedia The t	ecture will l cal applicati notherapy, a nts. reatment of creatment of creatment o creatment o cancer ther atric Solid C	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer f the gynecolog f genitourinary apy Cancer Therapy f the brain tum	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor cancers		
7 8 9 10 11 12 13		Yorihisa Ori Takeshi Miy Yutaka Yam Takeshi Mo Tomomi Ka Satoshi Fuk Taizo Hibi Akitake Mul	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0] mba [eJ-0] ushima [eJ-0] [eJ-0] kasa [eJ-0] ka [eJ-0]	The l clinic chen patie The 1 The 1 The 1 The 1 Skin Pedia The 1 The 1	ecture will l cal applicati notherapy, a nts. reatment of creatment of creatment o creatment o cancer ther atric Solid C	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer f the gynecolog f genitourinary apy Cancer Therapy f the brain tum f the hematolog	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor cancers		
7       8       9       10       11       12       13       14		Yorihisa Ori Takeshi Miy Yutaka Yam Takeshi Mo Tomomi Ka Satoshi Fuk Taizo Hibi Akitake Mul Kisato Nosa	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0] mba [eJ-0] ushima [eJ-0] [eJ-0] kasa [eJ-0] ka [eJ-0]	The l clinic chen patie The 1 The 1 The 1 The 1 Skin Pedia The 1 The 1	ecture will al application otherapy, a mts. creatment of creatment of creatment of creatment of cancer ther atric Solid Correatment of creatment of creatment of creatment of creatment of creatment of creatment of creatment of	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer f the gynecolog f genitourinary apy Cancer Therapy f the brain tum f the hematolog	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor cancers		
7 8 9 10 11 12 13 14 15 Estimated out-	ne	Yorihisa Ori Takeshi Miy Yutaka Yam Takeshi Mo Tomomi Ka Satoshi Fuk Taizo Hibi Akitake Mul Kisato Nosa Natsuo Ohy	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0] mba [eJ-0] ushima [eJ-0] [eJ-0] kasa [eJ-0] ka [eJ-0]	The l clinic chen patie The 1 The 1 The 1 Skin Pedia The 1 Radio	ecture will al application otherapy, a nts. reatment of creatment of creatment of cancer ther atric Solid Correatment of creatment of creatment of creatment of creatment of c	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer f the gynecolog f genitourinary apy Cancer Therapy f the brain tum f the hematolog the cancer	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor cancers , or gic malignancies		
7       8       9       10       11       12       13       14       15       Estimated out-study tim       Required Textbo	ne iok(テキス 参考文献)	Yorihisa Ori Takeshi Miy Yutaka Yam Takeshi Mo Tomomi Ka Satoshi Fuk Taizo Hibi Akitake Mul Kisato Nosa Natsuo Ohy We distribu • A new c • Cancer • Clinical • Cancer	ta [eJ-0] ramoto [eJ-0] amoto [eJ-0] tohara [eJ-0] mba [eJ-0] ushima [eJ-0] [eJ-0] kasa [eJ-0] ka [eJ-0] ra [eJ-0]	The l clinic chen patie The 1 The 1 The 1 Skin Pedia The 1 Radio	ecture will l al application otherapy, a nts. reatment of creatment of creatment of creatment of creatment of creatment of creatment of creatment of otherapy of epoint of the ellman, S.A.L uber,M.B.Ka	be performed c on of surgery, r and immunothe f the head and f the bone soft east cancer f the gynecolog f genitourinary apy	er on the effectiveness and radiotherapy, erapy in oral cancer neck cancer part tumor gic malignant tumor cancers , or gic malignancies hout appointing it.		

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 目ナンバー)		emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Eligible Student ŕ(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-017-83-2	2023	whole year	Graduate School of Medical Sciences (24160)		1	2	others	
	Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)	
		HIGO Pa	aliative Care(C9)		SI	UGITA Michiko,	HIRATA Naoyuki	
			Goals with their ratio(学修成果とそ	の割合	ĵ)			
1.Advanced expert and ability to take i	knowled§ nitiative a	ge, skill and reaction ••••15	esearch capability ····30% 2.Profound inte % 4.Social leadership drive ····15%	r-disci	plinary kno	wledge ····409	% 3.Global perspective	
Type of Class(授業	の形態)	Other						
Teaching Method( 法)	受業の方	Using e-lea	rning system in Web site of Japan Society of	Clinic	al Oncolog	у		
Course Goals(授業	の目的)	may challen	Il professionals have been affected by caring ge us at both a professional and at a persor e are challenged. This course serves as intro	al leve	el in areas w	vhere we feel o	ur confidence or	
		[A level (A	水準)】					
Course Learning go 目標)	oals(字修	- 【C level (C	水準)]					
Course Outline(授美	美の概要)	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.( Date()	3日)	Class Theme(授業テーマ)			Brief Outline of Class(内容概略)			
1								
Estimated out-of study time								
Required Textbook	(テキス	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 Conditi 条件)	ons(履修							
Assessment Metho Criteria(評価方法								
Language Use Instruction(使用	d in 言語)	Japanese (Japanese)						
Textbook/Mate Language(教科書・ 語)	erial 資料の言	Japanese (Ja	Japanese (Japanese)					
Course Based on F Work Experience( を活かした授	実務経験	Not applica	ble					

RDM 7-018-83-2         2023whole year         Graduate School of Mighal Sciences (24170)         1         2         others           Instructor(1)/Lill 26,200         Instructor(1)/Lill 26,200 <t< th=""><th></th><th>e Coding(科 マンバー)</th><th>Year/Se m(年,</th><th>emester/Ter 度・学期)</th><th>Faculty Offering Course(時間割所属・時間 割コード)</th><th>S</th><th>Eligible Student (開講年次)</th><th>Credits(単位 数)</th><th>Weekday and Period(曜 日・時限)</th></t<>		e Coding(科 マンバー)	Year/Se m(年,	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Eligible Student (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
HGO The Theory of Clinical Research (C10Learning of The Theory of Clinical Research)       YMMMOTO Yutaka, HMMODA SULKanhao, SULKUR, Marchao, MKASALEA, Kahaba, Kahab	RDM7	-018-83-2	2023v	whole year			1	2	others	
HIGO The Theory of Clinical Research (10 Lutaming of The Theory of Clinical Research)       Maktor, MUKASA Akitake, Kanba Tomonit, BABA Michol, Mukatsa Michol, Akitake, Kanba Tomonit, BABA Michol, Mukatsa Mitakaka, BE-O           <			Co	ourse Title(Th	neme)(科目名(講義題目))			Instructor(	s)(担当教員)	
1. Advanced expert howledge, skill and research capability ···· 45% 2.Profound inter-disciplinary knowledge ···· 35% 4.Social leadership drive ···· 26%           Type of Class(電気の) Power Point presentation will be usually provided in the fectures, Video lectures or e-learning programs will be power Point Power Point presentation will be usually provided in the fectures, Video lectures or e-learning programs will be power Point Power Point Presentation will be usually provided in the fectures, Video lectures or e-learning programs will be power Point Power Point Power	HIGO	The Theory	of Clinica	al Research(C	Research(C10Learning of The Theory of Clinical Research) Makoto, MUKASA Akitake, Kanba Tomomi, I					
drive       -20%         Teaching Method (\$\$#07)       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 Caals(#\$#0180)       To comprehend necessary knowledge in order to conduct Intervention studies/clinical trials         Course Learning goals(?\$#       10 provide the provided in the lectures. Video lectures or e-learning programs will be provided in the lectures.         Course Learning goals(?\$#       10 provide the provide the provide the apps viocide as a program of the provide the p					Goals with their ratio(学修成果とそ	の割合	ት)			
Teaching Method (第907)         ProverPoint presentation will be usually provided in the lectures. Video lectures or e-learning programs will be groups (1997)           Course Gaals (##018)         To comprehend necessary knowledge in order to conduct Intervention studies/clinical traits           Course Gaals (##018)         To comprehend necessary knowledge in order to conduct Intervention studies/clinical traits           Course Learning goals (##018)         To comprehend necessary knowledge in order to conduct Intervention studies/clinical traits           Course Learning goals (##018)         To comprehend necessary knowledge in order to apply into clinical practice           10 interport research findings enough to apply into clinical practice         To comprehend necessary knowledge           21 To comprehend necessary knowledge in order to apply into clinical practice         To comprehend necessary knowledge in order to apply into clinical practice           21 To comprehend scientific rationals clinical research         To acomprehend scientific rationals clinical research           21 To comprehend methods to conduct clinical research         To acomprehend scientific rationals clinical research           21 To comprehend methods to conduct clinical research         To acomprehend methods to conduct clinical research           31 To comprehend methods to conduct clinical research         To acomprehend methods to conduct clinical research           31 To comprehend methods to conduct clinical research         To acomprehend methods to conduct clinical research			knowledg	ge, skill and r	esearch capability ····45% 2.Profound inte	er-disci	plinary kno	wledge ····35	% 4.Social leadership	
Course Goals(後年の日か)     Course Coals(後年の日か)     Course Coals(後年の日か)     Course Coals(後年の日か)     Course Learning goals(学     (1)	Туре о	of Class(授業	の形態)	Other						
Image: Section Construct Section Transmission Construct Section Construct Construct Section Construct Section Construct Section Construct Section Construct Construct Section Construct Construct Section Construct Construct Section Construct Construct Section Construct Section Construct Section Construct Section Construct Section Construter Sectin Construct Section Construct Section Const	Teachir	ng Method(挡 法)	受業の方	PowerPoint provided fo	presentation will be usually provided in the r those who are regularly absent for unavoic	e lectur dable r	res. Video le easons.	ectures or e-lea	rning programs will be	
1) To conduct scientifically rational and ethical research         Course Learning goals(学生         2) To conduct scientifically rational and ethical research         3) To comprehend methods to conduct science in subscience and science in the science in a subscience in the science in	Course	e Goals(授業	の目的)	To compreh	nend necessary knowledge in order to cond	uct inte	ervention st	udies/clinical t	rials	
Course Outline(党家の報動         Kinetics/dynamics needed for clinical trials. And also, you will learn about the biochemical characters and the chincal trial. Survey and the clinical trials and also, you will be clicical trials and also. You will learn about the clicical trials and also, you will be also to explore and the clinical trials and also. You will be also to explore and trials and also. You will be also to explore and the instantiational study and proceets of the molecular biology will be discussed.           No.(@)         Date(月日)         Class Theme(授業テーマ)         Brief Outline of Class(内容構成)           1         Yamamoto Yutaka, eLi-O         Basic of clinical research 1           2         Matsui Kunihiko, eLi-O         Details of ethical guideline for clinical research 2           4         Akinobu Hamada, eLi-O         Basic of clinical research 2           5         Kenji Tamura, eLi-O         Basic of clinical research 1           6         Yutaka Yamantot, eELi-O         Basic of clinical research 2           8         Makoto Suzuki, eE-O         Clinical trials on lung cancer (2)           9         Hideo Baba, eE-O         Clinical trials on support cancer           11         Hideo Baba, eE-O         Clinical trials on maing cancer (2)           9         Hideo Baba, eE-O         Clinical trials on maing cancer (2)           12         Yutaka Yamamoto, eEL-O <t< td=""><td>Course</td><td></td><td>als(学修</td><td>1) To condu 2) To play a 3) To interp 4) To broad [C level (C 1) To comp 2) To comp</td><td>ict scientifically rational and ethical researc role as a project member in a large-scale o ret research findings enough to apply into o en knowledge about clinical researches and 水準)] rehend scientific rationale clinical research rehend methods to conduct clinical research</td><td>r multi clinical d stand h</td><td>practice lard treatme</td><td></td><td>ancies</td></t<>	Course		als(学修	1) To condu 2) To play a 3) To interp 4) To broad [C level (C 1) To comp 2) To comp	ict scientifically rational and ethical researc role as a project member in a large-scale o ret research findings enough to apply into o en knowledge about clinical researches and 水準)] rehend scientific rationale clinical research rehend methods to conduct clinical research	r multi clinical d stand h	practice lard treatme		ancies	
No.(日)         Date(月日)         Class Theme(検薬テーマ)         Brief Outline of Class(内容概略)           1         Yamamoto Yutaka, eEI-O         Basic of clinical research 1           2         Matsui Kunihiko, eEI-O         Details of ethical guideline for clinical research 2           3         Yamamoto Yutaka, eI-O, eE-O         Basic of clinical research 2           4         Akinobu Hamada, eEI-O         agents           5         Kenji Tamura, eEI-O         Pharmacokinetics/Pharmacodynamics of anti- tumor agents           6         Yutaka Yamamoto, eEI-O         Design and Assessment of clinical trailas           7         Makoto Suzuki, eE-O         Clinical trials on lung cancer (1)           8         Makoto Suzuki, eE-O         Clinical trials on gastric cancer           10         Hideo Baba, eE-O         Clinical trials on pastric cancer           11         Hideo Baba, eE-O         Clinical trials on pestric cancer           12         Yutaka Yamamoto, eEI-O         Clinical trials on thepatic cell carcinoma           13         Yutaka Yamamoto, eEI-O         Clinical trials on breast cancer (2)           14         Tomomi Kamba, eEI-O         Clinical Trials on thepatic cell carcinoma           15         Akitake Mukasa, eEI-O         Clinical Trials on trast cancer (1)           13         Yutaka Yamamoto, eEI-O	Course	Outline(授業	(の概要)	kinetics/dyr treatments including lu malignant b	namics needed for clinical trials. And also, y based on evidence of the clinical trial (EBM ng cancer, gastric cancer, colorectal cance rain tumor. In addition, the latest topics of 1	ou will ; evide r, liver	learn abou nce based i cancer, bre	t the biochemio medicine) in va ast cancer, urir	cal characters and the rious kinds of cancers, ary organ cancer and	
Date(7日)         Class Intellin(安ま チーマ)         Date Outline of Class (学会 性成年)           1         Yamamoto Yutaka, eEJ-O         Basic of clinical research 1           2         Matsui Kunihiko, eEJ-O         Data of clinical research 2           3         Yamamoto Yutaka, eL-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         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 lung cancer (2)           9         Hideo Baba, eE-O         Clinical trials on obreast cancer           11         Hideo Baba, eE-O         Clinical trials on breast cancer (1)           12         Yutaka Yamamoto, eEJ-O         Clinical Trials on breast cancer (2)           14         Tomomi Kamba, eEJ-O         Clinical Trials on breast cancer (2)           15         Akitake Mukasa, eEJ-O         Clinical Trials on malignant brain tumor           16         Go hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).           17					Details for Individual Classes(各回の	授業内	容)			
2         Matsui Kunihiko, eEI-O         Details of ethical guideline for clinical research           3         Yamamoto Yutaka, eI-O, eE-O         Basic of clinical research 2           4         Akinobu Hamada, eEI-O         Pharmacokinetics/Pharmacodynamics of anti- tumor agents           5         Kenji Tamura, eEI-O         Pharmacokinetics/Pharmacodynamics of anti- tumor agents           6         Yutaka Yamamoto, eEI-O         Design and Assessment of clinical trailas           7         Makoto Suzuki, eE-O         Clinical trials on lung cancer (1)           8         Makoto Suzuki, eE-O         Clinical trials on soft cancer           10         Hideo Baba, eE-O         Clinical trials on lung cancer (2)           9         Hideo Baba, eE-O         Clinical trials on soft cancer           11         Hideo Baba, eE-O         Clinical trials on bepatic cell carcinoma           12         Yutaka Yamamoto, eEI-O         Clinical Trials on bepatic cell carcinoma           13         Yutaka Yamamoto, eEI-O         Clinical Trials on breast cancer (2)           14         Tomomi Kamba, eEI-O         Clinical Trials on urinary organ cancer           15         Akitake Mukasa, eEI-O         Clinical Trials on urinary organ cancer           15         Akitake Mukasa, eEI-O         Clinical Trials on urinary organ cancer           16	No.(回 )	Date(月	3日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
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 trailas       7     Makoto Suzuki, eE-O     Clinical trials on lung cancer (1)       8     Makoto Suzuki, eE-O     Clinical trials on gastric cancer       9     Hideo Baba, eE-O     Clinical trials on lung cancer (2)       9     Hideo Baba, eE-O     Clinical trials on lung cancer (2)       10     Hideo Baba, eE-O     Clinical trials on lung cancer (1)       11     Hideo Baba, eE-O     Clinical trials on breast cancer (1)       13     Yutaka Yamamoto, eEJ-O     Clinical trials on breast cancer (1)       13     Yutaka Yamamoto, eEJ-O     Clinical Trials on breast cancer (2)       14     Tormomi Kamba, eEJ-O     Clinical Trials on urinary organ cancer       15     Akitake Mukasa, eEJ-O     Clinical Trials on urinary organ cancer       15     Akitake Mukasa, eEJ-O     Clinical Trials on urinary organ cancer       15     Akitake Mukasa, eEJ-O     Clinical Trials on urinary organ cancer       16     Line Jamamoto, eEJ-O     Clinical Trials on urinary organ cancer       17     Tormomi Kamba, eEJ-O	1			Yamamoto '	Yutaka, eEJ-O	Basic	c of clinical	research 1		
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 trailas       7     Makoto Suzuki, eE-O     Clinical trails on lung cancer (1)       8     Makoto Suzuki, eE-O     Clinical trails on lung cancer (2)       9     Hideo Baba, eE-O     Clinical trials on gastric cancer       10     Hideo Baba, eE-O     Clinical trials on peatric calcancer       11     Hideo Baba, eE-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 breast cancer (2)       14     Tomomi Kamba, eEJ-O     Clinical Trials on breast cancer (2)       14     Tomomi Kamba, eEJ-O     Clinical Trials on malignant brain tumor       Estimated out-of-class     60 hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).       Required Textbook(デキス     S       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 Therapeutic Trials in Acute Meloid Cheson BD, et al. Revised recommendations of the international Working Group for Diagnosis, Standardization of hospones Clinical Vicial Morial Working Group for Di	2			Matsui Kuni	hiko, eEJ-O	Deta	ils of ethica	l guideline for a	clinical research	
4     Akinobul Hamada, ED-O     agents       5     Kenji Tamura, eEJ-O     Pharmacokinetics/Pharmacodynamics of anti- tumor agents       6     Yutaka Yamamoto, eEJ-O     Design and Assessment of clinical trailas       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 spatric cell carcinoma       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 malignant brain tumor       15     Akitake Mukasa, eEJ-O     Clinical Trials on malignant brain tumor       16     Hideo Baba, eE-O     Clinical Trials on malignant brain tumor       17     Bo hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).       Required Textbook(デキス     Fernellearning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).       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	3			Yamamoto '	Yutaka, eJ-O, eE-O	Basic	c of clinical	research 2		
5     Nehn Tahura, BE-D     agents       6     Yutaka Yamamoto, eEJ-O     Design and Assessment of clinical trailas       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 pastric cancer       11     Hideo Baba, eE-O     Clinical trials on breast cancer (1)       12     Yutaka Yamamoto, eEJ-O     Clinical trials on breast cancer (2)       14     Tomomi Kamba, 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     60 hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).       Required Textbook(7 ± ス     Eanuel EJ, et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" edited by Bowcock, HUMANA PRESS, 2004 Cheson BD et al. Revised recommendations of the Interpational 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):4842-9. American Society of Clinical Oncology Clinical Practice Guideline, National Comprehensive Cancer Network Clinical (NCCN) Gui	4			Akinobu Ha	mada, eEJ-O			cs/Pharmacody	mamics of anti- tumor	
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 urinary organ cancer         15       Akitake Mukasa, eEJ-O       Clinical Trials on malignant brain tumor         60 hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).         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 Therapeurics" edited by Bowcock, HUMANA PRESS, 2004 Cheson BD, et al. Revised recommendations of the International Working Group for Diagnosis, Standardization of Responge Criteria, Treatment Outcomes, and Reporting Standards for Therapeutic Trials in Accute 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 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/(應修 条件) <td< td=""><td>5</td><td></td><td></td><td>Kenji Tamu</td><td>ra, eEJ-O</td><td></td><td colspan="4"></td></td<>	5			Kenji Tamu	ra, eEJ-O					
8         Makoto Suzuki, eE-O         Clinical trials on lung cancer (2)           9         Hideo Baba, eE-O         Clinical trials on lung cancer (2)           10         Hideo Baba, eE-O         Clinical trials on colorectal cancer           11         Hideo Baba, eE-O         Clinical trials on hepatic cell carcinoma           12         Yutaka Yamamoto, eEI-O         Clinical trials on breast cancer (1)           13         Yutaka Yamamoto, eEI-O         Clinical Trials on breast cancer (2)           14         Tomomi Kamba, eEI-O         Clinical Trials on urinary organ cancer           15         Akitake Mukasa, eEI-O         Clinical Trials on urinary organ cancer           15         Akitake Mukasa, eEI-O         Clinical Trials on urinary organ cancer           16         Oh ours 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)         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 Ouccology 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)         We evaluate the attendance	6			Yutaka Yam	amoto, eEJ-O	Desi	gn and Asse	essment of clini	cal trailas	
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           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)         Eanuel EJ, et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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)         We evaluate the attendance at a lecture, lecturing questions and answers and the lecture understanding degree about th	7			Makoto Suz	uki, eE-O	Clini	cal trials on	lung cancer (1	)	
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)       Eanuel EJ. et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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 Clinical 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)       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. Gri	8			Makoto Suz	uki, eE-O	Clini	cal trials on	lung cancer (2	)	
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)       Eanuel EJ. et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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)       We evaluate the attendance at a lecture, lecturing questions and answers and the lecture understanding degree duit 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 sudent's understanding of the course subject matter. The students' understanding will be evaluate on the basis of papers and quizzes r	9			Hideo Baba	, eE-O	Clini	cal trials on	gastric cancer		
12       Yutaka Yamamoto, eEI-O       Clinical trials on breast cancer (1)         13       Yutaka Yamamoto, eEI-O       Clinical Trials on breast cancer (2)         14       Tomomi Kamba, eEI-O       Clinical Trials on urinary organ cancer         15       Akitake Mukasa, eEJ-O       Clinical Trials on malignant brain tumor         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 Therapeurics" edited by Bowcock, HUMANA PRESS, 2004 Cheson BD, et al. Revised recommendations of the International Working Group for Diagnosis, Standardization of Resonse 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)       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 based on the average score of the papers and quizzes as well as participation in class discussions.	10			Hideo Baba	, eE-O	Clini	cal trials on	colorectal can	cer	
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         60 hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).         Required Textbook(7キス b)         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 Therapeurics" 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.         Enrollment Conditions(履修 条件)       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.	11			Hideo Baba	, eE-O	Clini	cal trials on	hepatic cell ca	rcinoma	
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)       Eanuel EJ. et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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)       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 O to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions.	12			Yutaka Yam	amoto, eEJ-O	Clini	cal trials on	breast cancer	(1)	
15       Akitake Mukasa, eEI-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)       Eanuel EJ. et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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)       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	13			Yutaka Yam	amoto, eEJ-O	Clini	cal Trials or	n breast cancer	(2)	
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 b)       Eanuel EJ. et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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)       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 student's understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored for mo to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions.	14			Tomomi Ka	mba, eEJ-O	Clini	cal Trials or	n urinary organ	cancer	
study time       times).         Required Textbook(テキス ト)       Eanuel EJ. et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008 Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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)       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.	15			Akitake Mul	kasa, eEJ-O	Clini	cal Trials or	n malignant bra	in tumor	
ト)       Eanuel EJ. et al. The Oxford Textbook of Clinical Research Ethics. Oxford University Press., 2008         Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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)       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.         Assessment Methods and Criteria(評価方法・基準)       We 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		study time								
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 Therapeurics" 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)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	Require		(テキス							
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	Read	,	文献)	Breast Cancer, Molecular Genetics, Pathogenesis, and Therapeurics" 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						
Assessment Methods and Criteria(評価方法·基準) 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.	Enrollm		ons(履修							
		ment Metho		Grading will will be evalu to 100. Fina	l be based on the student's understanding c uated on the basis of papers and quizzes rel Il grades will be based on the average score	of the c lated to	ourse subje the topics	ect matter. The dealt with in c	students' understanding lass to be scored from 0	
	Lar	nguage Used	d 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 (Each instructor has experiences as a primary investigator and a collaborator of clinical reserch projects, or a member of review boards.)

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 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	2023v	vhole year	Graduate School of Medical Sciences (24075)	1	2	others	
		Co	ourse Title(Th		Instructor(s)(担当教員)			
	F	IIGO Env	ironmental a	nd Sociomedical Sciences(B8)	Nishi Kunihi	ko, SOEJIMA H	ou Takahiko, MATSUI irofumi, Gi Chiyounen, amitsu, Lu Xi	
				Goals with their ratio(学修成果とそ	の割合)			
1.Advan and abil	nced expert l lity to take ir	knowledg nitiative a	ge, skill and r	esearch capability ····25% 2.Profound inte % 4.Social leadership drive ····40%	r-disciplinary kno	wledge ····25	% 3.Global perspective	
Type o	of Class(授業)	の形態)	Lecture					
Teachir	ng Method(挑 法)	受業の方	PowerPoint Extra classe	and/or OHP will be used in the lectures, an s or video lectures are considered for those	d active participa who are regularly	tion in the disc absent for una	ussion is encouraged. avoidable reasons.	
Course	e Goals(授業)	の目的)	The purpos preventive a neuropsych	e of this course is to develop the logic of the and environmental medicine (hygiene), publ iatry.	e broad field of Sc ic health, health r	cial Medicine f nedicine, foren	rom the viewpoints of sic medicine and	
Course	Learning go 目標)	als(学修	medicine ar medical soc students are medical car	cine is an important field of medical science and society in the human life cycle. The healt ial application, it is also supported by the co e expected to understand the relationship b e service including disease prevention & hea II also comprehensively learn the role of me	h of the humans i omprehensive hea etween the envirc alth promotion, a	s regulated in t alth and welfare onment and he nd individuals'	he ecosystem, and, as the e system. In this course, alth, the concept of total basic human rights.	
Course Outline(授業の概要) Course Outline(授業の概要) For each of the environment, the relationship between people and the environmental medicine (hygie evaluation, and the setting and maintenance of environmental standards, and lectures in the Depart Public Health on the concept of health and the construction of a healthy society based on preventing and epidemiology. In the Department of Forensic Medicine, there will be general lectures on the public forensic medicine, as well as the causes of the death and its classification from the medical, legal and perspectives, and forensic medicine's contribution to society. In the Department of Clinical Behave Medicine, students will learn about the epidemiology of mental diseases and the relationship between events, social support, personality, recognition pattern, nurture experience and mental disease.						vironmental indices and n the Department of on preventive medicine es on the purposes of ical, legal and social inical Behavioral nship between life-		
				Details for Individual Classes(各回の	授業内容)			
No.(回 )	Date(月	日)		Class Theme(授業テーマ)	Bri	ef Outline of Cl	ass(内容概略)	
1			Takahiko Ka	atoh 【eE-0, eJ-0】	Meaning of soci	al medicine		
2			Takahiko Ka	atoh 【eE-0, eJ-0】	Epidemiology			
3	06/1	6	5th period I	Hisamitsu Omori 【eEJ-L】	Medical Screen	ng		
4	06/2	:3	5th period `	Yoko Nishitani 【eE-0, eJ-L】	Definition and p	ourpose of forer	nsic medicine	
5	06/3	0	5th period I	Hirofumi Soejima 【eEJ-L】	General Medicir	ne: Atheroscler	osis	
6	07/0	)7	5th period `	Yoko Nishitani 【eE-0, eJ-L】	Forensic medici	ne & forensic s	cience	
7			Xi Lu 【eE-0	0]	Medical Statistic	cs		
8			Xi Lu【eE-0	1	Research Desig	n of Epidemiolo	ogy	
9	07/2	:8	5th period `	Yoko Nishitani 【eE-0, eJ-L】	Social aspect of	human death (	(1)	
10	08/0	94	5th period `	Yoko Nishitani 【eE-0, eJ-L】	Social aspect of	human death (	(2)	
11	08/2	25	5th period I	Hirofumi Soejima 【eE-0, eJ-L】	Blood Coagulati	on and Fibrioly	/sis	
12	09/0	)1	5th period I	Hirofumi Soejima 【eE-0, eJ-L】	Lifestyle and Co	ronary Artery D	Disease	
13	09/0	18	5th period (	Chang-Nian Wei 【eE-L, eJ-0】	Environment-hu	man system		
14	09/1	5	5th period (	Chang-Nian Wei 【eE-L, eJ-0】	Environmental i	ndices and eva	luation	
15	09/2	22	5th period I	Kunihiko Matsui 【eJ-L】	General Medicir results	ne: Clinical stud	dies, interpretation for	
Estim	nated out-of- study time	class						
Require	ed Textbook ト)	(テキス	Textbooks a	are not specified, and handouts will be distri	buted.			
Reading List(参考文献) · "Public Health & Preventive Medicine" by Maxy-Rosenan-Last: (14 edit) Appleton & Lan · "Forensic Pathology" by Bernard Knight, 2nded, Arnold, London, Sydney and Auckland					& Lange. 1998, kland, 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 students' understanding will be evaluated on the basis of papers and quizzes related to the topics dea 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 c								
Language Used in Instruction(使用言語)         Japanese and English				nd English				

Textbook/Material Language(教科書・資料の言 語)	Combination of Japanese and English
	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	Subjec	t Code	Course Start Date	Room
Subjects	Medical Sciences	Pharmaceutical Sciences	Course Start Date	Room
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	Subjec	et Code	Course Start Date	Room	
这未行日	Medical Sciences	Pharmaceutical Sciences	Course Start Date	Room	
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 Prog

Subjects	Subjec	et Code	Course Start Date	Room
Subjects	Medical Sciences	Pharmaceutical Sciences	Course Start Date	Room
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
HIGO Cutting-Edge Research Project II	24700	08395	_	_

## HIGO Program Four-year Course

Subjects	Subjec	et Code	Course Start Date	Room
Subjects	Medical Sciences	Pharmaceutical Sciences	Course Start Date	noom
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)		emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	iligible tudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)			
RDM7-128-99-2	2023v	vhole year	Graduate School of Medical Sciences (24430)	1,	2, 3, 4	1	others			
	Со	urse Title(Th			Instructor(	s)(担当教員)				
HIGO Governmental Seminar Series II() IRIE Tetsumi, UMEDA Kahoko, H 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 perspect and ability to take initiative action ····20% 4.Social leadership drive ····30%										
Type of Class(授業の形態) Other										
Teaching Method 法)	(授業の方	Students wi	ssions will be driven by questions and answ Il attend the seminars and write reports. Th s' own thoughts on the topics.							
Course Goals(授美	美の目的)	will enable a academia-g Students se pharmaceut to environm will attend s from a gloca	health and life sciences needs leaders equi them to find the root of the problems facing overnment initiatives that will bridge Japan eking to fill the shoes of this kind of leader tical and life sciences as well as an extensiv ental resources, sustainability, biodiversity, seminars that address issues related to heal al viewpoint. Through these seminars, stude conventional graduate-level educational co	local a and the must ha e know enviro th and nts wil	and global ( e surroundi ave a solid ledge of ev nmental et life science	glocal) commu ing region with academic footi erything from p hics, and more s, both at perso	nities and lead industry- the rest of the world. ng in the medical, oublic health and welfare In this course, students onal and global levels,			
Course Learning goals(学修 目標) Course Learning goals(学修 Learning goals(学修 目標) Course Learning goals(学修 Learning goals( Learning goals(										
Lecturers from the Kumamoto prefectural government, Kumamoto municipal government, national and o government agencies will be invited to discuss topics in medical and pharmaceutical sciences as well as 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.         OGovernmental Offices and Organization (AY2022)         - AOZORA, Nonprofit Corporation         - Seisa University         - Hitotsubashi University         - Osaka Ohtani University         - KOHYAMA Seishi Office							iences as well as medical t, environmental			
		It should be added or ch	Center for Global Health and Medicine e noted that, if the Government offices and of nanged, so you posted on the HIGO program program.jp/en/category/gyousei/							
			Details for Individual Classes(各回の	授業内	容)					
No.( Date	月日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)			
1		See the HIG	O Program home page.	See t	he HIGO Pi	rogram home p	age.			
Estimated out-c		This course	consists of content that requires 45 hours e- and post-study (including assignments) is	of study	y. Since the	class is 16 hou	urs (2h x 8 frames), 29			
Required Textboo ト)	ok(テキス	None speci	fied							
Reading List(参	考文献)	None speci	fied							
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 semination of the special reason, you must submit the absence reason statement to Higo program office. In that case, you 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 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.						erstanding in the areas rs during class				
Language Use Instruction(使月	]言語)	Japanese ar	nd English							
Textbook/Ma Language(教科書・ 語)	terial 資料の言	Combinatio	n 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( 目ナンバー)		Semester/Ter E度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	l S	Eligible Student ·(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-129-99-	2 2023	Swhole year	hole year Graduate School of Medical Sciences (24440)			2	others		
	C	ourse Title(Th			Instructor(	s)(担当教員)			
		RUYAMA Toru, UMEDA VKOTA 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 perspec and ability to take initiative action ····30% 4.Social leadership drive ····30%									
Type of Class(扬	愛業の形態)	Other							
Teaching Metho 法)	d(授業の方	attend the s own though In the case	re question-and-answer-focused discussion of seminars and weite reports. The reports shou its on the topics. of Japanese lecturer, principle, lectures in J In the case of foreign teachers, the English le	uld inc apane	lude a sum se using te	mary ofthe lect xt desctibed in	ures and the student's Japanese were		
Course Goals(招	受業の目的)	will enable academia-g course is de well as the researchers	health and life sciences needs leaders equip them to find the root of the problems facing overnment initiatives that will bridge Japan a esigned to provide students with a corporate ability to respond to those needs a responsil , developers, and other guest lectures will b tudents how they can give back to society th	local a and th world ole cor e invite	and global ( e surroundi l view and o rporate citiz ed from acr	glocal) commu ng region will t cultivate a sens en. Leading co oss Japan, to sl	nities and lead industry- he rest of he world. This itivity to local needs as orporate executives, nare their experiences		
	[A level (A水準)] Attend seminars by managers, researchers, and developers of local and major domestic companies to acq 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 acq knowledge about corporate philosophy, compliance, management, and social and community contribution						l and community companies to acquire		
Course Outline(	受業の概要	they related social respo- internationa Japanes sy Seminars w OCompani - D Three - Morisho C - ONO PHA - Kyushu Sa - Leave a N - Kumamot - HINOKUN	RMACEUTICAL CO., LTD. Ingyo University	hig fro nomy, ageme ut Eng	om corporat , human res ent, public i glish interpr	e philosophy to ources develop elations, and n etation will be	o complicance, corporate oment, nore. In the case of provided in such cases.		
		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/kigyou/							
			Details for Individual Classes(各回の	授業内	容)				
No.(回 Dat	e(月日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1		See the HIG	GO program home page	See t	he HIGO pr	ogram home p	age		
Estimated out study tii									
Required Textb ト)	ook(テキス	None speci	fied, but handouts outlining the seminar will	be dis	stributed.				
Reading List(취	参考文献)	None speci	fied.						
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 the special reason, you must submit the absence reason statement to Higo program office. In that cas see the movie of the lecture in Moodle by e-learning.						o be absent a seminar by ce. In that case, you can			
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 t 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.						derstanding in the areas rs during class			
Language L Instruction(偵	lsed in ē用言語)	Japanese ai	nd English						
Textbook/M Language(教科書 語)		Combinatio	n of Japanese and English						
Course Based o Work Experienc を活かした	e(実務経験	Not applica	ble						

HIGO Chinese Course II 【24480】 ※Not offered HIGO English course II 【24490】 ※Not offered HIGO Japanese Course II 【24500】 ※Not offered

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student ŕ(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	139-99-2	2023v	vhole year	Graduate School of Medical Sciences (24540)	1	, 2, 3, 4	1	others		
		Co	urse Title(Th	eme)(科目名(講義題目))		Instructor(s)(担当教員)				
		ł	HIGO Govern	mental Internship II()		IRIE Tetsu		AD DEVKOTA, MITCHELL W 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 persp and ability to take initiative action ····15% 4.Social leadership drive ····30%										
Type of	f Class(授業)	の形態)	Other							
Teachin	ng Method(挑 法)	受業の方	collaboratin	provides omnibus experiential training at g g with industry, government and academia. ns and have discussions to deepen their un	After	the field exp	perience, stude	nts will make		
Course	e Goals(授業)	の目的)	will enable t academia-g Students se pharmaceut to environm will particip and the glol to solve the educational	health and life sciences needs leaders equi them to find the root of the problems facing overnment initiatives that will bridge Japan eking to fill the shoes of this kind of leader n icical and life sciences as well as an extensive tental resources, sustainability, biodiversity, ate in discussions that address issues relate bal community. Discussions will focus on th m, and the outlook for the future. These dis courses to provide students with the latest m a glocal perspective.	local and th must h e know envirc ed to h e curre cussio	and global ( e surroundi ave a solid a vledge of ev onmental etl ealth and lif ent status of ns will go be	glocal) commu ng region with academic footi erything from p hics, and more e sciences that these problem eyond conventi	nities and lead industry- the rest of the world. ng in the medical, ublic health and welfare In this course, students affect both individuals is, what needs to be done onal graduate-level		
Course Learning goals(学修 目標) La level (A水準)] Through hands-on experience in solving social issues, students will acquire knowledge and practical sk welfare, public health, environmental resources, recycling society, biodiversity, and environmental ethi [C level (C水準)] Through hands-on experience in solving social issues, students will acquire knowledge in welfare, public environmental resources, recycling society, biodiversity, and environmental ethics.						ronmental ethics.				
Course	Outline(授業	きの概要)	collaboratic life sciences In addition, training is c If there are practical tra	operation of government agencies, universit on, students will experience and learn how t s, regional development, and foreign worker practical training will be conducted in Engl onducted in Japanese. any changes, such as the addition or chang ining, or if the training is to be conducted in o please check back often.	o solve rs. ish, bu e of th	e a wide ran t English int e governme	ge of social issi terpretation wil nt office or org	ues, such as health and I be provided when the anization in charge of the		
				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)			ass(内容概略)			
1				overview and pre-study, lecture, site visit, exchange, group work, post-study and n 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					
Estim	ated out-of- study time	class	This course pre- and po	consists of content that requires 45 hours or st-study (including assignments) is required	of stud to de	y. Since the epen the un	class is for 30 derstanding of	hours, 15 hours worth of the class.		
Require	ed Textbook ト)	(テキス	Not specifie	d. Handout on the outline of internship will	be dis	stributed.				
Readi	ing List(参考	文献)	Not specifie	d.						
Enrollme	ent Conditio 条件)	ons(履修	Approval by	faculty supervisor and HIGO Administrative	e Comi	mittee is rec	juired.			
	ment Metho ia(評価方法,		The degree experience,	of acquisition of practical skills through the positive attitude toward presentation and c	interr liscuss	ship will be ion, and the	evaluated base contents of th	ed on the on-the-job e e-portfolio report.		
Language Used in Instruction(使用言語) Japanese and English										
	tbook/Mate ge(教科書・資 語)		Combinatio	n of Japanese and English						
Work Ex	Based on P xperience(実 活かした授賞	<b>ミ務経験</b>	Not applica	ble						

	Coding(科 ンバー)		mester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Eligible Student (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	140-99-2	2023w	vhole year	Graduate School of Medical Sciences (24550)	1	, 2, 3, 4	1	others		
		Co	urse Title(Th	eme)(科目名(講義題目))		Instructor(s)(担当教員)				
	HIG	GO Busine	ess Internshi	p II(HIGO Business Internship II )		MORIO K	KA Hiroshi, MA ahoko, HARI Pl	RUYAMA Toru, UMEDA RASAD 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										
Teachin	ng Method(挑 法)			Il intern at a selected company. The internsh in order to give the participants a better un						
Course Goals(授業の目的) The HIGO Program aims to foster glocal pioneers in the health and life sciences who understand local new well as the needs of people throughout Asia and are willing to work on solving local problems through glo partnerships. In this course, students will put the knowledge gained through specialized lectures in medic pharmacology, the Governmental and Business seminars into practice while interning at a local company leading pharmaceutical company in Japan. The internship will give students access to first-hand informative related to corporate philosophy, compliance, management, planning, operations, accounting, corporate so responsibility, community outreach, as well as local community needs. Students will learn to look at the we through a glocal lens as they develop the practical skills that will enable them to adapt to a changing environment.							blems through glocal lectures in medicine and calocal company or a rst-hand information nting, corporate social rn to look at the world			
Course Learning goals(学修 目標) Course Learning goals(学修 目標) (C level (C水準)] Students will be able to acquire and apply practical ability in a glocal perspective and techniques to ada (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.										
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. <ul> <li>Companies and organizations located in Kumamoto Prefecture</li> <li>DOJINDO Laboratories, KM Biologics</li> <li>Preclinical services and pharmaceutical companies in Japan</li> <li>Shin Nippon Biomedical Laboratories</li> <li>Companies and organizations that accept interns are subject to change. Additions or changes of host organizations will be informed via e-mail.</li> </ul>										
No (回				Details for Individual Classes(各回の		(台)				
No.(回 )	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1			planning, m	philosophy, corporate compliance, anagement, accounting, contribution to tribution to community, learning needs,	envir inter expe comp final * If or	onment, ca action and o rimental tra panies and p presentatio n-site interr	exchange of op ining, examina preparation for n about learnir iship is not pos	hilosophy and ation, facility tours, inions with employees, tion of issues given by presentation of results, g outcomes, etc. sible due to COVID-19, ne using ZOOM, etc.		
Estim	ated out-of- study time	-class	This course pre- and po	consists of content that requires 45 hours c st-study (including assignments) is required	f stud to dee	y. Since the epen the un	class is for 30 derstanding of	hours, 15 hours worth of the class.		
	ed Textbook ト)		•	d. Handout on the outline of internship will	be dis	tributed.				
Read	ing List(参考	文献)	Not specifie	ed.						
Enrollm	ent Conditic 条件)	ons(履修	,	faculty supervisor and HIGO Administrative						
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 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.							answers during the			
	nguage Usec uction(使用		Japanese ar	nd English						
	tbook/Mate ge(教科書・資 語)		Combinatio	n of Japanese and English						
Work E	Based on Pl xperience(実 活かした授業	<b>ミ務経験</b>	Not applica	ble						

Course Coding(科 目ナンバー)		mester/Ter を・学期)	Faculty Offering Course(時間割所属・時間 割コード)	I S	Eligible tudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)
RDM7-141-99-1	2023w	hole year	Graduate School of Medical Sciences (24560)	1,	, 2, 3, 4	1	others
	Соц	urse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)
		HIGO Over	seas Internship II()		OGUI	RA Teru, DEVKO ANDRE	DTA HARI, MITCHELL W NEIL
			Goals with their ratio(学修成果とそ	の割合	(1		
1.Advanced expert and ability to take i	knowledge nitiative ac	e, skill and ro ction ・・・・30	esearch capability ····10% 2.Profound inte % 4.Social leadership drive ····20%	r-disci	plinary kno	wledge ····40	% 3.Global perspective
Type of Class(授業	の形態)	Other					
Teaching Method( 法)	授業の方	Experiential held to dee	training at the above institutions. After the pen students' understanding of what they ha	on-site ave lea	e experience rned.	e, presentation	s and discussions will be
Course Goals(授業	の目的)	and the wor medicine, p regional soc This course	ead a healthy society as a "health and life so ld, students need to develop not only broad harmacology, life sciences, etc., but also a b iety (glocal society) while connecting the re is designed to provide students with a broa regional and global perspectives.	l and d bird's-e gional	leep expert ye view of t characteris	ise in health an he issues and r stics of Kyushu	d life sciences based on needs of international and with a global perspective.
Course Learning go 目標)	oals(学修	setting and negotiation [C level (C Through ear	ly international work experience and trainir problem-solving skills in a glocal society, as skills.	well as	s internatio dents will b	nally competiti e able to acqui	ve communication and re problem-setting and
Course Outline(授考	美の概要)	<ul> <li>Students will participate in a 30-hour (five-day) internship at one of the following organizations.</li> <li>Overseas offices of Kumamoto University</li> <li>Shanghai Office, Dalian Office, Korea KAIST Office, or Indonesia ITS Office</li> <li>Educational institutions, companies and research organizations affiliated with Kumamoto University</li> <li>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); Ligance Pharmaceuticals, Inc. (USA); etc.</li> <li>International administrative organizations</li> <li>United Nations, World Health Organization, etc.</li> <li>Training will be conducted in English and interpreted into English if given in Japanese.</li> </ul>					
			Details for Individual Classes(各回の	投未内	,		
No.(回 Date()	3日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)
1		•	d on the HIGO Program website		•	the HIGO Prog	
Estimated out-of study time		This course pre- and po	consists of content that requires 45 hours of state of content that requires (including assignments) is required	of study to dee	y. Since the epen the un	class is for 30 derstanding of	hours, 15 hours worth of the class.
Required Textbook		•	d. Handout on the outline of internship will	be dis	tributed.		
Reading List(参考		Not specifie	d.				
Enrollment Conditi 条件)			faculty supervisor and HIGO Administrative				
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 Objectives] will be evaluated based on the active attitude of the students during the question-and-ans session, presentation, and discussion at the hands-on training site, as well as a report on the theme pr after the hands-on training is completed.						estion-and-answer	
Language Use Instruction(使用		Japanese ar	id English				
Textbook/Mate Language(教科書・ 語)	資料の言	Combinatio	n of Japanese and English				
Course Based on F Work Experience() を活かした授	実務経験	Not applica	ble				

Course Coding 目ナンバー)	科 Ye		mester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student rr(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-154-99	1	2023whole y		Graduate School of Medical Sciences (24680)		1, 2, 3, 4	6	others	
		Co	ourse Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)			
		HIC	GO Cutting-Edge Seminar Series II()			NISHINAKAMURA Ryuichi			
Goals with their ratio(学修成果とその割合)									
1.Advanced exp and ability to tal	ert kno e initia	owledg ative a	ge, skill and research capability ····50% 2.Profound inter-disciplinary knowledge ····25% 3.Global perspective 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 Dat	e(月日)		Class Theme(授業テーマ)			Brief Outline of Class(内容概略)			
1			participate i	n the weekly seminars				conference room of ee 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)		。(履修							
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(和 目ナンバー)		emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Eligible itudent ·(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
YDL7-349-99-1	2023	whole year	Graduate School of Medical Sciences (24700)	1,	, 2, 3, 4	10	others	
	Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)	
HIGO Cutti	ng-Edge R	esearch Proje	ect II(HIGO Cutting-Edge Research Project)		(	OGURA Teru, M	ORIOKA Hiroshi	
			Goals with their ratio(学修成果とそ	の割合	î)			
1.Advanced exper and ability to take	t knowled initiative a	ge, skill and r action ••••15	esearch capability ····50% 2.Profound inte % 4.Social leadership drive ····15%	er-disci	plinary kno	wledge ····20	% 3.Global perspective	
Type of Class(授	業の形態)	Other						
Teaching Method 法)	(授業の方	Students wi discussion f	II engage in the literature search, experimer or four years (three years for those who belo	nt plan ong to	ning and its the Gradua	execution, res te School of Ph	earch presentation and armaceutical Sciences).	
Course Goals(授	業の目的)	from the he research pla	Il conduct professional and advanced exper alth-life science perspectives. In addition, t annings and their execution. Further, they w ad international conferences and to publish	hey wi ill be e	II discuss ex encouraged	periment data to present thei	to promote more	
Course Learning ( 目標)	goals(学修	Based on th skills to con autonomou and life scie [C level (C Based on th skills to con	[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, drug discovery science and life science fields.					
Course Outline(授	業の概要)	learning me	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)		Brie	ef Outline of Cl	ass(内容概略)	
1		Advanced re	esearch on health-life sciences 1			derstand the do esearch theme.	omestic research trends	
Estimated out-o study tim		awarded on	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 Textboo ト)	ok(テキス	The student	s 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 Condi 条件)	tions(履修	Students will require the skills of knowledge and experimentation of the tip of the related areas.						
Assessment Metl Criteria(評価方法		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 Us Instruction(使)		Japanese and English						
Textbook/Ma Language(教科書 語)	terial 資料の言	Combination of Japanese and English						
Course Based on Work Experience を活かした打	実務経験	Not applica	ble					

HIGO Practical Training 【24400】 ※Not offered

Course Coding 目ナンバー)		ar/Semester/Ter m(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 2	2023whole year	Graduate School of Medical Sciences (24410)	1	1	others			
		Course Title(Th	eme)(科目名(講義題目))		Instructor(	s)(担当教員)			
		HIGO Governm	GO Governmental Seminar Series() IRIE Tetsumi, UMEDA Kaho DEVKOT						
			Goals with their ratio(学修成果とそ	の割合)					
1.Advanced exp and ability to ta	oert knov ke initia	wledge, skill and re tive action ····20	esearch capability ····20% 2.Profound inte % 4.Social leadership drive ····30%	r-disciplinary kno	wledge ····30	% 3.Global perspective			
Type of Class	授業の形	態) Other							
Teaching Meth 法)	od(授業)	Students wi	sions will be driven by questions and answe I attend the seminars and write reports. The ' own thoughts on the topics.						
Course Goals(;	授業の目	will enable t academia-g Students se pharmaceut to environm will attend s from a gloca	health and life sciences needs leaders equi hem to find the root of the problems facing overnment initiatives that will bridge Japan eking to fill the shoes of this kind of leader r ical and life sciences as well as an extensive ental resources, sustainability, biodiversity, eminars that address issues related to heal I viewpoint. Through these seminars, stude conventional graduate-level educational co	local and global ( and the surround nust have a solid e knowledge of ev environmental et th and life science nts will acquire la	(glocal) commu ing region with academic footi rerything from p hics, and more as, both at perso	nities and lead industry- the rest of the world. ng in the medical, bublic health and welfare In this course, students onal and global levels,			
Course Learnin 目標		individual lif 学修 【C level (C Students wi life to globa	I be able to acquire and apply a wide range e to global scale, including not only medici h, environmental resources, recycling socie	ne, pharmacology ty, biodiversity, ar dge on issues in h acology, and life s	r, and life scien nd environment nealth and life s sciences, but als	ces, but also welfare, al ethics. ciences, from individual			
Course Outline	(授業の林	government and pharma resources, s interpreted Seminars wi OGovernme - AOZORA, I - Seisa Univ - Hitotsubas - Osaka Oht - Kobe Univ - Kobe Univ - Kobe Univ - Kriake surv - National C	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. OGovernmental Offices and Organization (AY2022) - AOZORA, Nonprofit Corporation - Seisa University - Hitotsubashi University - Osaka Ohtani University - Kobe University - KOBYAMA Seishi Office - Ariake surveying development ci., Itd - National Center for Global Health and Medicine						
		changed, so	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 Da	ite(月日)	)	Class Theme(授業テーマ)	Brie	ef Outline of Cl	ass(内容概略)			
1		environmen	e, welfare, environment, public health, tal resources, recycling society, environmental ethics, etc.	business, examp	roduction of the lecturer's organization and its siness, examples of solutions to health or various cial issues, career path of the lecturer, message to idents, etc.				
			concrete themes are decided, they will be ne HIGO Program website.	As soon as conc posted on the H	rete contents a IIGO Program w	re decided, they will be vebsite.			
Estimated ou study t		ss This course hours of pre deepen.	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						
Required Textb ト)	book(テ	キス None specif	ied						
Reading List(	参考文南	扰) None specif	None specified						
Enrollment Con 条件		a special rea	participate in the seminar as long as there i ason, you must submit the absence reason s movie of the lecture in Moodle via e-learnir	statement to the H	on. If you want t HGO program c	o be absent a seminar for office. In that case, you			
Assessment M Criteria(評価力		and Students are 準) on the basis	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 Instruction(		Japanese ar	Japanese and English						
Textbook/I Language(教科 語)	Material 書・資料	の言 Combinatio	Combination of Japanese and English						
Course Based o Work Experien			ble						

を活かした授業)	Not applicable
----------	----------------

Course Coding(科 目ナンバー)		mester/Ter 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	2023v	vhole year	Graduate School of Medical Sciences (24420)	1, 2, 3, 4	1	others	
	Co	urse Title(Th	ieme)(科目名(講義題目))		Instructor(	s)(担当教員)	
	HIGO Bu	usiness Seminar Series(Business seminar) MORIOKA Hiroshi, MARUYAN Kahoko, HARI PRASAD					
			Goals with their ratio(学修成果とそ	の割合)			
1.Advanced expert and ability to take in	knowledg nitiative a	e, skill and r ction ····30	esearch capability ····20% 2.Profound inter % 4.Social leadership drive ····30%	r-disciplinary kno	wledge ····20	% 3.Global perspective	
Type of Class(授業	の形態)	Other					
Teaching Method(打 法)	受業の方	attend the s own though In the case	e question-and-answer-focused discussion user minars and write reports. The reports shou ts on the topics. of Japanese lecturer, principle, lectures in Ja of foreign teachers, the English lectures usin	Id include a sumi panese using tex	mary of the lect t described in J	ures and the student's	
Course Goals(授業	の目的)	will enable academia-g course is de well as the a researchers	health and life sciences needs leaders equip them to find the root of the problems facing overnment initiatives that will bridge Japan a esigned to provide students with a corporate ability to respond to those needs a responsit , developers, and other guest lectures will be tudents how they can give back to society th	local and global ( and the surround world view and ble corporate citiz e invited from acr	(glocal) commu ing region will t cultivate a sens zen. Leading co oss Japan, to sl	nities and lead industry- he rest of he world. This itivity to local needs as orporate executives, nare their experiences	
Course Learning go 目標)	oals(学修	and apply k contribution [C level (C Attend sem	nars by managers, researchers, and develop nowledge about corporate philosophy, com ns.	pliance, managen ers of local and n	nent, and socia najor domestic	l and community companies to acquire	
Course Outline(授考	€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. OCompanies 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					
		http://higo	o you posted on the HIĜO program home pa program.jp/en/category/kigyou/		e at any time.		
N (5)			Details for Individual Classes(各回の)	授業内容) <b> </b>	:)		
No.(回 Date(月	3日)		Class Theme(授業テーマ)	Brie	ef Outline of Cl	ass(内容概略)	
1		and regiona	philosophy, corporate compliance, social I contributions, human resource nt, internationalization, etc.	business, examp	oles of solutions	rganization and its s to health or various e lecturer, message to	
			concrete themes are decided, they will be he HIGO Program website.	As soon as conc posted on the H		re decided, they will be vebsite.	
Estimated out-of study time	-class		consists of content that requires 45 hours o e- and post-study (including assignments) is				
Required Textbook ト)	(テキス	None speci	fied, but handouts outlining the seminar will	be distributed.			
Reading List(参考	(文献)	None speci	fied.				
Enrollment Conditio 条件)	ons(履修	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 Metho Criteria(評価方法		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 Instruction(使用		Japanese and English					
Textbook/Mate Language(教科書・ 語)		Combination of Japanese and English					
Course Based on P	ractical	Not applica	ble				

を活かした授業)	Not applicable
----------	----------------

HIGO Chinese Course 【24450】 ※Not offered HIGO English Course 【24460】 ※Not offered HIGO Japanese Course 【24470】 ※Not offered

	Coding(科 ンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	-136-99-2	2023	vhole year	Graduate School of Medical Sciences (24510)	1	, 2, 3, 4	1	others		
		Co	ourse Title(Th	neme)(科目名(講義題目))		Instructor(s)(担当教員)				
			HIGO Gover	HGO Governmental Internship() IRIE Tetsumi, HARI PRASAD DEVKOTA, MI ANDREW NEIL						
				Goals with their ratio(学修成果とそ						
1.Advan and abil	ced expert l ity to take ir	knowledg nitiative a	ge, skill and r	esearch capability ····20% 2.Profound inte % 4.Social leadership drive ····30%	er-disci	iplinary kno <sup>.</sup>	wledge ····35	% 3.Global perspective		
Type of	f Class(授業	の形態)	Other							
Teachin	ng Method(挡 法)	受業の方	collaboratir	provides omnibus experiential training at g ng with industry, government and academia. ns and have discussions to deepen their un	After	the field exp	perience, stude	nts will make		
Course Goals(授業の目的)			will enable academia-g Students se pharmaceur to environr will particip and the glo to solve the educational	health and life sciences needs leaders equi them to find the root of the problems facing overnment initiatives that will bridge Japan eking to fill the shoes of this kind of leader n tical and life sciences as well as an extensiv- iental resources, sustainability, biodiversity, ate in discussions that address issues relate bal community. Discussions will focus on th m, and the outlook for the future. These dis I courses to provide students with the latest m a glocal perspective.	local and th must h e know envirc ed to h e curre cussio	and global ( ave a solid a vledge of ev onmental etl ealth and lif ent status of ns will go be	glocal) commu ng region with academic footi erything from p hics, and more e sciences that these problem eyond conventi	nities and lead industry- the rest of the world. ng in the medical, ublic health and welfare In this course, students affect both individuals is, what needs to be done onal graduate-level		
Course	Learning go 目標)	als(学修	[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	3日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1				overview and pre-study, lecture, site visit, exchange, group work, post-study and n of results						
Estim	ated out-of- study time	-class	This course pre- and po	consists of content that requires 45 hours or st-study (including assignments) is required	of stud I to de	y. Since the epen the un	class is for 30 derstanding of	hours, 15 hours worth of the class.		
Require	ed Textbook ト)	(テキス	Not specifie	ed. Handout on the outline of internship will	be dis	stributed.				
Read	ing List(参考	文献)	Not specifie	ed.						
Enrollmo	ent Conditio 条件)	ons(履修	Approval by	r faculty supervisor and HIGO Administrative	e Comi	mittee is rec	juired.			
	ment Metho ia(評価方法,		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.							
Lar Instr	nguage Used uction(使用)	d in 言語)	Japanese and English							
	tbook/Mate ge(教科書・資 語)		Combination of Japanese and English							
Work Ex	Based on P xperience(実 活かした授う	€務経験	Not applica	ble						

	Coding(科 ンバー)		mester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Eligible Student (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)
RDM7-	137-99-2	2023w	vhole year	Graduate School of Medical Sciences (24520)	1	, 2, 3, 4	1	others
		Со	urse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)
	HI	GO Busin	ess Internship(HIGO Business Internship II ) MORIOKA Hiroshi, MARUYAMA T Kahoko, HARI PRASAD DE					RUYAMA Toru, UMEDA RASAD DEVKOTA
				Goals with their ratio(学修成果とそ	の割合	î)		
1. Advanced expert knowledge, skill and research capability $\cdots$ 50% 2. Profound inter-disciplinary knowledge $\cdots$ 20% 3. Global perspect and ability to take initiative action $\cdots$ 20% 4. Social leadership drive $\cdots$ 10%								
Type o	f Class(授業)	の形態)	Other					
Teachin	ng Method(挑 法)			Il intern at a selected company. The internsh in order to give the participants a better und				
Course	e Goals(授業(	の目的)	well as the r partnership pharmacolo leading pha related to c responsibili	rogram aims to foster glocal pioneers in the needs of people throughout Asia and are wil s. In this course, students will put the knowle gy, the Governmental and Business seminar rmaceutical company in Japan. The internsh prporate philosophy, compliance, managem ty, community outreach, as well as local con ocal lens as they develop the practical skills t.	ling to edge g is into nip will ent, pl nmuni	work on sc gained throu practice wh give stude lanning, op ty needs. St	olving local prob ugh specialized hile interning at nts access to fin erations, accou udents will lear	blems through glocal lectures in medicine and calocal company or a rst-hand information nting, corporate social rn to look at the world
Course	Learning go 目標)	als(学修	[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	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.Course Outline(授業の概要)〇 Companies and organizations located in Kumamoto Prefecture DOJINDO Laboratories, KM Biologics O Preclinical services and pharmaceutical companies in Japan Shin Nippon Biomedical LaboratoriesCompanies and organizations that accept interns are subject to change. Additions or changes of host organizations will be informed via e-mail.							
No.(回				Details for Individual Classes(各回の				
)	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)
1			planning, m	hilosophy, corporate compliance, anagement, accounting, contribution to tribution to community, learning needs,	envir inter expe comp final * If or	onment, ca action and o rimental tra panies and presentatio n-site interr	exchange of op ining, examina preparation for n about learnir iship is not pos	hilosophy and ation, facility tours, inions with employees, tion of issues given by presentation of results, g outcomes, etc. sible due to COVID-19, ne using ZOOM, etc.
Estim	ated out-of- study time	class	This course pre- and po	consists of content that requires 45 hours o st-study (including assignments) is required	f stud to dee	y. Since the epen the un	class is for 30 derstanding of	hours, 15 hours worth of the class.
	ed Textbook ト)		•	d. Handout on the outline of internship will	be dis	tributed.		
Read	ing List(参考	文献)	Not specifie	d.				
Enrollm	ent Conditic 条件)		,	faculty supervisor and HIGO Administrative			•	
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 areas specified in the course objectives will be evaluated on the basis of a internship, active participation in presentations and discussions, as well a internship.					questions and a	answers during the		
	nguage Usec uction(使用		Japanese ar	apanese and English				
	tbook/Mate ge(教科書・資 語)		Combinatio	n of Japanese and English				
Work E	Based on P xperience(実 活かした授業	<b>ミ務経験</b>	Not applica	ble				

HIGO Overseas Internship 【24530】 ※Not offered

	Coding(科 ンバー)	Year/Se m(年	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	5	Eligible Student r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	153-99-1	2023	whole year	Graduate School of Medical Sciences (24670)		1	2	others	
		Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)	
		Н	IIGO Cutting-	Edge Seminar Series()			NISHINAKAN	1URA Ryuichi	
				Goals with their ratio(学修成果とそ	の割合	<b>)</b>			
1.Advanced expert knowledge, skill and research capability ····50% 2.Profound inter-disciplinary knowledge ··· and ability to take initiative action ····20% 4.Social leadership drive ····5%								% 3.Global perspective	
Type of	f Class(授業)	の形態)	Lecture						
Teachin	ng Method(挑 法)	受業の方		tend the seminars that are authorized by the the lectures and his/her own discussion ab ort.					
Course	eGoals(授業)	の目的)	practice con committed	Science is an interdisciplinary science that i nsists of lectures from researchers who work to cutting-edge research will be invited and to attend the seminars to acquire up-to-da	on he	ealth life sci nt latest dev	ence in Japan a velopments of t	nd overseas. Researchers heir own. Students are	
Course	Learning goa 目標)	als(学修	【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 th areas of me	e seminars may encompass full range of iss dical and pharmaceutical medicine.	ues tha	at are relate	d to health life	science, which covers all	
				Details for Individual Classes(各回の	授業内	]容)			
No.(回 )	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
1			participate	n the weekly seminars				conference room of ee the web for the details.	
Estim	ated out-of- study time	class	90 hrs						
Require	ed Textbook ト)	(テキス							
Readi	ing List(参考	文献)							
Enrollme	ent Conditic 条件)	ons(履修							
	ment Metho a(評価方法・		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.						
Lan Instru	nguage Used uction(使用言	t in 言語)	English						
Textbook/Material Language(教科書・資料の言 語)			Combination of Japanese and English						
Work Ex	Based on Pi xperience(実 活かした授う	〖務経験	Not applica	ble					

HIGO Cutting-Edge Research Project 【24690】 ※Not offered

	Coding(科 ンバー)	Year/Se m(年	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	-702-99-1	2023	intensive	Graduate School of Medical Sciences (24710)	1	, 2, 3, 4	1	others		
		Co	ourse Title(Th	eme)(科目名(講義題目))	•		Instructor(	s)(担当教員)		
	HIGO	Leadersh	ip Training	Course(Leadership training course)		MORIO		KOTA HARI, MITCHELL W NEIL		
	Goals with their ratio(学修成果とその割合)									
2.Profou ••40%	und inter-dis	ciplinary	knowledge	····20% 3.Global perspective and ability to	take i	initiative act	ion ••••40% 4.	Social leadership drive ••		
Туре о	f Class(授業)	の形態)	Seminar							
Teachir	ng Method(挑 法)	受業の方	Practice and	d small group discussions						
Course	e Goals(授業)	の目的)	Students wi social activi	ll learn self-leadership, team-leadership, gl ties.	obal le	adership an	d the practical	skills in business and		
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 [C level (C水準)] Students will learn self-leadership, team-leadership and global leadership through their theories and studies.						eir future actions.				
Course	Outline(授業	¢の概要)	Understand similar to th	the flow of leadership theory and the over at learned at MBA (business school), etc.	all pict	ure of leade	rship in a 3-day	y leadership program		
				Details for Individual Classes(各回の	)授業内	內容)				
No.(回 )	Date(月	3日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1			Leadership global leade	theory, self leadership, team leadership, ership	lead	ership, glob	dership theory, al leadership th Il group discus	self leadership, team prough lectures, case sions		
Estim	nated out-of- study time	class		consists of content that requires 45 hours orth of pre- and post-study (including assig						
Require	ed Textbook ト)	(テキス	World Class	Leadership (World Scientific)						
Read	ing List(参考	文献)	Not applicable.							
Enrollm	ent Conditio 条件)	ons(履修	Students are advised to read "World Class Leadership" beforehand.							
	ment Metho ia(評価方法 ·		Students will be evaluated according to their activities during the three-day leadership program (50%) and reports using e-portfolio (50%).							
Lar Instr	nguage Used ruction(使用	t in 言語)	English							
Textbook/Material Language(教科書・資料の言 語)			Combination of Japanese and English							
Work E	Based on P xperience(実 活かした授業	ミ務経験	Not applica	ble						

Course Cod 目ナンバ			emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	5	Eligible Student (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-142	2-99-1	2023v	vhole 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)	
	HIG	O Resear	ch presentat	ion(HIGO Research presentation)		OGAWA	Minetaro, DEV ANDRE	/KOTA HARI, MITCHELL EW NEIL	
				Goals with their ratio(学修成果とそ	の割合	ĵ)			
1.Advanced and ability to	expert k o take in	nowledg iitiative a	ge, skill and r ction ····20	esearch capability ·····30% 2.Profound inte % 4.Social leadership drive ····20%	er-disci	plinary kno	wledge ····30	% 3.Global perspective	
Type of Cla	ass(授業)	の形態)	Seminar						
Teaching M	ethod(搒 法)	受業の方		tend domestic or international conferences s presented by other researchers, students v al sessions.					
Course Goa	als(授業)	の目的)	discuss with capability to	process of conducting research on health li n other scientists at domestic and internatio o make a productive discussion on a subjec n findings in an effective manner at an acade	nal co t prese	nferences. T Inted by oth	This practice ai	ms at expanding	
Course Learning goals(学修 目標)			researchers 【C level (C Students ar	e expected to acquire skills to make a produ and to present and discuss their own findir	ngs in a ssion c	an effective on a subject	manner at an a	cademic conference.	
Course Outl	Course Outline(授業の概要)			tend domestic or international conferences s presented by other researchers, students v al sessions. The instructors listed above ap n. Students finally write a report that includ s. The reports should include summary of th made on them, and also the summary of th Although form and quantity are not specifie will be evaluated based on the reports.	vill pre propria es the le pres e stude	esent finding Itely support state of ach entations b ent's own p	gs obtained from t discussions a ievement of the y others togeth resentation tog	m their own research in nd preparations of e activities at the er with discussion that ether with discussion	
				Details for Individual Classes(各回の	授業内	容)			
No.(回 )	Date(月	日)		Class Theme(授業テーマ)		Bri	ef Outline of Cl	ass(内容概略)	
1			student's re	search theme	stud	ent's resear	ch theme		
Estimated stud	d out-of- dy time	class	30 hours						
Required Te	extbook ト)	(テキス							
Reading L	_ist(参考	文献)							
Enrollment (	Conditic 条件)	ons(履修							
Assessmen Criteria(評			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.						
Langua Instructio	Language Used in Instruction(使用言語)			English					
Language(教	Textbook/Material Language(教科書・資料の言 語)			English					
Course Base Work Exper を活か		務経験	Not applica	ble					

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

	Coding(科 ンバー)		emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	5	Eligible Student r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7	-152-99-1	2023v	vhole year	Graduate School of Medical Sciences (24665)	1	, 2, 3, 4	2	others	
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(	s)(担当教員)	
HIG	O Social and	l Cultura	Sciences tutorial(Giving advice to a student or a group of students) UENO Shinya, Andrew Mitche				itchell, KAWAMURA Yoko, o SASAKI Hazuk		
				Goals with their ratio(学修成果とそ	の割合	\$)			
1.Advan and abil	iced expert k lity to take in	nowledg iitiative a	ge, skill and r ction ••••20	esearch capability ····30% 2.Profound inte % 4.Social leadership drive ····10%	r-disci	iplinary kno	wledge ····40	% 3.Global perspective	
Туре о	f Class(授業)	の形態)	Other						
Teachir	ng Method(招 法)	受業の方	Giving advid	e to a student or a group of students					
Course	e Goals(授業)	の目的)	final report	, based on the knowledge of Social and Cult on a theoretical and /or practical problem c s more than 5000 words, and an abstract of	oncer	ning Social	and Cultural So	ciences. The volume of	
Course	Learning go 目標)	als(学修	students wi write a final 【C level (C Students wi	e knowledge of life and health sciences and I be able to accurately consider theoretical report that communicates the content of th	or pra eir stu	ctical issues Idy.	s related to soc	io-cultural sciences and	
Course	Outline(授業	の概要)	Giving advid	e 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)		Brie	ef Outline of Cl	ass(内容概略)	
1			social and c	ultural sciences tutorial	Exam	nination of t	he theme of th	e final report	
2			social and c	ultural sciences tutorial	Exam	nination of t	he theme of th	e final report	
3			social and c	ultural sciences tutorial	Exan	nination of t	he theme of th	e final report	
4			social and c	ultural sciences tutorial	Dete	rmination o	f the theme of	the final report	
5			social and c	ultural sciences tutorial		Advice on making the final report: Significance, Methodology			
6			social and c	ultural sciences tutorial		Advice on making the final report: :Data, literature collection			
7			social and c	ultural sciences tutorial	Advi	ce on makin	ig the final repo	ort: Structure of the whole	
8			social and c	ultural sciences tutorial	Advie chap		g the final repo	ort: Relationships among	
9			social and c	ultural sciences tutorial	Advi	ce on makin	ig the final repo	ort: Consistency	
10			social and c	ultural sciences tutorial	Advi	ce on makin	ig the final repo	ort: Originality	
11			social and c	ultural sciences tutorial	Maki	ing the man	uscript		
12			social and c	ultural sciences tutorial	Maki	ing the man	uscript		
13			social and c	ultural sciences tutorial	Maki	ing the man	uscript		
14			social and c	ultural sciences tutorial	Maki	ing the man	uscript		
15			social and c	ultural sciences tutorial	Com	pleting and	submitting the	final report	
Estim	nated out-of- study time	class	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.						
Require	ed Textbook ト)	(テキス	Textbooks a	are not specified, and handouts will be distri	buted				
Read	ing List(参考	文献)	Recommen	ded readings are not specified, but will be sເ	uggest	ed during t	he class.		
Enrollm	ent Conditic 条件)	ons(履修							
Assess Criter	ment Metho ia(評価方法・	ds and 基準)	Grading will be based on a final report.						
Lar Instr	nguage Usec ruction(使用言	l in 言語)	Japanese and English						
	ktbook/Mate ge(教科書・資 語)		Combination of Japanese and English						
Work E	Based on Pl xperience(実 活かした授業	系務経験	Not applica	ble					