For students admitted in 2023 and later The Graduate School of Medical Sciences Kumamoto University (Doctoral Course)

AY2025 Syllabus

Compulsory subjects and Elective subjects Page 3 ~ Page 50

- A1 Research Ethics and Biomedical Ethics
- B1 Pathophysiology and structural biochemistry of biomolecules
- B2 Cell Biology
- B3 Hematopoietic and Immune System
- B4 Infection and Immune Control
- B5 Neuroscience
- B7 Developmental and Regenerative Medicine
- B8 Environmental and Sociomedical Sciences
- B9 Medical Informatics, Emergency and Disaster Medicine
- C1 Current Theory of Medical Diagnosis
- C2 Advanced therapeutics
- C3 Metabolic and Circulatory Regulations
- C4 Reproductive and Developmental Medicine
- C5 Advances in Oncologic Medicine
- C6 The Forefront of Clinical Oncology
- C7 Restorative Medicine
- C8 Cancer therapeutics
- C10 The Theory of Clinical Research
- C11 Training of biostatistics in clinical study
- C12 Overview of clilnical study
- D1 Medical and Life science Seminar
- D2 Learning from Experienced Doctors Seminar
- D3 Medicine and Life Science Training
- D5 International Biomedical Research Seminars English (GSMS)

Practice (Jissen) I, II • Practice (Jissen) III Timetable Code List

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Course Work subject		•• Page 52 ~	Page 53
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Medical Experiment Course

Developmental Biology and Regenerative Medicine · · · Page 54 ~ Page 66

E1 Special Lecture "Tokuron" on Developmental Biology and Regenerative Medicine I

- E2 Special Lecture "Tokuron" on Developmental Biology and Regenerative Medicine II
- E3 Special Lecture "Tokuron" on Transplantation immunology
- E4 Special Lecture "Tokuron" on Bioethics

Practice "Enshuu" on Developmental Biology and Regenerative Medicine I

Practice "Enshuu" on Developmental Biology and Regenerative Medicine II

Practice "Enshuu" on Developmental Biology and Regenerative Medicine III

Practical Training "Jisshuu" on Developmental Biology and Regenerative Medicine

Educational Program for Advanced Research in Infectious Diseases

F1 Special Lecture I on Infectious Diseases and AIDS
F2 Special Lecture II on Infectious Diseases and AIDS
Training I on Infectious Diseases and AIDS
Practice I on Infectious Diseases and AIDS
Practice II on Infectious Diseases and AIDS
Practice III on Infectious Diseases and AIDS
Practice IV on Infectious Diseases and AIDS
Research on Infectious Diseases and AIDS
Special Research I on Infectious Diseases and AIDS
Special Research II on Infectious Diseases and AIDS

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Endocrinology and Metabolism Course	・・・・・Page 81 ~	Page 82
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Practical Training of Metabolic Medicine

Educational Program for extension of healty life expectacy

- G1 Special Lecture I on CMHA · · · · Page 83 ~ Page 103
- G2 Special Lecture II on CMHA
- Special Lecture on Bioethics

Special Practice

Practice I on CMHA

- Practice II on CMHA
- Practice III on CMHA

Compulsory subjects and Elective subjects

A1

B1~B9 • C1~C12 D1~D3 • D5

English (GSMS)

Practice (Jissen) I, II , III Timetable Code List

	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	igible udent 開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	-020-81-2	2025	whole year	Graduate School of Medical Sciences (26020)	1,	2, 3, 4	2	others	
Course Title(Theme)(科目名(講義題目))							Instructor(s)(担当教員)	
Res	earch Ethics	s and Bio	medical Ethi	cs(Doctoral Course A1 · Master's Course A	5)		KADOOK	A Yasuhiro	
				Goals with their ratio(学修成果とそ	の割合)			
1.Advan	iced expert l	knowledg	ge, skill and r	esearch capability ····50% 2.Profound inte	er-discip	linary kno	wledge ····50	%	
Туре о	f Class(授業)	の形態)	Lecture						
Teachir	ng Method(招 法)	受業の方	active learn	ing (discussion and presentation) and onlin	e learni	ng			
Course	e Goals(授業)	の目的)		aims to support students to have relevant k aduate research and future career.	nowled	ge and pra	ctical skills for	biomedical ethics in	
Course	Learning go 目標)	als(学修	interdiscipli 【C level (C	ethical issues in actual settings of biomedie nary discussion and moral reasoning			·		
Course	Outline(授業	(の概要)	eAPRIN onli Active leani decision-ma	ne program will be adopted to learn basic e ng methods will be adopted to gain skills fo sking.	element r ethica	s of resear l conduct o	ch ethics. of biomedical r	esearch and medical	
			- 	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			Posser-1-						
2			Research in			N online p	•		
			Research in			N online p	•		
3			Research in			N online p	0		
4			Research in	· ·	-	N online p	•		
5			Research et		eAPRIN online program				
6			Research et		eAPRIN online program				
7			Research ethics 3			eAPRIN online program			
8			Research et	hics 4	eAPRIN online program				
9	08/2	8	3rd period	Step-up lecture on research ethics 1	Active learning will be held. (The instructor will set a related topic. Students will audit a small lecture, dis and then make presentation or comment.)			it a small lecture, discuss	
10	09/0	4	3rd period	Step-up lecture on research ethics 2	Active learning will be held. (The instructor will set a related topic. Students will audit a small lecture, disc and then make presentation or comment.)			it a small lecture, discuss	
11	09/0	4	4th period	Step-up lecture on research ethics 3	Active learning will be held. (The instructor will set a related topic. Students will audit a small lecture, disc and then make presentation or comment.)			it a small lecture, discuss	
12	09/1	1	3rd period	Step-up lecture on research ethics 4	relate	d topic. St		e instructor will set a it a small lecture, discuss comment.)	
13	09/1	1	4th period	Step-up lecture on research ethics 5	relate	d topic. St	vill be held. (Th udents will aud presentation or	e instructor will set a it a small lecture, discuss comment.)	
14	09/1	8	3rd period	Medical ethics 1	relate	d topic. St	vill be held. (Th udents will aud presentation or	e instructor will set a it a small lecture, discuss comment.)	
15	09/1	8	4th period	Medical ethics 2	Active learning will be held. (The instructor will set a related topic. Students will audit a small lecture, discus and then make presentation or comment.)			it a small lecture, discuss	
Estim	nated out-of- study time	class	60 hours of	self-learning (out-of-class study) is recomm	iended i	in addition	to 30-hours le	cture (2hrs X 15 times).	
Require	ed Textbook ト)	(テキス	NA						
Principles of Biomedical Ethics. Beauchamp TL and Childress JF. OXFORD University Press. Bioethics Briefings. The Hastings Center. https://www.thehastingscenter.org/publications-resources/hacenter-bioethics-briefings/ Responsible Conduct of Research. Shamoo AE and Resnik DB. OXFORD University Press. The Oxford Textbook of Clinical Research Ethics. Emanuel EJ, Crady C et al eds. OXFORD University Press. Medical Ethics Today. British Medical Association Ethics Department. Wiley-Blackwell. Resolving Ethical Dilemmas A Guide for Clinicians. Lo B. LWW.						ns-resources/hastings- 5.			
Enrollm	ent Conditic 条件)	ons(履修	Participatin	g students are recommended to have basic	knowle	dge life-sc	iences.		
	ment Metho ia(評価方法・			e evaluated for their grades and credits bas abilities of discussion and ethical reasonin		ne course ł	nours complete	d, understanding of each	
Lar Instr	nguage Usec ruction(使用	t in 言語)	Japanese ar	nd 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)		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	-021-79-2	2025v	vhole year	Graduate School of Medical Sciences (26030)	1,	, 2, 3, 4	1	others		
Course Title(Theme)(科目名(講義題目)) Instructor(s)(担当										
Patho	Pathophysiology and Structural Biochemistry of Biomolecules (For students admitted in 2023 and later)(B1) ARIMA Yuichiro, YAMAGATA Kazuya, TAKAHA Yuta, BABA Masaya, MIHARADA Kenichi									
	Goals with their ratio(学修成果とその割合)									
1.Advan and abi	1.Advanced expert knowledge, skill and research capability ····30% 2.Profound inter-disciplinary knowledge ····30% 3.Global perspective and ability to take initiative action ····30% 4.Social leadership drive ····10%									
Туре о	Type of Class(授業の形態) Lecture									
Teachir	ng Method(挑 法)	受業の方	PowerPoint	will be used in the lectures, and active part	icipatio	on in the di	scussion is enc	ouraged.		
Course	e Goals(授業)	の目的)								
Course	Learning go 目標)	als(学修	clinical app 【C level (C	nd the detailed findings of the structure, fu lication of biomolecule, and to be able to a 水準)] ind the structure, function, physiological rol	oply th	em to the s	tudy.			
Course Outline(授業の概要) (1) You will learn the mechanism for regulating metabolism and its signaling cascades. (2) You will learn fundamental metabolic pathways under normal conditions and its relationship to pathology. (3) The ob this course is to understand diseases caused by epigenomic abnormalities. (4) You will learn how quant quality of functional proteins is maintained at the desired levels, and molecular mechanisms of unfolded response. Furthermore, you will learn how its disruption is implicated in various diseases. (5)You will learn of hypoxia signaling pathway, mTOR signaling pathway in diseases							logy. (3) The objective of learn how quantity and isms of unfolded protein			
				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			ARIMA Yuic	hiro [eEJ-0]	Patho	ophysiology	y of cardiovascı	ular diseases (1)		
2			ARIMA Yuic	hiro [eEJ-0]	Path	ophysiology	y of cardiovascı	ular diseases (2)		
3			YAMAGATA	Kazuya [eEJ-0]	Patho	ophysiology	y of glucose/lip	id metabolism (1)		
4			YAMAGATA	Kazuya [eEJ-0]	Patho	ophysiology	y of glucose/lip	id metabolism (2)		
5			TAKAHASH	Yuta [eEJ-0]	Epige	enomic Abr	normalities in D	isease		
6				Kenichi [eEJ-0]	Prote	ein quality o	control and its a	abnormality		
7				Kenichi [eEJ-0]	Roles	s for materr	nal metabolism	in fetal development		
8			BABA Masa	ya [eEJ-0]	Нурс	oxia/mTOR	signaling pathv	vay and disease		
Estim	nated out-of- study time	-class								
Require	ed Textbook ト)	(テキス	Textbooks a	re not specified, and handouts will be distri	ibuted	in some cla	asses.			
Read	ling List(参考	文献)	Companies.	llustrated Biochemistry" by Robert K. Murr 2016 k of Lipoprotein Testing" by Nader Rifal et		-		odwell, The McGraw-Hill		
Enrollm	nent Conditio 条件)	ons(履修								
	ment Metho ia(評価方法,		The student select one a	rs' understanding will be evaluated compreh rea from all attended courses and submit it	nensive s repo	ely based or rt to the Stu	n the quality of udent Affairs Se	report. Students must		
Lar Instr	nguage Usec ruction(使用	d in 言語)	Japanese ar	nd English						
Textbook/Material Language(教科書・資料の言 語)										
Work E	e Based on P Experience(実 と活かした授業	€務経験	Not applica	ble						

	Coding(科 ンバー)	Year/Ser m(年序	mester/Ter 麦・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)
RDM7-0	002-79-2	2025w	hole year	Graduate School of Medical Sciences (20030)	1	, 2, 3, 4	2	others
		Cou	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)
			Cell	Biology(B2)		Yusuke	Ono, Satoshi T	to Tomizawa, Miki Bundo, Tateishi, Shinjirou Hino, iki Koga, Yuta Takahashi
				Goals with their ratio(学修成果とそ	その割合	- 		
1.Advanc and abilit	ed expert k ty to take in	nowledge itiative ac	e, skill and r ction ・・・・5%	esearch capability ····75% 2.Profound inte	er-disc	iplinary kno	wledge ····20	% 3.Global perspective
Type of	Class(授業)	の形態)	Lecture					
Teaching	g Method(搒 法)	受業の方	E-learning l	ecture				
Course (Goals(授業)	の目的)	The student	s understand the various biological phenor disorders, molecular genetics, and stem cel	mena s Ils base	uch as deve ed on cellula	elopment/reger ar functions.	neration, cancer, aging,
Course Lo	earning goa 目標)	als(学修	aging, psych understand [C level (C The student	s can understand the various biological ph natric disorders, molecular genetics, and st and discuss the latest topics.	em ce	lls at the mo	lecular level. Ir g development	addition, they can
Course O	Dutline(授業	[の概要)	The topics of genetics, an on their spe	of this course include development/regene d stem cells. The teachers give lectures on cialty.	ration, basic	cancer, agiı knowledge a	ng, psychiatric and current sta	disorders, molecular tus of each topic, based
				Details for Individual Classes(各回の)授業内	3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	ulation in ph	ysiology and p	athophysiology
2			Kazuhito To	mizawa 【eE-0, eJ-0】	Reg	ulation by pr	rotein phospho	rylation
3			Shinjiro Hin	o【eE-0, eJ-0】	Cros	s talk betwe	en metabolism	and epigenome
4			Yusuke Onc	eE-0, eJ-0]	Sten	n cells and t	issue regenerat	ion/adaptation l
5			Yusuke Onc	eE-0, eJ-0]	Sten	n cells and t	issue regenerat	ion/adaptation II
6			Yutaka Naka	achi【eE-0, eJ-0】	Oste	oblasts and	Osteoclasts I	
7			Yutaka Naka	achi 【eE-0, eJ-0】	Oste	oblasts and	Osteoclasts II	
8			Miki Bundo	[eE-0, eJ-0]	Sing	le cell analy	sis of brain fun	ctions
9			Yuta Takaha	ashi [eEJ-O]	Epig	enetic regul	ation in embry	onic development
10			Tomoaki Ko	ga [eEJ-O]			ost biological d	
11			Kazuya lwar	noto【eE-0,eJ-0】	Neu	roepigenetio	cs I	
12			Kazuya lwar	noto【eE-0, eJ-0】	Neu	roepigenetio	cs II	
13			Satoshi Tate	eishi 【eEJ-0】	Cell	growth and	cell cycle	
14			Satoshi Tate	eishi 【eEJ-0】	Abo	ut Mitosis ar	nd Meiosis	
15			Satoshi Tate	eishi 【eEJ-0】	DNA	repair and	recombination	
	ated out-of- study time	class	This course consists of content that requires 90 hours of study. Since the class is 30 hours, 60 hours of pre- and post-study (including assignments) is necessary to understand the class.					
Required	d Textbook ト)	(テキス	Not specified.					
Readin	ng List(参考	文献)	Not specified.					
Enrollme	nt Conditic 条件)	ons(履修	Should have	e the basic knowledge of cell biology.				
	nent Metho a(評価方法・	us anu 其淮)	Grading will be based on the understanding of the course subject matter. The understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions.					
	guage Used ction(使用言		Japanese ar	nd English				
	book/Mate e(教科書・資 語)		Combination of Japanese and English					
Work Exp	Based on Pi perience(実 舌かした授う	務経験	Not applica	ble				

	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 r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7	-003-79-2	2025	vhole year	Graduate School of Medical Sciences (20040)	1	, 2, 3, 4	2	others	
		Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)		
Н	ematopoieti	c and Im	mune Systen	ns(B3 Hematopoietic and Immune Systems)		SATO Yo OGAWA	orifumi, OSHIUN A Minetaro, IRIE	Hiroto, SASHIDA Goro, /II Hiroyuki, KOGA Saori, Atsushi, SUZU Shinya, , NOMURA Takushi	
				Goals with their ratio(学修成果とそ	の割合				
1.Advar	nced expert l	knowledg	ge, skill and r	esearch capability ····35% 2.Profound inte	er-disci	iplinary kno	wledge ····35	% 3.Global perspective	
				% 4.Social leadership drive ····10%					
	of Class(授業 ng Method(挑		Lecture						
Teachin	ing Method(<u>f</u> 法)			cures. E-learning contents are available in s			<u> </u>	-	
Course	e Goals(授業	の目的)	The goal of these syster	this lecture series is to understand the basi ns (malignancy, immunodeficiency, and im	s of he nune c	matopoietic lisorders).	c and immune s	systems, and disruption of	
Course	Learning go 目標)	als(学修	related dise 【C level (C	the basics of hematopoietic and immune s ases and discuss about recent progress. 水準)】 the basics of hematopoietic and immune s					
Course	Outline(授業	きの概要)	 The mec The orig The anir Aging ar Cell-cell 	this lecture series are to understand the fo hanisms how the homeostasis of hematopo in of hematopoietic system and the mechan nal model bearing human hematopoietic sy id tumorigenesis of hematopoietic system, interaction in the immune system, hanism of antigen-recognition and the imm	pietic s nisms c stem a	ystem is ma of developm nd applicat	ent of hematop	poietic stem cells,	
			•	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			Minetaro O	gawa [eJ-0]	Onto	geny of her	tem-1		
2				gawa [eJ-0]	Onto	geny of her	natopoietic sys	tem-2	
3			Saori Koga	-	Onto	geny of her	natopoietic sys	tem-3	
4			-	[eJ-0,eE-0]	-	• •	of immune cells		
5				[eJ-0,eE-0]	Appl	ication of H	umanized mice		
6			Goro Sashio		<u> </u>			id malignancies	
7			Shinya Suzu	(eEJ-0)	-		ematopoiesis	0	
8				zawa [eE-0]			ation on hemat	opoiesis	
9			Yorifumi Sa		T-ce	ll and retrov	viral infection		
10			Hiroto Ohgu	uchi [eEJ-0]	Mole	cular patho	genesis of plas	ma cell neoplasm	
11			Hiroyuki Os		Role	of innate in	nmune cells du	ring viral infection	
12				mura [eEJ-0]			analysis for T-c	5	
13			Hiroyuki Os		Deve	elopment ar	nd function of ir	nate lymphoid cells	
14			Takushi Noi	mura [eEJ-0]	T-ce	II responses	in SARS-CoV-2	2 infection	
15			Atsushi Irie	[eJ-0]	B ce	ll developm	ent and functio	'n	
Estim	nated out-of- study time	-class			•				
Require	ed Textbook ト)	(テキス	Textbooks are not specified, and handouts will be distributed.						
			 "The Immune System" by Peter Parham. Garland Publishing Inc. New York and London, 2007 "Janeway's Immunobiology Seventh Edition" by Kenneth Murphy, Paul Travers, Mark Walport. Garland Science, Taylor & Francis Group LLC. New York and Abingdon, 2008. • The Immune System, 4th Edition [Peter Parham] Garland Science • WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues. WHO, 2017. • The Science of Stem Cells. Jonathan M. W. Slack. Wiley Blackwell, 2018 • Williams Hematology, 9th ed. MCGRAW-HILL EDUCATION. 2016 						
Enrollm	ient Conditio 条件)	ons(履修							
	ment Metho ia(評価方法)		will be spec matter. The grades will l	nt of the Objectives will be evaluated by act ified 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 on t on the	he student's basis of the	s understanding reports and br	g of the course subject ief examinations. Final	
Lar Instr	nguage Usec ruction(使用)	t in 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)	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-	-004-99-2	2025whole year		Graduate School of Medical Sciences (20050)	1,	, 2, 3, 4	2	others		
Course Title(Theme)(科目名(講義題目))							Instructor(s)(担当教員)		
Infection and Immune Control(B4 Infection and Immune Control) KUBOTA Ryu MOTOZONO Shinya, NAK								Takeo, IKEDA Masanori, Seiji, OSHIUMI Hiroyuki, SAWA Tomohiro, SUZU omo, IKEDA Terumasa, SUNAGA Jyunichirou, Kazuaki		
				Goals with their ratio(学修成果とそ	の割合	î)				
1.Advan and abil	nced expert k lity to take ir	nowledg	e, skill and r ction ••••20	esearch capability ·····30% 2.Profound inte % 4.Social leadership drive ····20%	r-disci	plinary kno	wledge ····30	% 3.Global perspective		
Type o	of 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 res are considered for those who are regular ents will be informed of the individual lectu	ly abse	ent for unav	oidable reason			
Course	e 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	isease: (3) imi) diagn	s: (1) intera mune contr losis and tre	ction between ol and vaccine eatment of eme	pathogen and host research, (4)		
Course Learning goals(学修 目標) [A level (A水準)] Students will learn following topics important for basic and clinical research of infectious diseases. (1) interaction b pathogen and host response, (2) molecular pathogenesis of viral infection, (3) immune control and vac research, (4) management of nosocomial/opportunistic infection, (5) diagnosis and treatment of emer 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) interaction between ontrol and vaccine				
Course	Outline(授業	(の概要)	(including g and prevent protective in as the mech	addresses the introduction (bacteriology, vi gram-positive and negative bacteria, a DNA of tion of infectious diseases and emerging and mmunity of host against infectious diseases nanism of T-cell recognition of the viral antig nd the strategy for the development of effec	or RNA d reem includ gens, d	viruses) foo erging infeo ing HIV-1 ir ifferentiatio	cusing on topic ctious diseases ifection. Espect on of immune co	s of pathogenesis, control The course addresses ally, recent topics such ells from hematopoietic		
				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			Terumasa Ik	keda [eE-O]	Retro	ovirus life cy	vcle			
2			Tomohiro S	awa 【eE-O】	Bacte	erial infection	on and pathoge	enesis		
3			Hiroyuki Os	hiumi 【eE-O】	Innat	te immune i	responses to pa	ithogens		
4			Chihiro Mot	tozono [eE-O]	Cellu	ılar immune	e responses to p	oathogens		
5			Takeo Kuwa	ata [eE-O]	Hum	oral immun	e responses to	pathogens		
6	06/3	0	5th period(16:45~18:15) Kazuaki Monde【eE-O】	Adap	tive evoluti	on of viral gene	2S		
7	07/0	7	5th period(O]	16:45~18:15) Jyunichirou Yasunaga 【eE-	Emer	rging/re-em	erging infection	us diseases		
8			Shinya Suzu	ı [eE-O]	Retro	oviruses-hos	st interaction			
9			Yorifumi Sat	to [eE-O]	Retro	oviral infect	ions and latenc	у		
10			Masanori Ik	eda 【eE-O】	Mole	cular patho	genesis of hep	atitis viruses		
11			Yasuhito Ta	naka [eE-O]	Нера	atitis viruses	and Liver cand	cer		
12			Ryuji Kubot	a [eE-O]	Virus	us-induced neurological diseases				
13			Seiji Okada			mal model research in infectious diseases				
14	L			atsui [eE-O]				r infectious diseases		
15 Hirotomo Nakata [eE-O] Nosocomial/opportunistic infection										
	nated out-of- study time	class	• This cour	se consists of content that requires hours (hours of pre- and post-study (including ass	90 hou	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.					
Read	ing List(参考	文献)	"Atlas of A "Infectious	IDS" edited by Gerald L. Mandell and Donr Diseases and Medical Microbiology" 2nd	na Milo Editior	dvan. Currei n, Abraham	nt Medicine, In I. Braude et al.	c. Philadelphia, 2001. , W.B. Saunders Company		

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

ļ I	vhole year			(開講年次)	数)	日・時限)	
Co		Graduate School of Medical Sciences (26040)	1	, 2, 3, 4	2	others	
	ourse Title(Th			Instructor(s)(担当教員)		
Neuroscience	e (For studen	ts admitted in 2023 and later)(B5)		Chitoku, BUNI TAKEBAY Shigeyuki	, SHIODÁ Norifu DO Miki, Sou Bu ASHI Minoru, H i, UEDA Mitsuh	ZUNO Hidenobu, TODA umi, SHIMAMURA Kenji, unketsu, ERA Takumi, IATAKEYAMA Jun, ESUMI aru, TAKEMOTO Makoto, , NAKACHI Yutaka	
		Goals with their ratio(学修成果とそ	の割合	;)			
1.Advanced expert knowledg and ability to take initiative a	ge, skill and r	esearch capability ····60% 2.Profound inte 6 4.Social leadership drive ····5%	er-disci	plinary kno	wledge ····309	% 3.Global perspective	
Type of Class(授業の形態)	Lecture						
Teaching Method(授業の方 法)	Mainly by e	learning					
Course Goals(授業の目的)	Understand for treatmer	the sturucture and function of brain, highe nt.	r funct	ions, neuro	psychiatric disc	orders and the methods	
Course Learning goals(学修 目標)	disorders ar 【C level (C Students ca the method	n explain and understand the sturucture an nd the methods for treatment. 水準)] n understand the sturucture and function o s for treatment.	f brain	, higher fun	ctions, neurops	sychiatric disorders and	
Course Outline(授業の概要)	The lecture functions. n	rs will teach about general introductions to europsychiatric disorders and the methods	the stu for tre	aructure and atment.	d function of br	ain, neurocircuit, higher	
		Details for Individual Classes(各回の					
No.(回 Date(月日)		Class Theme(授業テーマ)			ef Outline of Cla	ass(内容概略)	
1	Shigeyuki E	sumi (eEJ-0)	Neur		ity contributes	to establishing neuronal	
2	Jun Hatakey	rama (eEJ-0)	Human brain development: How is brain devel humans and mice different?			w is brain development in	
3	Kenji Shima	mura (eE-0)	Regi prim	onalization ordium	and histogenes	is of the brain	
4	Hidenobu N	1izuno (eEJ-0)	Post	Postnatal development of the somatosensory cortex			
5	Bunketsu So	ou (eEJ-0)	Hear	ing and hea	aring loss	·	
6	Makoto Tak	emoto (eEJ-0)	Neur	oscience of	femotions		
7	Chitoku Too	la (eE-0)	Neur	onal circuit	to regulate fee	ding behavior	
8	Takeshi Chu	ujo (eEJ-0)	RNA disea		molecular fund	ctions and related	
9	Minoru Take	ebayashi (eJ-0)	Mole	cular basis	of mood disorc	lers	
10	Kazuya Iwar	noto (eE-0)	Gene	etics and ep	igenetics of psy	ychiatric disorders	
11	Miki Bundo	(eE-0)	Som	atic mutatio	ons and psychia	tric disorders	
12	Mitsuharu L	Jeda (eEJ-0)	Path disea	ogenesis of ase-modifyiı	intractable neung therapies	urological diseases and	
13	Yutaka Naka	achi (eEJ-0)	Sexu	al differenti	ation of the bra	ain	
14	Takumi Era	(eJ-0, eE-0)		medical ap m using ste		eases of the nervous	
15	Norifumi Sh	ioda (eE-0)	The targe	potential of et for neurol	nucleic acid st ogical diseases	ructures as a therapeutic	
Estimated out-of-class study time	This course hours of pre	consists of content that requires 90 hours o and post-study is necessary.	of stud	y. Since cla	ss is 30 hours (2 hours X 15 times), 60	
Required Textbook(テキス ト)	Not specifie	Not specified.					
Reading List(参考文献)	Not specifie	Not specified.					
Enrollment Conditions(履修 条件) none							
Assessment Methods and Criteria(評価方法・基準) Based on the scores of quizzes reated to the topics. Final grades will be out of 15 quizzes.					nade by averag	ing the 10 highest scores	
Language Used in Instruction(使用言語)	Japanese ar	nd English					
Textbook/Material Language(教科書・資料の言 語)							
Course Based on Practical Work Experience(実務経験	Not applica	ble					

	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-	-007-79-2	2025v	vhole year	Graduate School of Medical Sciences (20080)		, 2, 3, 4	2	others	
		Co	urse Title(Th	eme)(科目名(講義題目))	•		Instructor(s)(担当教員)	
Developmental and Regenerative Medicine(B7) Hitoshi, OKI Shinya, ESUMI Shi KOBAYASHI Akio								NAKAMURA Akira, ERA shi, ONO Yusuke, NIWA a, ESUMI Shigeyuki, aichi, ARIMA Yuichiro,	
				Goals with their ratio(学修成果とそ	の割合	<u></u>)			
and abil	lity to take ir	nitiative a	e, skill and r ction ····20	esearch capability ····50% 2.Profound inte % 4.Social leadership drive ····5%	r-disci	iplinary kno	wledge ····25	% 3.Global perspective	
	of Class(授業)		Lecture						
Teachin	ng Method(挑 法)	受業の方	PowerPoint encouraged	will be used in the lectures, and active parti	icipati	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 it. In this course, you learn basic concepts a now become essential for any area of resear ntal and Regenerative Researcher Program, ntial knowledge on genetic engineering tech	nd teo rch. Th and w	chniques us his course s rill 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 filed based on the knowledge.					
Course	Outline(授業	の概要)	in vitro ferti nuclear trar stem cells; (ment and application of stem cells includin ization, freezing of embryos and sperms, em sfer; (3) Genome editing technology and k 5) Placental development; (6) Organ develo ron, gonad, heart and vasculature; (7) Rege	nbryo nocko opmen	transfer, int out mice; (4) it and diseas	racytoplasmic s) Maintenance se including the	sperm injection, and and differentiation of	
				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			Ryuichi NIS	HINAKAMURA [eE-0]	Over	view & Kidr	ney developmer	nt	
2			Toru TAKEC	[eE-0]	Repr	productive engineering			
3			Taichi NOD	4 [eE-0]		eration of ge ication	enetically modi	fied mice and their	
4			Hitoshi NIW	A [eE-0]	Mole	ecular basis	of embryonic s	tem cells I	
5			Hitoshi NIW	A [eE-0]	Mole	ecular basis	of embryonic s	tem cells II	
6			Takumi ERA	[eE-0]	iPS c	ells, their a	pplications for	the medicine	
7			Hiroaki OKA	E [eE-0]	Preg	nancy in ma	ammals		
8			Shinya OKI	[eE-0]	Bioir	nformatics in	n development	al biology	
9			Yasushi YAE	UKI [eE-0]	iPS c	cells and ne	urodegeneratio	on	
10			Shigeyuki E	sumi [eE-0]	Anat	omy of dige	stive tracts and	lung	
11			Akio KOBAY	ASHI [eE-0]	Deve	elopment of	the urogenital	system	
12			Yusuke ON) [eE-0]	Muse	cle develop	ment and reger	neration	
13			Akira NAKA	MURA [eE-0]	germ	n cell format	tion: preformati	ion and epigenesis	
14			Keiichiro IS	HGURO [eE-0]	germ	n cell develo	pment in mam	mals	
15			Yuichiro AR	MA [eE-0]		rentiation, l t and Blood		d Regeneration of the	
Estim	nated out-of- study time	class	60 hrs						
Require	ed Textbook ト)	(テキス							
Read	ling List(参考	文献)	 "Developmental Biology, 12th edition" by Barresi MJF& Gilbert S 2019. "Essential Developmental Biology, 4th edition" by Slack JMW &Dale L.,Blackwell Publishing 2021 "Manipulating the Mouse Embryo: A Laboratory Manual, 4th edition" by Nagy A., Gertsenstein M., Vintersten K., Behringer R., Cold Spring Harbor Laboratory Press, 2014. "Larsen' s Human Embryology, 5th edition" by Shoenwolf GC, Bleyl SB, Brauer PR, Francis-West PH. Churchill Livingstone, 2014. 						
		Enrollment Conditions(履修							
Enrollm	ent Conditio 条件)	ons(履修							
Assessi		ds and	in class to b	s' understanding will be evaluated on the ba e scored from 0 to 100. Final grades will be inal report and active participation in class o	based	d on the ave	l quizzes relate erage score of t	d to the topics dealt with he papers and quizzes, as	

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

	e Coding(科 -ンバー)	Year/Ser m(年度	mester/Ter ξ・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	M7-008-81-2 2025		hole year	Graduate School of Medical Sciences (20090)	1, 2, 3, 4	2	others	
		Cou	urse Title(Th	eme)(科目名(講義題目))		Instructor(s)(担当教員)	
		Environ	mental and	Sociomedical Sciences(B8)		lisamitsu, Masu	ihiko, SOEJIMA Hirofumi, da Shota, Katou Takahiko, ı 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	knowledge nitiative ac	e, skill and rection ••••10	esearch capability ····25% 2.Profound inter % 4.Social leadership drive ····40%	r-disciplinary kno	owledge ····25	% 3.Global perspective	
Туре о	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, and so rvideo lectures are considered for those	d active participa who are regularl	ation in the disc y absent for una	ussion is encouraged. avoidable reasons.	
Course	e Goals(授業	の目的)	The purpose preventive a neuropsych	e of this course is to develop the logic of the and environmental medicine (hygiene), publi iatry.	broad field of S ic health, health	ocial Medicine f medicine, foren	from the viewpoints of asic medicine and	
Course Learning goals(学修 目標)			medicine ar medical soc students are medical car	cine is an important field of medical science ad society in the human life cycle. The health ial application, it is also supported by the co e expected to understand the relationship be e service including disease prevention & hea Il also comprehensively learn the role of med	n of the humans omprehensive he etween the envir alth promotion, a	is regulated in t ealth and welfare onment and he and 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)	There will be practical lectures in the Department of preventive and environmental medicine (hygiene) on th structure of the environment, the relationship between people and the environment, environmental indices a evaluation, and the setting and maintenance of environmental standards, and lectures in the Department of Public Health on the concept of health and the construction of a healthy society based on preventive medici and epidemiology. In the Department of Forensic Medicine, there will be general lectures on the purposes or forensic medicine, as well as the causes of the death and its classification from the medical, legal and social perspectives, and forensic medicine's contribution to society. In the Department of Clinical Behavioral Medicine, students will learn about the epidemiology of mental diseases and the relationship between life-events, social support, personality, recognition pattern, nurture experience and mental disease.					
				Details for Individual Classes(各回の	授業内容)			
No.(回)	Date(月	3日)	Class Theme(授業テーマ) Brie			ief Outline of Cl	ass(内容概略)	
1		·	Takahiko Ka	toh 【eE-0, eJ-0】	Public health : Meaning of social medicine			
2			Takahiko Ka	toh 【eE-0, eJ-0】	Public health : Epidemiology			
3				omori [eEJ-0]	Public health :	ing		
4			Rie Sano 【e		Definition and	purpose of forer	nsic medicine	
5			Rie Sano 【e			ine & forensic s		
6			Rie Sano 【		· · · ·	f human death ((1)	
7			XiLu (eE-0		Medical Statisti			
8			Xi Lu 【eE-0			n of Epidemiolo		
9 10			Rie Sano	ejima (eE-0, eJ-0)		f human death (
11			Kunihiko Ma	· -	General Medici		dies, interpretation for	
					results	Soto of at-t' ''	of a population in 1	
12 13			Shota Masu Shota Masu		Public Health	Social Security	of a population in Japan System and Medical	
					Insurance Syste	•		
14				ejima [eE-0, eJ-0]		tion and Fibrioly		
15 Estim	ated out-of-		nirofumi So	ejima【eE-0, eJ-0】	Lifestyle and Co	oronary Artery D	nsease	
Louin	study time	01035						
Require	ed Textbook ト)	(テキス	Textbooks a	re not specified, and handouts will be distri	buted.			
Read	ling List(参考	文献)	 "Public "Forens 	Health & Preventive Medicine" by Maxy-Ro ic Pathology" by Bernard Knight, 2nded, A	senan-Last: (14 Arnold, London, S	edit) Appleton & Sydney and Auc	& Lange. 1998, kland, 1996.	
Enrollm	ient Conditio 条件)	ons(履修						
	ment Metho ia(評価方法・	ods and · 基準)	Grading will be based on active class participation, paper summaries, and the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions					
			Final grades discussions	s will be based on the average score of the p	apers and quizze	es as well as par	ticipation in class	

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

	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)	S	Eligible itudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7	-000-81-2	-2 2025whole year		Graduate School of Medical Sciences (26050)	1,	, 2, 3, 4	1	others	
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)	
				saster Medicine (For students admitted in 2 Informatics, Emergency and Disaster Medi		KASAOK	A Shunji, IRIE H	liroki, NAKAMURA Taishi	
				Goals with their ratio(学修成果とそ	の割合)			
1.Advan and abil	nced expert k lity to take ir	nowledg itiative a	e, skill and r ction ••••25	esearch capability ····25% 2.Profound inte % 4.Social leadership drive ····25%	er-disci	plinary kno	wledge ····25	% 3.Global perspective	
	of Class(授業)		Lecture						
Teachir	ng Method(挑 法)	受業の方		or face-to-face classes, using PowerPoint ar		•		•	
Course	e Goals(授業)	の目的)		ormatics, Emergency and Disaster Medicine dicine, which requires a holistic approach,					
Course	Learning go 目標)	als(学修	details. 【C level (C	medical informatics, emergency medicine,					
Course	Outline(授業	の概要)	information In Emergen	nformatics, students learn about medical ir coordination in emergency and disaster sit cy Medicine, students learn about the emer Medicine, students learn about medical res ome.	uations gency	s. medical sys	tem and initial	trauma care.	
				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	06/1	1	NAKAMURA Introduction [eJ-L]	Taishi n to Medical Informatics		Medical Information Systems and Information Processing			
2	06/1	8	NAKAMURA Regional Me [eJ-L]	Taishi edical Cooperation	Community Healthcare Visions and Medical Inform Aggregation for Emergency Disaster Situations				
3	06/2	5	NAKAMURA Vision 2030 【eJ-L】		Data-based Health Management Initiatives; KMN a Healthcare DX promotion			nt Initiatives; KMN and	
4	07/0	2	KASAOKA S Post-Cardia 【eJ-L】	hunji c Arrest Syndrome	Post-Cardiac Arrest Syndrome, Cardiopulmonary Resuscitation			Cardiopulmonary	
5	07/0	9	KASAOKA S Disaster Me 【eJ-L】		Disaster Medicine (General), Triage			iage	
6	07/1	6	KASAOKA S Disaster Me 【eJ-L】		Disaster Medicine (Details), Natural Disasters and Human Damage		Damage		
7	07/2	3	IRIE Hiroki Emergency 【eJ-L】	Medical Care System		ities of Para lospital	amedics and the	e Acceptance System in	
8	07/3	0	IRIE Hiroki Emergency 【eJ-L】	Medicine	Initia	l Trauma C	are		
Estim	nated out-of- study time	class	This course requires 45 hours of study, 12 hours of classroom work, and 33 hours worth of pre- and post-work in assignments and other activities to deepen understanding of the course.						
Require	ed Textbook	(テキス	No particular designation will be made, but materials summarizing the main points of the lecture will be distributed via moodle.						
Read	ling List(参考	文献)	This will be	introduced as appropriate during the lectu	re.				
Enrollm	ient Conditic 条件)	ons(履修	Nothing in p	particular					
	ment Metho ia(評価方法・		The level of participatio during the l	understanding of the matters listed in [Pur _l n will be comprehensively evaluated based ecture, and a report on the theme to be pre	oose of on the sented	the class] a students' e after the le	and the status o fforts in the lec ecture, etc.	of E-Learning ture, the Q&A session	
Lar Instr	nguage Usec ruction(使用	l in 言語)	Japanese						
	ktbook/Mate ge(教科書・資 語)		Japanese						
Work E	Based on P xperience(実 :活かした授業	務経験		Teachers with expertise in hospital informa tures in their areas of responsibility.)	tion sy	stems, eme	rgency medicir	ne, or disaster 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)	9	Eligible Student r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	-009-82-2	2025v	vhole year	Graduate School of Medical Sciences (20100)	1	, 2, 3, 4	2	others	
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)	
C	urrent Theor	ry of Med	ical Diagnos	is(C1 Current Theory of Medical Diagnosis)		Hirotaka, (Shinya, K Jiyouno Hi	GOTO Hiroki, K OMOHARA Yo irofumi, SHINR	AMI Yoshiki, MATSUI OJIMA Akihiro, SHIRAISHI shihiro, UEDA Mitsuharu, KI Satoru, Misumi Youhei, SATO Yonosuke	
				Goals with their ratio(学修成果とそ	の割合	5)			
1.Advan	iced expert k	nowledg	e, skill and r	esearch capability ····45% 2.Profound inte 6 4.Social leadership drive ····5%	er-disci	iplinary kno	wledge ····45	% 3.Global perspective	
	of Class(授業)		Lecture	4.Social leadership drive ·····5%					
	ng Method(拐			files will be used for giving the lectures, and	d activ	e participati	ion in the discu	ission is encouraged.	
	送法)		Extra classe	s or video lectures will be considered for th	ose wł	no are regul	arly absent due	e to unavoidable reasons.	
Course	e Goals(授業)	の目的)	modern me	series "Current Theory of Medical Diagno dical diagnostic techniques and their applic	sis"a [:] cation	fford fundar in practical	mental and cur medicine and i	rent general views of medical research.	
Course	Learning goa 目標)	als(学修		水準)] e expected to understand cutting-edge adv find devise a method to discover unsolved				osis. Students are also	
			【C level (C Students ar	水準)】 e also expected to find devise a method to	discov	er unsolved	problems and	lead to solutions.	
Course	Outline(授業	の概要)	addition, me coagulation In the field of databases in currently be In the field presented. In the field RI molecula	of Pathology, current morphology and its ap olecular approaches for a research in cance system and immune reaction (especially on of laboratory medicine, we will outline advan in the post-genome era, and introduce the b sing practiced. of Radiology, detailed implication of CT and of Isotope Science, basic research such as r imaging and nuclear medicine treatments of Neurology, recent advances in the neuro	er cell on macr nced co basics a d MRI i SPECT are ou	differentiation ophage) wil liagnostic a and practice images and and immur and immur utlined.	on, proliferation I be shown. pproaches thro ss of "cancer ge their application no-PET using m	n and invasion, blood ugh genome analysis and nomic medicine" that are on for researchers will be ouse models, as well as	
			In the held t	Details for Individual Classes(各回の			viii be given to	the students.	
No.(回									
)	Date(月	日)		Class Theme(授業テーマ)	Brief Outline of Class(内容概略)				
1			Sato Y (Path	nol Exp Med) 【eJ-0】	Tumor diagnosis with immunohistochemistry.				
2			Komohara Y	(Cell Pathol) 【eJ-0】	PD-L	.1	••	er Immunotherapy and	
3			Komohara Y	(Cell Pathol) [eJ-0]	Cano	cer	_	licroenvironment of	
4			Komohara Y	(Cell Pathol) 【eJ-0】	Path Node		mmunity: Canc	er Immunity and Lymph	
5			Mikami Y (P	athol Diagnosis) 【eJ-0】	Histo logic	pathologic for interpre	approach to di etation of morp	agnostic oncology: a hology.	
6			Ueda M (Ne	eurology) 【eJ-L0】		ent advance ological dis		methods for intractable	
7			Misumi Y (N	leurology) [eJ-0]	Adva disea	inced diagn ases	ostic approach	es for rare and inherited	
8			Shinriki S (L	aboratory Medicine) 【eJ-0】	Appl diag	ication of no	ext generation	sequencing for clinical	
9			Shinriki S (L	aboratory Medicine)【eJ-0】	Prac	tice and pro	ospect of clinic	al diagnostic medicine	
10			Jono H (Clir	Pharm Sci) 【eJ-0】	Drug evide		research based	on basic and clinical	
11			Hirai T (Dia	g Radiology) 【eJ-0】	Fore	front of MR	imaging and re	search approaches	
12			Hirai T (Diag	g Radiology) 【eJ-0】	Fore	front of CT	imaging and re	search approaches	
13			,	Science) [eJ-0]	Mole	ecular Imagi	ng Using RI [Ba	sics]	
14			Shiraishi S (Mole	ecular Imagi	ng Using RI [Cl	inical]	
15			Not open th						
Estim	nated out-of- study time	class	15 sessions	consists of content that requires 90 hours (), 60 hours worth of prior and post-work stu erstand the classes.	of stud Idies (i	y. Since the ncluding as	e classes will be signments, etc.	30 hours long (2 hours x) will be required to	
Require	ed Textbook ト)	(テキス	Each instruc	ctor will specify as needed.					
Read	ling List(参考	文献)	Each instruc	ctor will specify as needed.					
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 and the final reports. Ev in this course is very poor or none, the students can obtain credits for this course through e-l						ts. Even if the attendance gh e-learning system that			

Assessment Methods and Criteria(評価方法・基準)	are prepared in some classes, or a supplemental class. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics and be scored from 0 to 100.
Textbook/Material Language(教科書・資料の言 語)	Combination of Japanese and English (We will use documents and materials in English whenever possible.)
Course Based on Practical Work Experience(実務経験 を活かした授業)	Applicable (Faculty members engaged in the clinical practice of Pathology, Radiology and Laboratory medicine will lecture disease diagnostics from the basics to actual levels in an omnibus style.)

	Coding(科 ンバー)	Year/Semester/Ter m(年度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	Eligib Stude Year(開諱	ent	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	010-82-2	2025whole year	Graduate School of Medical Sciences (20110)	1, 2, 3	3, 4	2	others	
		Course Title(Tl	neme)(科目名(講義題目))	•		Instructor(s)(担当教員)	
		Advanced	Therapeutics(C2)	Da	aizou, N	IIYAMARU Sato leaki, ISE Mom	nba Tomomi, Murakami oru, FUKUSHIMA Satoshi, oko, Hibi Taizou, TANAKA uhito	
			Goals with their ratio(学修成果とそ	の割合)				
	•		esearch capability ····80% 2.Profound inte	r-disciplina	ary kno	wledge ····20	%	
	f Class(授業)							
Teachin	ng Method(挑 法)	^{愛美の方} PowerPoint	will be used in the lectures, and active part	icipation i	n the di	scussion is end	couraged.	
Course	e Goals(授業)	の目的) か目的) たけ。 たたでは たたで たたで たたで たたで たたで たたで たたで たたで たた	ept of molecular targeting and clinical applic between immune disorders and pathogene strategy for viral infectious diseases, auto-ir urrent evaluation and problems of immune- he basic research and progress to the establ gans, and also focus on the current efficacy a will be reviewed. Future therapeutic strategi	sis has bee nmune dis nodulation ishment of and limitati	en revea eases, a therap organ ons. In	aled, immune n and cancer. Th by. On the othe transplantatior addition, prog	nodulation serve as a is course provides a ir hand, this course will n, cell transplantation and	
Course	Learning go 目標)	als(学修 and artificia	and a rationale, current evaluation and probl d the basic research and progress to the est al organs, and also to know the current effica will be recognized.	ablishmen	t of org	an transplantat	tion, cell transplantation	
Course	Outline(授業	の概要) diseases. Ir carcinogen has been d modulation and artificia endoscopio	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, is 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 cours will focus on progress in treatments and future orientation of medicine.					
			Details for Individual Classes(各回の	授業内容)				
No.(回)	Date(月	日)	Class Theme(授業テーマ) Brief Outline of Class(内容概略				ass(内容概略)	
1		Naoe Hidea	ıki [eJ-0]	Progress gastrointe			ent and diagnosis of	
2		Tanaka Yas	uhito [eJ-0]	State-of t disease	he art i	n diagnosis and	d treatment of hepatic	
3		Tanaka Yas	uhito [eJ-0]	Molecula diseases	r target	ing therapy in	gastrointestinal & hepatic	
4		Sakagami T	akuro [eJ-0]	Progress diseases	in diag	nosis and treat	ment of respiratory	
5		Sakagami T	akuro [eJ-0]	Topics of	allergi	c respiratory di	seases	
6		Sakagami T	akuro [eJ-0]	Topics of	diagno	osis and treatm	ent of lung cancer	
7		Miyamaru S	atoru [eJ-0]			nd managemen		
8		lse Momok	o [eJ-0]	Treatmen sensorine	nt using eural he	cochlear impla aring loss	ant for severe	
9		Murakami I	Daizo [eJ-0]	Endoscopic treatment of head and neck diseases				
10		Hibi Taizo	[eJ-0]	Organ transplantation; the past and the present			t and the present	
11		Hibi Taizo	[eJ-0]	Liver tran	splanta	ntion; basis and	clinical application	
12		Kamba Ton	nomi [eJ-0]	Current t	herape	utic strategy fo	r urogenital cancers	
13		Kamba Ton	nomi [e-0]	Endoscor	oic trea	tments for urin	ary diseases	
14		Fukushima	Satoshi [eJ-0]	Molecula skin	r target	ing therapy for	r autoimmune diseases in	
15		Fukushima	Satoshi [eJ-0]	Immune t	herapy	in skin cancer		
Estim	ated out-of-	class						
Require	study time	(テキス Textbooks	are not specified, and handouts will be distri	buted.				
Read	下) ing List(参考	1) Molecula	ar Cell Biology, sixth edition, by Lodish H, et SRL Jr. Liver transplantation. American Assoc	al. W.H.Fre	eman, he Stu	2008 dy of Liver Dise	eases. Liver Transpl 2000	
Enrollmo	ent Conditic 条件)							
	,							

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/Ter m(年度・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-	011-82-2	2025whole year	Graduate School of Medical Sciences (20120)	1,	, 2, 3, 4	2	others	
		Course Title(T	heme)(科目名(講義題目))			Instructor(s)(担当教員)	
		Metabolic and C	irculatory Regulations(C3)		Kenich Eiichiro, Y	i, MATŚUZAWA (OKOI Hideki, A HIRATA Naovuk	IMURA Takeshi, TSUJITA Vasushi, YAMAMOTO ADACHI Masataka, IZUMI i, SUGITA Michiko, GOTO IKE Yuuichi	
			Goals with their ratio(学修成果とそ	の割合	(1			
1.Advan	ced expert l	knowledge, skill and	research capability ····30% 2.Profound inte 0% 4.Social leadership drive ····10%	r-disci	plinary kno	wledge ····30	% 3.Global perspective	
	f Class(授業)							
	ng Method(挑 法)	受業の方 PowerPoin classes and reasons.	t/Zoom will be used in the lectures, and activ l e-learning are considered for those who are sure to refer to the syllabus change as it will b iences.	e not a	ble to atten	d regular class	es for unavoidable	
Course Goals(授業の目的) Metabolic and Circulatory Regulations aim at learning the following items: syndrome and related factors, (2) the molecular mechanisms and therapeu (3) the pathogenesis of metabolic disorders including diabetes mellitus an its therapeutic strategy, (4) the molecular mechanisms of actions and secre mechanisms and therapeutic strategy for metabolic syndrome and the dev between the progression of atherosclerosis or obesity, and inflammatory of physiology, and the functional differentiation/regulation of each segment of major renal diseases and the underlying mechanisms causing the patholog mechanisms of surgical stress to the metabolism and circulation, and the t these influences.						eutic strategies nd diabetic vas cretion of insuli evelopment of c cells, (7) the m t of the nephro ogical conditior	of chronic heart failure, scular complications, and n, (5) the molecular obesity, (6) the relation olecular basis of renal n, (8) the pathogenesis of ns, (9) the influence and	
Course Learning goals(学修 目標) [A level (A水準)] In this lecture, you are expected not only to learn the followings but also to apply them to clinical activity: Course Learning goals(学修 目標) [A level (A水準)] In this lecture, you are expected not only to learn the followings but also to apply them to clinical activity: Course Learning goals(学修 目標) [A level (A水準)] In this lecture, you are expected not only to learn the followings but also to apply them to clinical activity: Course Learning goals(学修 目標) [A level (A水準)] Course Learning goals(学修 目標) [A level (A水準)] Im this lecture, you are expected not only to learn the followings but also to apply them to clinical activity: Im this lecture, you are expected not only to learn the followings but also to apply them to clinical activity: Im this lecture, you are expected not only to learn the followings but also to apply them to clinical activity: Im this lecture, you are expected not only to learn the followings but also to apply them to clinical activity: Im this lecture, you are expected not only to learn the following but also to apply them to clinical activity: Im this lecture, you are expected not only to learn the following but also to apply them to clinical activity: Im this lecture, you are expected not only to learn the following but also to apply them to clinical activity: Im this lecture, you are expected not only to learn the following but also to apply them to clinical activity: Im this lecture, you are expected not on the						rategies. in experimental acute and secretion of insulin; one of the main egulation along the hysiological mechanisms , pain, inflammatory		
Course	Outline(授業	2. Basic me myocardial 3. Molecula 4. Pathoge 5. Molecula pathogene 6. Molecula nephron. 7. Regulati of proteinu 8. Various	 Regulation and dysregulation of renal blood flow and blood pressure, and the pathophysiological mechanisms of proteinuria and renal dysfunction. 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 					
			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		Yasushi Ma	tsuzawa [eE-0]	Mech	nanism of m	yocardial ische	emia/reperfusion injury	
2		Eiichiro Ya	mamoto [eE-0]		cular mech nic heart fai		rapeutic strategies of	
3		Kenichi Tsı	ujita [eE-0]	Mech strate		atherosclerosis	and therapeutic	
4		Michiko Su	gita [eE-0]	Perio	perative St	ress and Invasiv	ve Control Mechanisms	
5		Tomomi Go	otoh [eE-0]	NO a	nd nitroger	n metabolism d	isorders	
6		Naoto Kub	ota [eE-0]	Insul	in and its a	ctions-their mo	lecular basis	
7		Takeshi Ma	itsumura [eE-0]		etic compli oaches	cations and the	ir therapeutic	
8		Naoyuki Hi	rata [eE-0]		nanisms and n injury	d therapeutic st	rategies of perioperative	

9		Naoyuki Hirata 【eE-0】	Mechanisms and therapeutic strategies of Postoperative cognitive decline				
10		Masataka Adachi 【eE-0】	Renal potassium handling				
11		Hideki Yokoi 【eE-0】	Structure and function of nephron				
12		Yuichiro Izumi 【eE-0】	Sodium and water handling by the kidney				
13		Tomomi Gotoh 【eE-0】	ER stress-related diseases				
14		Naoto Kubota 【eE-0】	Pathogenesis and therapies of metabolic diseases				
15		Yuichi Oike 【eE-0】	Clarification of molecular and cellular mechanisms underlying aging and its associated diseases				
Estim	nated out-of-class study time	As the total of in-class hours becomes 30 hours (two ho	This course consists of contents which requires 90 hours of work. As the total of in-class hours becomes 30 hours (two hours x15 classes), additional 60 hours of pre-post study including some task will be required in order to improve comprehension of the course.				
Require	ed Textbook(テキス ト)	Textbooks are not specified, and handouts will be distributed.					
Read	ling List(参考文献)	 Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine, 12th edition, edited by Libby P, et al. Saunders, Philadelphia, 2021. Miller's Anesthesia, 9th edition, edited by Miller RD. Elsevier Churchill Livingstone, Philadelphia, 2019. Brenner & Rector's The Kidney, 11th edition, Elsevier, Philadelphia, 2020. Comprehensive Clinical Nephrology, 6th edition, Mosby, 2019. 					
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, paper summaries, and the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100. Final grades will be based on the average score of the papers and tests as well as participation in class discussions					
	nguage Used in ruction(使用言語)	English (English)					
	Textbook/Material Language(教科書・資料の言 語)						
Course Based on Practical Work Experience(実務経験 を活かした授業)							

	Coding(科 ンバー)	Year/Se m(年 <u>[</u>	mester/Ter 度・学期)	Faculty Offering Course(時間割所属・B 割コード)		Eligible Student Year(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	012-82-2	2-2 2025whole year		Graduate School of Medical Science (20130)	S	1, 2, 3, 4	2	others	
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(- s)(担当教員)	
Repr	oductive an	d Develo	pmental Mee N	dicine(C4 Reproductive and Develop Aedicine)	nenta	I NAKAZAT VAMAG OZASA	O Hitoshi, Mat GUCHI Muneka Shirou, SAWAD	KONDO Eiji, HIBI Taizou, sumoto Shirou, KIDO Jun, ge, SAITOH Fumitaka, A Takaaki, ISONO Kaori, otaro, Shohei Kuraoka	
				Goals with their ratio(学修成果	とその	D割合)			
1.Advan and abil	ced expert l ity to take ir	knowledg nitiative a	e, skill and r ction ••••30	esearch capability ····30% 2.Profound 1% 4.Social leadership drive ····10%	inter-	disciplinary 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							
Course	e Goals(授業)	の目的)	knowledge and during pathology o	of "Reproductive and developmental r for physiology and pathology of human pregnancy, and social issues related to f development and growth of man. (4) E neuromuscular diseases, pediatric surg	fertiliz these Basic k	zation and pregr interventions. (3 mowledge for di	nancy. (2) Medi 8) Basic knowle sorders which a	cal interventions before dge for physiology and	
Course	Learning go 目標)	als(学修	pathology, t birth, newb	pants will learn basic knowledge for dever creatment, technology and ethical aspectorn intensive care and assisted reprodu- d organ transplantation.	ts in a	advanced medic	ine. They will a	Iso learn pregnancy,	
Course	Outline(授業	(の概要)	This class will introduce the most recent and important progress in the field of reproductive and developmentar medicine. The lecture related to pregnancy and delivery will discuss medical and social issues in addition to th physiology of reproductive system. We will discuss biological and medical aspect of the reproductive system, a social and ethical problems. The ethical problems of assisted fertilization including in vitro fertilization, ICSI (In Cytoplasmic Sperm Injection), oocyte donation, cryopreservation of embryos, cryopreservation of sperm will be discussed. The class for neonatal medicine, we introduce principal physiology of newborn infants and various pathologica conditions of this period. The participant will learn many different disorders. One of the important topics of this supported by surrounding environment of children which included social conditions. The participant will also learn neonatal surgical disorders and abdomanal organ transplantation for children. We will discuss the social problems which affect healthy development of children in recent years.						
				Details for Individual Classes(各	回の授	受業内容)			
No.(回)	Date(月	3日)	Class Theme(授業テーマ) Brief Outline of Class(内容概略)					ass(内容概略)	
1			Kimitoshi N	akamura 【eE-0】	1	Inborn errors of	metabolism		
2			Hitoshi Nak	azato [eJ-0]		Hereditary Nepł	nropathy		
3			Kei Murayaı	ma [eE-0]		Enzyme replace inherited diseas		nd gene therapy for hood	
4			Takaaki Sav	vada [eE-0]		Congenital abno	ormalities and g	genetic counseling	
5			Kotaro Anai	n [eE-0]		Molecular basis disorders in chil		c strategies for pediatric	
6	11/0	6	5th period	Shohei Kuraoka		Modeling Kidne	y Disease with	Pluripotent Stem Cells	
7			Shiro Ozasa	[eE-0]		of Pediatric Neu	romuscular dis	nd Therapeutic Strategies orders — Duchenne I Muscular Atrophy —	
8			Shiro Matsu	imoto [eE-0]		Amino acid meta			
9			Jun Kido【e	E-0]		New diagnostics diseases	and treatment	s for rare pediatric	
10	12/0)4	5th period	Rumi Sasaki		Prenatal diagno	sis, current stat	us and the ethics	
11			Eiji Kondoh			Management of	preeclampsia		
12			, Fumitaka Sa			0		ogy and carcinogenesis	
13				Yamaguchi [eJ-0]			ages in the hur	nan placenta: a variety of	
14			Kaori Isono	[eJ-0]			tween macroph	ages and microbiota in	
15			Taizo Hibi	[eE-0]	Indications and outcomes of abdominal organ transplantation for children				
Estim	ated out-of- study time	class							
Require	ed Textbook ト)	(テキス							
Readi	ing 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)	Applicable

	e Coding(科 -ンバー)	Year/Semester/Ter m(年度・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)		
RDM7	-013-83-2	2025whole year	Graduate School of Medical Sciences (20140)	1,	, 2, 3, 4	2	others		
		Course Title(T	neme)(科目名(講義題目))		Instructor(s)(担当教員)				
		Advances in C	ncologic Medicine(C5)		NAKAYA	AMA Hideki, MI` su, OKABE hirol	lorie, IWATSUKI Masaaki, YAMOTO Yuji, HAYASHI hisa, IDA satoshi, IKEDA pei		
			Goals with their ratio(学修成果とそ	の割合	(1				
1.Advan and abi	nced expert k lity to take ir	nowledge, skill and itiative action ····1	research capability ····45% 2.Profound inte 0% 4.Social leadership drive ····10%	r-disci	plinary kno	wledge ····35	% 3.Global perspective		
Туре о	of Class(授業)	の形態) Lecture							
Teachir	ng Method(招 法)	受業の方 PowerPoin video lectu	t will be used in the lectures, and active parti res are considered for those who are regular	icipatio ly abse	on in the di ent for unav	scussion is enc voidable reason	ouraged. Extra classes or Is.		
Course	e Goals(授業)	の目的) To underst oncology a	and advances in oncologic medicine, this co s follows:	urse se	erves evide	nces and recen	t findings of medical		
Course	Learning go 目標)	als(学修 oncology a	and advances in oncologic medicine, this co s follows: (1) Overview of tumor biology and I Recent advances in oral and maxillofacial si	geneti	cs; (2) Rece	ent advances in	gastroenterological		
Course	Outline(授業	some of lea related ger diagnostic Many peop gastrointes	e overviews landmark findings in mechanism iding-edge research and our data. We focus ies, cell cycle, cell death, cell differentiation; tools, genome, transcriptome and proteomic le suffer from gastroenterological cancers (e tinal stromal tumor). We explain not only sta ge treatment for refractory or metastatic, or re	on foll therap s; can sopha ndard	owing topic peutic agen cer stem ce geal, gastric treatment f	cs: molecular m its based on tur ell. c, colon, pancre or gastroenterc	echanisms of tumor- nor biology; molecular eas, liver, billiary tract and ological cancer but also		
			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	10/0	7 (Tue) 4th p	eriod Araki Norie 【eEJ-L】	Tumo	ntroduction)				
2	10/1	4 (Tue) 4th p	period Araki Norie [eEJ-L]	Tumo	or Genetics	and biology 1			
3	10/2	1 (Tue) 4th p	oeriod Araki Norie 【eEJ-L】	Tumor Genetics and biology 2					
4		lwatsuki M	asaaki [eJ-0]	Gastroenterological surgery (introduction)					
5		Okabe hiro	hisa 【eE-0】	Gastroenterological surgery 1					
6		Hayashi Hi	romitsu [eJ-0]	Gastroenterological surgery 2					
7		lda satoshi	[eE-0]	Gastroenterological surgery 3					
8		lwatsuki M	asaaki [eE-0]	Gastroenterological surgery 4					
9		Miyamoto `	ſushi 【eE-0】	Gastroenterological surgery 5					
10		Nakayama	Hideki [eJ-0]	Oral and maxillofacial tumors					
11		Nakayama	Hideki [eJ-0]	Diagnosis and treatment of oral cancer					
12		Nakayama	Hideki 【eJ-0】	Challenges in oral cancer treatment					
13		Suzuki Mal	toto [eE-0]	Gene	eral discuss	ion of Thoracic	Surgery		
14		Suzuki Mał	oto [eJ-0]	Specific discussion of Thoracic Surgery, Lung Cancer					
15		Ikeda Koei	[eE-0]	Medistinal tumor					
Estim	nated out-of- study time	class							
Require	ed Textbook ト)	(テキス Textbooks	are not specified.						
Read	ling List(参考	文献) "The biolo "Clinical ("ACS surg	"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						
Enrollm	ient Conditic 条件)	ons(履修							
	ia(評価方法・		l be based on active class participation, pap	er sum	imaries,and	l final report.			
	nguage Usec ruction(使用		nd English						
То	ktbook/Mate	rial	Japanese and English Combination of Japanese and English						

RDM7-014-93-2 2025whole year Graduate School of Medical Sciences Course Tube(Themo(秋田名(田原東田)) The ForeFord of Clinical Oncology(C6) The ForeFord of Clinical Oncology(C6) The ForeFord of Clinical Oncology(C6) Course Course (19, 1997) Tables), WMDACA Easto, Tables), WMDACA Easto		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 r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
The Forefront of Clinical Oncology(C6) OVA holson, MUKAA ANAR Vigui, NOSAK & Kasto, Variantes, MOTOHAV Tastesh, WAAAA E Isaku, WAAAA E Isaku, MOTOHAV Tastesh, WAAAA E Isaku, WAAAA E Isaku, MOTOHAV Tastesh, WAAAA E Isaku, Tastesh, WAAAA E Isaku, MOTOHAV Tastesh, WAAAA E Isaku, WAAAA E Isaku, MOTOHAV Tastesh, WAAAA E Isaku, WAAAA E Isaku, WAAAA E Isaku, MOTOHAV Tastesh, WAAAA E Isaku, WAAAA E Isaku, WAAAA E Isaku, MOTOHAV Tastesh, WAAAA E Isaku, WAAAAA E Isaku, WAAAAAA E Isaku, WAAAAA E Isaku, WAAAAAA E Isaku, WAAAAAAA I Isaku, WAAAAAA E Isaku, WAAAAAA E Isaku, WAAAAAAA	RDM7-	-014-83-2	2025v	whole year		1	, 2, 3, 4	2	others	
The Forefront of Clinical Oncology(C6) Junchicing, MURAKAM Reg. Not Status Family Law, MORAKAS Status Family Law, Moraka Status Family L			Co	ourse Title(Th	neme)(科目名(講義題目))			Instructor(s)(担当教員)	
1. dotamed expect browledge, skill and mesarch capability '0% 2. Protouting inter-disciplinary knowledge10% 3. Clobal perspective and ability to take initiative action			Th	e Forefront o	f Clinical Oncology(C6)		Jiyunichi	irou, MÜRAKAN TO Yutaka, Sait	/I Ryuji, NOSAKA Kisato, ou Fumitaka, MOTOHARA	
Type of Class(党業の新生) Executing 次の時間にした。 Tracking 次の時間にした。 Course Goals(学業の目的) In Lecture Series "Rinor": CG The ForeFront of Clinical Oncology, II, you learn basic concepts and novel tracking (学校の日本) In Lecture Series "Rinor": CG The ForeFront of Clinical Oncology, II, you learn basic concepts and novel tracking (E) previous and novel tracking, II) previous and endocrime tracking (E) previous and novel tracking, II) previous and another previous and another previous and novel tracking, II) previous and novel tracking, II) previous and novel tracking, III) previous and another previous another previous another previous ano					Goals with their ratio(学修成果とそ	その割合	合)			
Teaching Method (接意の方 波) Video loctures or e-learning programs may be considered for those who are regularly absent for unavoidable reasons. Course Goals(接意の)HD In Lecture Series "Bron": C6 The ForeFort of Clinical Oncology, (1) you learn basic concepts and novel encology, (3) genecology. (2) breast and endocrine oncology, (3) genecology. (4) neuronocology, (6) hematological oncology, (1) fueran concision, (2) the series and endocrine oncology, (3) genecology, (2) breast and endocrine oncology, (3) genecology. (3) hematological oncology, (3) genecology, (2) the series and endocrine oncology, (3) genecology, (3) envertices (1) The foreForot of radiation oncole the envelopment in 3-D conformal external beam radiotherapy to Learning statistic concepts and onvole techniques in the most advanced clinical oncology, is lectured, especially regarding surgery, chemotherapy, and molecular target therapy for breast cancer and thyroid cancer. (3) The foreForot of a surgery, chemotherapy, and molecular target therapy for breast cancer and thyroid cancer. (3) The foreForot of a surgery chemotherapy and chemocolobit regarding trade therapy cancer (3) The foreForot of a surgery chemotherapy and chemocolobit regarding the molecular target therapy for breast cancer and thyroid cancer. (3) The foreForot of a surgery chemotherapy and chemocolobit regarding the molecular target therapy point as previous of the statological oncology is lectured explosited by and adaptive and contrare of the statological oncology is explained especially regarding the molecular target therapy point as previous of the statological oncology is cancer and thyroid cancer (3) The foreForot of a statism biological estatures of therast ancer" No.(a) Date(F) Class Theme(### 7 - V) Brief Outline of Class(AS@## Point of the strateget andotherapy of uncertain target therapy point and therap	1.Advan and abil	nced expert l lity to take ir	knowledg hitiative 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	
法) resons. Course Goals(営業の目的) Letter's Series. "Riron": CG The Evertons of Clinical Oncology, IL you learn basic concepts and novel techniques in the most advanced clinical oncology, (C) hematological oncology, (C)	Туре о	of Class(授業)	の形態)	Lecture						
Course Goals(第の目前) techniques in the most advanced clinical oncology, (1) readiation oncology, (2) pression and endocrine oncology, (3) precological oncology, (4) neurooncology, (5) hemotological oncology, (6) hemotological oncology, (6) hemotological oncology, (7) he	Teachir		受業の方	reasons.						
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fechniques is lectured. (2) The forefront of breast and endocrine oncology is lectured, especially regarding sympcological oncology is pecially regarding the recent development and therapout modalities, is explained, including mechanisms in tumor of hematological oncology is lectured especially regarding the mechanisms in tumor development and therapout modalities, is explained expecially regarding the mechanisms in tumor development and spression. Details for individual Classes(各回び決水内) Details for individual Classes(各回び決水内) No.(回 Date(月日) Class Theme(探索ブーマ) Brief Outline of Class(乃容破的) 1 No.(回 Natuo Oya [el-0] "Radiation biology and physics" 2 Natuo Oya [el-0] "Radiation biology and physics" 2 Natuo Oya [el-0] "Radiation biology map physics" 2 Natuo Oya [el-0] ""Radiation biology map physics" 3 Repuip Murakami [el-0] """Radiation biology on physics" 3 Yutaka Yamamoto [el-0] "Paradign shift in breast cancer" 7 Takeshi Motohara [el-0] ""Radiation therapy for gyncological malignancies" 8 Takeshi Motohara [el-0] <	Course		als(学修	You learn`b oncology, (2 oncology.	asic concepts and novel techniques in the r 2) breast and endocrine oncology, (3) gyned					
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ト) Reading List(参考文献) Enrollment Conditions(履修 条件) Grading will be based on active class participation, paper summaries, or the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in criteria(評価方法・基準) Language Used in Instruction(使用言語) Japanese		study time								
Enrollment Conditions(履修 条件) Grading will be based on active class participation, paper summaries, or the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100.Final grades will be based on the average score of the papers and quizzes as Language Used in Instruction(使用言語) Japanese		۲)								
条件) Assessment Methods and Criteria(評価方法・基準) Grading will be based on active class participation, paper summaries, or the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100.Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions Language Used in Instruction(使用言語) Japanese										
Assessment Methods and Criteria(評価方法·基準) Grading will be based on active class participation, paper summaries, or the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100.Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions Language Used in Instruction(使用言語) Japanese										
Instruction(使用言語) Japanese	Assessment Methods and Criteria(評価方法 · 基準) Grading will be based on active class participation, paper summaries, or the final report. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt wi class to be scored from 0 to 100.Final grades will be based on the average score of the papers and quizze						the topics dealt with in			
Textbook/Material Japanese				Japanese						
	Tex	(tbook/Mate	rial	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 マンバー)		mester/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	2025w	hole year	Graduate School of Medical Sciences (20160)		1, 2, 3, 4	2	others		
		Со	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)		
		Restorati	ve Medicine	e(C7 Restorative Medicine)		YASUNAG	A Junichirou, K , FUKUI Toshih	NISHIKAWA Takeshi, AWANO Hiroaki, NAKATA iro, MIYAMOTO Takeshi, IRA Takeshi		
Goals with their ratio(学修成果とその割合)										
				esearch capability ····50% 2.Profound in % 4.Social leadership drive ····10%	ter-dis	sciplinary know	wledge ····30	% 3.Global perspective		
Туре о	of Class(授業)	の形態)	Lecture							
Teachir	ng Method(挑 法)	受業の方		and/or OHP will be used in the lectures, a s or video lectures are considered for the						
Course	e Goals(授業		sepsis, the r knowledge cardiovascu body surfac regenerative	ves of this course are for you to understan 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 bor edge required to plan out and implement	om sep ir surg (4) the ical lo ie and	osis, (2) risk fa gical treatmen e mechanisms ocations, and p l joint functior	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 factor treatments; techniques	understand and explain, (1) pathogenesis is; (2) risk factors for coronary syndrome; al treatments; (4) mechanisms underlying ques for plastic surgery and regenerative d joint diseases; (6) basic knowledges for eview the handout materials distributed in o the lecturers, "Office Hour" is available for ning contents if available.	(3) lat derma medic planni the le or you. Ind str ledge theal ine; (!	est knowledge al wound heali ine; (5) mecha ing and condu cctures and yo . It is also reco rategy to treat s regarding ca ing, distributic 5) mechanism	es regarding ca ng, distributior anisms underly icting clinical s ur notebooks v mmended to r sepsis and org rdiovascular di on of body surfa s underlying ar	rdiovascular diseases and n of body surface blood ing 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, nd ways of treatment for		
Course	Outline(授業	(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 livital function. ued progress in the field of medicine, criti its functional prognosis has also improvec strategies of international sepsis guidelin isms of organ failure from sepsis in basic we will provide lectures regarding risk fact d the progress of surgical treatments for h sorders of the skin, bones, and joints are r ital functions. We will explain the theory of and we will also provide lectures regardir lood flow in human skin and discuss recon in terms of the development of microsurg	cal ca dram es with and cli ors for eart fa arely o f skin g the nstruc ery.	re medicine h natically. We w h outline of ne inical viewpoli cacute corona ilure, ischemi directly life-th wound healin progress mad tive medicine	as produced a ill introduce ne w clinical resent. ry syndrome, w c heart disease reatening cond g and the lates e in the area of	steady flow of successful ew definition and arch. We will also provide which needs urgent s, and valvular heart litions, they greatly affect t molecular biological skin flaps through		
				Details for Individual Classes(各回	の授業	[内容]				
No.(回)	Date(月	日)		Class Theme(授業テーマ)		Brie	of Outline of Cl	ass(内容概略)		
1				ushima [eJ-0]	_	echanism of W	0			
2				ushima [eJ-0]	_	construction l				
3				ushima [eJ-0]			with microsurge			
4			Takeshi Miy		_		of bone metal			
5			Takeshi Miy		-		biology of articu	ular cartilage		
6			Takeshi Miy		_	lammatory art				
7 Takeshi Nishikawa [eJ-0] Hypothesis and Design of Clinical Researches 8 Hematopoiesis in the bone marrow and hema										
8 9	stem cell transplantation therapy									
9 10			Hirotomo N Hiroaki Kaw				cute coronary	syndrome and gender		
					_	ference				
11			Toshihiro Fu		Sugical treatment of heart failure					
12			Toshihiro Fu		Surgical treatment of ischemic heart disease					
13 14			Toshihiro Fu Takeshi Mat		Ну	pothesis and	ar heart diseas design from the	e e perspective of diabetic		
14			Hiroaki Kaw		cò	mplications re	esearches e related diseas			
	l nated out-of-	class			^					
Loun	.atoa oat or	51035								

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 目ナ	Coding(科 ンバー)	Year/Sem m(年度	nester/Ter ・学期)	Faculty Offering Course(時間 割コード)	割所属・時間	S	Eligible Student ·(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	-016-83-2	2025wł	nole year	Graduate School of Medica (20170)	al Sciences		, 2, 3, 4	2	others	
		Cou	rse Title(Th					Instructor(
	Cancer therapeutics(C8 Cancer therapeutics) Cancer therapeutics(C8 Cancer therapeutics) SUZUKI Makoto, MUKASA Akitake, SAKAG Takuro, OYA Natsuo, Kanba Tomomi, OY Yorihisa, IWATSUKI Masaaki, NAKAYAMA H NOSAKA Kisato, YAMAMOTO Yutaka, FUKU Satoshi, MOTOHARA Takeshi, Hibi Taiz MIYAMOTO Takeshi, TANAKA Yasuhit									
				Goals with their ratio)(学修成果とそ	の割合	î)			
1.Advan and abil	nced expert l lity to take ir	knowledge nitiative act	, skill and re tion ••••5%	esearch capability ····60% 2.	Profound inter	r-disci	plinary kno	wledge ····35	% 3.Global perspective	
Type of	of Class(授業	の形態) L	_ecture							
Teachin	ng Method(挡 法)	受業の方	We deal witl	n a student by intensive lectur	e of power po	int or	e-learning.			
Course	e Goals(授業	の目的) In の目的) In r	adiotherap directions o eading-edg espiratory t neoplasia (6	nt lecture, we lead to compreh y, chemotherapy and immuno f cancer therapy. Furthermore e medical treatment for variou ract tumor (3) brain and nervo) breast endocrine tumor (7) g uloskeletal tumor (10) skin tur	therapy and the s, the aims of the stypes of can bus system new genitourinary s	ne hist he cur cer as oplasn system	orical chan rent lecture follows: (1 n (4) head a tumor (8)	ge, standard tro e are to underst) gastroenterolo and neck tumor gynecological t	eatment and future and thoroughly the ogical tumor (2) (5) otolarygological umor (9) orthopaedic and	
Course	Learning go 目標)	T pals(学修 t t t	and immuno To understa gastroentero umor (5) ot	end the fundamental knowled otherapy and the historical cha nd thoroughly the leading-ed ological tumor (2) respiratory t olarygological neoplasia (6) bi thopaedic and neuro-musculo	ange, standarc ge medical tre ract tumor (3) reast endocrin	l treat atmen brain ie tum	ment and fu It for variou and nervou Ior (7) genit	uture directions s types of canc us system neop ourinary systen	s of cancer therapy. er as follows: (1) lasm (4) head and neck n tumor (8) gynecological	
Course	Outline(授業	t の概要) g r	The aims of current lecture are to understand the up-to date treatment for the various types of cancer in add 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 ho the standard treatments are confirmed from the results of various clinical trials.					erapy. In late years a bout the cancer.A		
	-			Details for Individual C	Classes(各回の語	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		٢	Yasuhito Ta	naka [eJ-0]		Medi	ointestinal cancer			
2		Ν	Masaaki lwa	atsuki [eJ-0]		Surgi	ical cure of	the digestive ca	ancer	
3		Т	Fakuro Saka	gami 【eJ-0】		Medi	ical treatme	ent of the lung o	ancer	
4		Ν	Makoto Suz	uki [eJ-0]		Surgi	ical treatme	ent of the lung o	cancer	
5		ŀ	Hideki Naka	yama [eJ-0]		The l	ecture will cal applicati notherapy, a	ion of surgery, I	on the effectiveness and	
6		٢	Yorihisa Ori	a [eJ-0]		The t	reatment o	f the head and	neck cancer	
7		г	Fakeshi Miy	amoto [eJ-0]		The t	reatment o	f the bone soft	part tumor	
8			, Yutaka Yam				tment of bre			
9			Fakeshi Mot						gic malignant tumor	
10			Fomomi Kar					f genitourinary	_	
11			Satoshi Fuki				cancer ther			
12			Faizo Hibi	[eJ-0]				Cancer Therapy		
13	L		Akitake Muk					f the brain tum		
14			Kisato Nosa						gic malignancies	
14			Natsuo Ohy						อาจ เทนกุธกลางเจง	
15 Natsuo Ohya [eJ-0] Radiotherapy of the cancer Estimated out-of-class study time study time study time										
Require	ed Textbook	(テキス)	We distribut	e in particular the print which	we summarize	ed the	e point of th	e lecture in wit	hout appointing it.	
 A new clinical oncology Cancer principles & practice of oncology,V.T. DeVita, S.Hellman, S.A.Rosenberg,Lippincott Willams &Wi Clinical Oncology, M.D.Abeloff, J.O. Armitage, J.E.Niederhuber,M.B.Kastan,W.G.McKenna, Elsevier Cancer Medicine, Holland-Frei, AACR Necon guideline 						vincott Willams &Wilkins enna, Elsevier				
	ent Conditio		 Cancer NCCN g 	Medicine, Holland-Frei, AACR	• The bi	ology	of Cancer,	R.A.Weinberg, (Garland Science	

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 目ナ:	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 udent 開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-0	018-83-2	2025v	vhole year	Graduate School of Medical Sciences (20190)	1,	2, 3, 4	2	others		
		Co	ourse Title(Th	eme)(科目名(講義題目))		Instructor(s)(担当教員)				
The	Theory of C	Clinical R	esearch(C10	Learning of The Theory of Clinical Research	ר)	Hirofur	ni, SUZUKI Ma Fomomi, IDA Sa	1ATSUI Kunihiko, JONO koto, MUKASA Akitake, atoshi, MIYAMOTO Yuji, Mitsuhiro		
				Goals with their ratio(学修成果とそ	の割合)				
1.Advand		nowledg	ge, skill and r	esearch capability ····45% 2.Profound inte	er-discip	olinary kno	wledge ····35	% 4.Social leadership		
anno	⁻ Class(授業)	の形態)	Lecture							
Teachin	g Method(扮 法)	愛業の方	PowerPoint provided fo	presentation will be usually provided in the r those who are regularly absent for unavoid	e lecture dable re	es. Video le asons.	ectures or e-lea	rning programs will be		
Course	Goals(授業)	の目的)	To compreh	nend necessary knowledge in order to cond	uct inte	rvention st	udies/clinical t	trials		
Course L	_earning go 目標)	als(学修	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	r multic clinical d standa :h	practice ard treatme	•	ancies		
Course (Outline(授業	の概要)	kinetics/dyn treatments including lu malignant b	rn about bases of research ethics, epidemic 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 t be discussed.	ou will ; evider r, liver c	learn abou ice based i :ancer, bre	t the biochemi medicine) in va ast cancer, urir	cal characters and the rious kinds of cancers, nary organ cancer and		
				Details for Individual Classes(各回 ${\mathfrak C}$	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			Yamamoto `	Yutaka, eEJ-O		of clinical vational st	research 1(Clir udies)	nical trials and		
2			Yamamoto	Yutaka, eEJ-O		of clinical arkers)	research 1(Clir	nical research using		
3			Matsui Kuni	hiko, eEJ-O	Detai	tails of ethical guideline for clinical research				
4			Jono Hirofu	mi, eEJ-O	Basic	s of Pharm	acokinetics/Ph	armacodynamics		
5			Jono Hirofu	mi, eEJ-O	Clinic Pharn	al Applicat	tion of cs/Pharmacody	ynamics		
6			Yutaka Yam	amoto, eEJ-O	Desig	n and Asse	essment of clini	cal trailas		
7			Makoto Suz	uki, eE-O	Clinic	al trials on	lung cancer (1)		
8			Makoto Suz	uki, eE-O	Clinic	al trials on	lung cancer (2	:)		
9			Satoshi Ida,	eE-O	Clinic	al trials on	gastric cancer			
10			Yuji Miyama	aoto, eE-O	Clinic	al trials on	colorectal can	cer		
11			Hiromitsu H	ayashi, eE-O	Clinic	al trials on	hepatic cell ca	arcinoma		
12			Yutaka Yam	amoto, eEJ-O	Clinic	al trials on	breast cancer	(1)		
13			Yutaka Yam	amoto, eEJ-O	Clinic	al Trials or	n breast cancer	(2)		
14			Tomomi Ka	mba, eEJ-O	Clinic	al Trials or	n urinary organ	cancer		
15			Akitake Mul	kasa, eEJ-O	Clinic	al Trials or	n malignant bra	in tumor		
	ated out-of- study time	class	60 hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2 hours x 15 times).							
Require	d Textbook ト)	(テキス								
Readi	ng List(参考	文献)	Breast Cano Cheson BD, Response C Leukemia. J American So	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, 200 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.						
Enrollme	ent Conditic 条件)	ons(履修				_				
	^{乗件)} nent Metho a(評価方法・		about the m Grading will will be evalu	e the attendance at a lecture, lecturing quest natter which we raised to the [the aim of the be based on the student's understanding of uated on the basis of papers and quizzes rel l grades will be based on the average score	class] to of the co lated to	by reports a burse subje the topics	about a theme ect matter. The dealt with in c	shown at being finished. students' understanding lass to be scored from 0		

Textbook/Material Language(教科書・資料の言 語)	Combination of Japanese and English
	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)	S	Eligible Student (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	RDM7-156-99-1 2025			Graduate School of Medical Sciences (25240)	1	, 2, 3, 4	2	others	
		Co	ourse Title(Th	neme)(科目名(講義題目))	Instructor(s)(担当教員)				
		Traini	ng of biostat	istics in clinical study(C11)		TOMI	ZAWA Kazuhito	o, HASHIMOTO Kenyu	
				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 ction ••••10	esearch capability ····50% 2.Profound inte % 4.Social leadership drive ····10%	r-disci	plinary kno	wledge ····30	% 3.Global perspective	
Туре о	of Class(授業)	の形態)	Lecture and	l Seminar					
Teachir	ng Method(挑 法)	受業の方	Lecture (Q &	& A style), Practical use of PC & statistical so	ftware	EZR).			
Course	e Goals(授業)	の目的)	study. There	about basic statistical methods is important efore, the aim of this course is to learn abou xperiments and/or clinical studies.	for re t how	searchers to researchers	plan and exec use statistical	cute biological/clinical tests through carrying out	
Course	Learning go 目標)	als(学修		水準)] ing study design. Performing basic statistica analysis etc).	l tests	(comparing	g two groups, tł	nree or more groups,	
			[C level (C Understand	水準)】 ing basic statistical theory.					
Course	Outline(授業	(の概要)	In this class statistical so	, students will learn about study design, bas oftware "EZR".	ic stat	istical theor	ies, and practio	ce basic tests using	
			-	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			HASHIMOT	O Kenyu, 【eJ-0】	Data	representa	tion		
2			HASHIMOT	O Kenyu, 【eJ-0】	Data	set construe	ction		
3			HASHIMOT	O Kenyu, 【eJ-0】	Com	paring two	groups		
4			HASHIMOT	O Kenyu, 【eJ-0】	Comparing three or more groups				
5			HASHIMOT	O Kenyu, 【eJ-0】	Correlation and simple linear regression				
6			HASHIMOT	O Kenyu, [eJ-0]	Contingency table analysis				
7			HASHIMOT	O Kenyu, 【eJ-0】	Fundamentals of statistical inference				
8			HASHIMOT	O Kenyu, 【eJ-0】	Statistical design 1				
9			HASHIMOT	O Kenyu, 【eJ-0】	Statistical design 2				
10			HASHIMOT	O Kenyu, 【eJ-0】	Sample size determination				
11			HASHIMOT	O Kenyu, 【eJ-0】	Multivariate analysis 1				
12			HASHIMOT	O Kenyu, 【eJ-0】	Multi	ivariate ana	lysis 2		
13			HASHIMOT	O Kenyu, 【eJ-0】	Multi	ivariate ana	lysis 3		
14			HASHIMOT	O Kenyu, 【eJ-0】	Survi	val analysis	1		
15			HASHIMOT	O Kenyu, 【eJ-0】	Survi	val analysis	2		
Estim	nated out-of- study time	-class							
Require	ed Textbook ト)	(テキス	Handout / s	ample data for statistical analysis					
Reading List(参考文献)			Indicated in each lecture.						
Enrollm	ent Conditic 条件)	ons(履修	Bring own p	personal computer for statistical practice (W	indow	s).			
	ment Metho ia(評価方法 ·		Attendance	Attendance at lectures, Q&A, and score of reports.					
Lar Instr	nguage Usec ruction(使用	d in 言語)	Japanese						
Tex Languag	(tbook/Mate ge(教科書・) 語)	erial 資料の言	Japanese						
Work E	Based on P xperience(実 活かした授業	€務経験	Not applica	ble					

RDM7-157-09-1 2025whole year Graduate School of Medical Sciences (25250) 1, 2, 3, 4 2 others Course Title(Theme)(特目名(情覺型目)) Instructor(s)(1313/87) Instructor(s)(1318/87) Instructor(s)(1318/87) Overview of clinical study(Overview of clinical study (C12)) Instructor(s)(1318/87) Instructor(s)(1318/87) Action Market		Coding(科 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 (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
Overview of cilinical study(Overview of cilinical study (C12)) TSUITA Kenichi, SAKAGMI Priver, YMAZAWI Manne, KAWKAUCH Takuro, MAXAWI Tesuri, MATSU Konhiko, NAKAWU Cilinical, MAXAWI Tesuri, MATSU Kawawi Cilinical, Tesuri, Tesur	RDM7-	-157-99-1	2025v	vhole year		1	, 2, 3, 4	2	others		
No.enview of clinical study(Overview of clinical study(Cl21) Heime, EAMAGLICH Takeyopi, SAUGIT Televipy) Heime, EAMAGLICH Takeyopi, SAUGIT Televipy) Marsh Kominkow Statis, SAUGIT Televipy) Course Coals with their ratio(2% git2 4 - 0%) Extra - 5% 4 Scalal leadership drive5% Type of Class(#2-0%) Lecture Teaching Method(#5, Mill and research capability0%) 2 Profound inter-disciplinary knowledge1% Topic 2 Class(#2-0%) Course Coals(#2-0%) Lecture Face-to-face or elearning lectures using handouts. Course Coals(#2-0%) The purpose of this lecture is to provide young researchers who are about to start clinical research with the bask construction and unit eventional research, research, in addition to concepts related to the framework of observational and interventional research, research, televip, statistics, regulations, proctices, big dat construction and utilization, intellectual property, etc. Course Couline(#2-0%) The course provides an overview of observational and intervention research, research etics, statistical concepts related to the framework of observational and intervention research, research etics, statistical concepts related to the framework of observational and interventional research, research etics, statistical concepts related to the framework of observational and interventional research, research etics, statistical concepts related to the framework of observational and interventional research, research etics, statistical concepts related to the framework of observational and interventional research, research etitics, statistical concepts related to the framework			Co	urse Title(Th	eme)(科目名(講義題目))		Instructor(s)(担当教員)				
Advanced expert hnowledge skill and research capability		Overvi	ew of cli	Inical study(Overview of clilnical study(C12))		Hajime, K MATSUI K	(AWAGÚCHI Ta (unihiko, NAKA prinaga Jiyun, Y	akayoshi, SANUKI Tetsuji, MURA Taishi, MIYASHITA AMASAKI Akira, NOSAKA		
and ability to take initiative action ·····S% 4.Social leadership drive ·····S% Typer of Lass(愛愛が影) Course Coarls(愛愛が影) Course Coarls(愛愛の影) Course Coarls(愛愛の歌) Course Coarls(@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@					Goals with their ratio(学修成果とそ	の割合	î)				
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Teaching Method(伊克の方 (点) Face-to-face or e-learning lectures using handouts. Course Goals(授意の目的) The purpose of this lacture is to provide young researchers who are about to start clinical research, with the basic threadedge necessary to plan and conduct their research. Course Learning goals(学 EIR) All aved (1/3, KB) transvork of observational and interventional research, research thics, statistics, regulations, practices, big dat construction and utilization, intellectual property, etc. Course Outline(授意:most) The purpose of point and conduct clinical research, in addition to concepts related to the framework of observational and intervention research, research thics, statistics, regulations, practices, big dat construction and utilization, intellectual property, etc. Course Outline(授意:most) The course provides an overview of observational and intervention research, research thics, statistical concepts to decessary to plan and version of observational and intervention research, research ethics, statistical concepts to decessary to plan and practices, and big data construction and utilization, intellectual property. Course Outline(授意:most) The course provides an overview of observational and intervention research, research ethics, statistical concepts to decessary for decessary for decessary for decessary study design, regulations and practice of decessarianal decessary for decessarianal decessarianal decessarianal decessariana dec		-			4.Social leadership drive ·····5%						
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Involvedge about intellectual property. Details for Individual Classes(各回の表集内容) Date(月日) Class Theme(授業テーマ) Brief Outline of Class(内容構築) 1 SAKAGAMI Takuro, [eJ-O] Introduction to clinical research: Translational research(Active Learning) 2 YAMASAKI Akira, [eJ-O] Research Ethics: Protecting participants in clinical research 3 MORINAGA Jun, [eJ-O] Statistical principles in clinical research 4 MORINAGA Jun, [eJ-O] Introduction of study design in clinical research 5 MIYASHITA Azusa, [eJ-O] Introduction of protocol writing in clinical research 6 MIYASHITA Azusa, MORINAGA Jun, [eJ-O] Introduction of protocol writing in clinical research 7 MATSUI Kunihiko, [eJ-O] Promotion and practice of observational study 9 NAKAMURA Taishi, [eJ-O] Construction and application of medical big data 10 NOSAKA Kisato, [eJ-O] Construction and application of medical big data 11 12/11 Thu. Ath period. SANUKI Tetsuji, [eJ-L] Management of medical device development 12 12/18 NAGAOKA Katsuya, [eJ-L] Potential for Al Applications in Clinical research 1 (Active Learning	Course		als(学修	Acquire suff framework of construction [C level (C Acquire ess framework of construction	icient knowledge to plan and conduct clinio of observational and interventional research n and utilization, intellectual property, etc. 水準)] ential knowledge to plan and conduct clinio of observational and interventional research n and utilization, intellectual property, etc.	, resea cal rese , resea	arch ethics, earch, in ado arch ethics,	statistics, regul dition to conce statistics, regul	ations, practices, big data pts related to the ations, practices, big data		
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	Language(教科書・資料の言 Japanese										
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Academic Year 2025, D1 Medicine & Life Science Seminar [eE-L]

Place: Lecture room 2, Medical Education & Library Building 3F. Time & Date: From 17:30 (Usually on Wednesday)

N⁰	Schedule	Talker	Title	Affiliation	Inviter
1	May 7 (Wed)	Yosuke Togashi	New insghits from tumor- infilitrating lymphocyte analyses	Department of Tumor Microenvironment, Faculty of Medicine, Dentistry and Pharmaceutical Sciences (Medicine), Okayama University	Cell Pathology
2	May 14 (Wed)	Yasuhiro Takashima	Human pluripotent stem cells and early development	Department of Life Science Frontiers Center for iPS Cell Research and Application, Kyoto University/ Professor	Cell Modulation
3	May 21 (Wed)	Yumiko Yoshimura	Experience-dependent development of visual cortical function	Division of Visual Information Processing, National Institute for Physiological Sciences,/Professor	Sensory and Cognitive Physiology
4	Jun 4 (Wed)	Hideyuki Saya	Research aimed at implementation for intractable diseases	Oncology Innovation Center, Fujita Health University/ Professor (Director)	Molecular Genetics
5	Jun 11 (Wed)	Koki Hasegawa	Targeted radiotherapy in nuclear medicine - Clinical Advances and Perspectives	Department of Radiological Sciences, School of Health Sciences, Fukushima Medical University School of Medicine. Professor	Radioisotope and Tumor Pathobiology
6	Jun 18 (Wed)	Takero Shindo	Optimizing transplant immunity against ATL	Hiroshima University Research Institute for Radiation Biology and Medicine, Next Generation Development of Genome and Cellular Therapy Program/Designated Professor	Hematopoiesis
7	Aug 27 (Wed)	Makoto Arita	Biology of LipoQuality and the Lipidome Atlas	Professor, Keio University Faculty of Pharmacy Team Leader, RIKEN Center for Integrative Medical Sciences	Microbiology
8	Sep 3 (Wed)	Shusaku Uchida	Molecular and neural mechanisms underlying psychosocial stress resilience and susceptibility	Department of Integrative Anatomy, Nagoya City University Graduate School of Medical Sciences, Associate Professor	Neuropsychiatry
9	Oct 15 (Wed)	Itaru Imayoshi	Analysis of neural stem cell regulatory mechanisms using optogenetics	Professor, Laboratory of Brain Development and Regeneration, Graduate School of Biostudies, Kyoto University	Molecular Brain Science
10	Nov 5 (Wed)	Nobuhiko Ohno	Frontiers of 3D Microstructure Research by Volume Electron Microscopy	Division of Histology, Jichi Medical University, School of Medicine	Histology
11	Nov 26 (Wed)	Kenya Honda	Development of microbiota- based therapeutics by unraveling the functional roles of the gut microbiota	Keio University School of Medicine Department of Microbiology and Immunology	Stem Cell Stress

Note: The date, time or place of these lectures may change due to the inviter's and lecturer's schedules.

Please check the details with the seminar guide leaflet distributed to each Department beforehand.

Also please check our website for the latest information.

We might add the seminar other than the above. (http://www.medphas.kumamoto-u.ac.jp/en/medgrad/gakunai/seminar/)

*** Each seminar will be held in English ***

*Only those who have registered for D1 Seminar can take the e-learning course.

However, some seminar sessions may not be recorded due to the content of the seminar or the instructor's availability.

An announcement will be made if a lecture will not be recorded. For details, please contact the Student Affairs Office.

*Face-to-face seminars can be taken by students who have not registered for the course.

大学院医学教育部「医学・生命科学セミナー」レポート

(「D1 Medicine and Life science Seminar」Report)

学生番号		学年	
Registered number		Grade	
名前		所属分野	
Name		Division	
講演演題名			
Title of talk			
講師 Talker			
講演日時 Date			
	200~2000字程度のレポートを言		
A body of essay:	Fill this A4 sheet with 250-500 wor	ds	

D2 Learning from Experienced Doctors Seminar (Elective 2 credits)

Subject code 20230

Academic Year 2025, D2 Learning from Experienced Doctors Seminar [eJ-L]

Place: Lecture room 2, Medical Education & Library Building 3F. Time & Date: From 17:30 (Usually on Wednesday)

Nº	Schedule	Talker	Title	Affiliation	Inviter
1	Apr 16 (Wed)	Ichiro Manabe	Innate stress memory in heart failure and multimorbidity	Department of System Medicine, Graduate School of Medicine, Chiba University	Molecular Genetics
2	May 15 (Thu)	Hidetaka Ota	The Initiatives of Akita University in Advanced Research on Elderly Medical Care	Advanced Research Center for Geriatric and Gerontology, Akita University	Cell Pathology
3	Jul 2 (Wed)	Tadafumi Kato	Tackling the mystery of bipolar disorder	Chief Professor, Department of Psychiatry and Behavioral Science, Juntendo University Graduate School of Medicine	Molecular Brain Science
4	Jul 16 (Wed)	Takahiro Ochiya	Strategies and Current Regulations for Medical Applications of Extracellular Vesicles	Institute of Medical Science, Tokyo Medical University	Gastroenterology and Hepatology
5	Jul 30 (Wed)	Koji Shiraishi	The research and clinical practice in male infertility treatment	Department of Urology, Yamaguchi University School of Medicine	Histology
6	Sep 10 (Wed)	Takuya Matsushita	The advance of treatments for intractable neurological diseases	Department of Neurology, Kochi Medical School, Kochi University/Professor	Cell Modulation
7	Sep 19 (Fri)	Akihiko Takahashi	Supporting the lives of children in medical care, their siblings, and their families	Director of Hibari Clinic Chairman of Certified Non-Profit Organization Urizun	Hematopoiesis
8	Oct 8 (Wed)	Kazuki Harada	Head trauma: a review from the perspective of the forensic neuropathologist	Department of Forensic Medicine, Fukushima Medical University School of Medicine Professor	Disaster and Critical Care Medicine
9	Oct 29 (Wed)	Shotaro Hagiwara	Status of Polypharmacy and Potentially Inappropriate Prescription in Older Adults	Department of Hematology, Tsukuba University Hospital Mito Clinical Education and Training Center. Professor	Radioisotope and Tumor Pathobiology

Note: The date, time or place of these lectures may change due to the inviter's and lecturer's schedules.

Please check the details with the seminar guide leaflet distributed to each Department beforehand.

Also please check our website for the latest information.

We might add the seminar other than the above. (http://www.medphas.kumamoto-u.ac.jp/en/medgrad/gakunai/seminar/)

*** Each seminar will be held in Japanese. ***

*Only those who have registered for D2 Seminar can take the e-learning course.

However, some seminar sessions may not be recorded due to the content of the seminar or the instructor's availability.

An announcement will be made if a lecture will not be recorded. For details, please contact the Student Affairs Office.

*Face-to-face seminars can be taken by students who have not registered for the course.

大学院医学教育部「名医に学ぶセミナー」レポート

(「D2Learning from Experienced Doctors」Report)

学生番号 Registered		学年
number		Grade
名前		所属分野
Name		Division
講演演題名		
Title of talk		
講師 Talker		
講演日時 Date		
	200~2000字程度のレポートを訳 Fill this A4 sheet with 250-500 word	
		<u>us</u>

Academic Year 2025, D5: International Biomedical Research Seminars

•Place: Meeting Lounge, IRCMS 1F or online

• Time & Date: From 16:00 (usually on Wednesday; may be adjusted due to time difference)

The "D5 International Biomedical Research Seminars" course will be offered by International Research Center for Medical Sciences (IRCMS). It will run from April 2025 to March 2026, with lectures given by scientists who are affiliated with IRCMS or in collaboration with researchers at IRCMS. The lectures will be given in English, and by leading scientists in the relevant research field. Students will be taught: 1) how normal physiological functions are maintained in the human body; 2) how these systems become abnormal under certain pathophysiologic conditions; 3) why stem cells are important in animal development and homeostasis; 4) how stem cell-based approaches can help us understand disease mechanisms and find potential cure for diseases related to stem cell malfunction (e.g., cancer, aging).

No	Schedule	Lecturer	Research Field/The title for the lecture	Title / Affiliation
1.	May (onsite)	Kazu Kikuchi	Cardiomyocyte, Live imagind of tissue homeosasis and regeneration	Director of Department of Cardiac Regeneration Biology, National Cerebral and Cardiovascular Center, Japan
2.	June (online)	Els Mansell	Hematopoietic Cell, Cellular Senescence	Assistant Professor, Erasmus MC, Hematology the Netherlands
3.	July (onsite)	Anne Goriely	Genetics, Development, Mutations	Associate Professor of Human Genetics, Medical Sciences Division, University of Oxford, UK
4.	August (onsite)	Yusuke Nasu	Lactate, Biosensors, Fluorescent proteins, Protein Engineering	Assistant Research Fellow, Institute of Biological Chemistry, Academia Sinica, Taiwan
5.	September (online)	Cristian Bellodi	RNA, Stem Cell Biology	Professor, Biotech Research & Innovation Centre, University of Copenhagen, Denmark
6.	October (onsite)	Mikiko Tanaka	Molecular genetic mechanisms	Professor, Department of Life Science and Technology, Institute of Science Tokyo, Japan
7.	November (onsite)	Jun Nagai	Neurophysiology, General neuroscience, Neurochemistry	PI, Center for Brain Science, RIKEN, Japan
8.	December (online)	Andres Hidalgo	Inflammation, Neutrophils, Platelets, HSC	Professor, Department of Immunobiology, Yale University School of Medicine, USA
9.	January (onsite)	Naoyuki Matsumoto	Neuroscience	Associate Research Scientist, Department of Neuroscience, Yale University School of Medicine, USA
10.	February (onsite)	Yosuke Kurashima	Experimental pathology, Gastroenterology, Immunology	Associate Professor, Institute for Advanced Academic Research, Chiba University, Japan
11.	March (online)	Daniel Lacorazza	HSC, LSC, Leukemias	Professor, Department of Pathology & Immunology, Baylor College of Medicine, USA

Note: The schedule or venue of these lectures might change due to various reasons. Please check the details with the seminar guide leaflet distributed to each Department beforehand. Also, please check our website for the latest information. We might add the other seminar than the above.

http://www.medphas.kumamoto-u.ac.jp/medgrad/gakunai/seminar/seminar3/

A report format of "D5: International Biomedical Research Seminars"

Write 2 essays based on 2 talks chosen from the seminar "D5: International Biomedical Research Seminars". Length of the essays should be 250-500 words. "D5: International Biomedical Research Seminars" requires students to attend more than 10 lectures as well as to submit at least 2 reports for credit before completion of their thesis research. Send each essay to the IRCMS within one month by E-mail (ircms@jimu.kumamoto-u.ac.jp, not by hard copy or any other digital media). The file of the essay should be included in the E-mail both in an attached file and in the text. A carbon copy E-mail should be also sent to Medical Faculty Educational Affairs Planning Section (iyg-igaku-3@jimu.kumamoto-u.ac.jp). Attendance will be taken in every talk by signing your name at the entrance of the lecture room.

Graduate School of Medical Sciences, Medical Course (Doctor) "D5: International Biomedical Research Seminars" Report

Student : Grade	Registered number	Division	Name	
Title of talk:				
Talker:				
Date:				
Place:				
A body of essay:	Fill this A4 sheet with 250-50	0 words		

Approval of Credits of Elective Subject in Doctoral Course,

creditD3 Medicine and Life Science Training (Subject code 22220)

1. In the wake of realization of doctoral course lessons in the graduate school, presentations at academic meetings, such as academic conferences and lecture meetings, under the sponsorship of academic societies and universities, but not under the sponsorship of private organizations will be approved as credits.

2. "D3 Medicine and Life Science Training" is an elective subject in the doctoral course and up to a maximum of 2 credits can be awarded from presentations at academic conferences. (Refer to the list of lecture course/subject and credit in the syllabus.)

3. The criteria for credit approval are stipulated below. In addition, academic meetings that meet the above criteria such as academic conferences, lecture meetings and symposiums, will be judged by the committee of the postgraduate education.

- 1) In international academic meetings such as conferences, meetings, and symposiums, which are held domestically and abroad, or in national conferences and study meetings, which are held domestically, attendance as a leading presenter of a poster or an oral presentation as the first author of the abstract will be approved for a maximum of 2 credits.
- 2) In local academic meetings, such as conferences, lecture meetings and seminars, leading a poster or oral presentation as the first author of the abstract will be approved for a maximum of 1 credit.

For relation of the term of academic meetings and the number of credits to be approved, refer to the detailed regulations as shown in the next page.

4. How to apply for credits and the process of approving credits (The stipulations of this matter and the necessary forms are published on the website for the Graduate School of Medical Sciences and can be downloaded from the website).

- 1) Graduate students should record and submit the necessary information. Record in the prescribed application form (Refer to Format 1) the names of academic meetings, the term of the meetings and reports. Submit the written form to the Educational Affairs Planning Section (Ext. 5029) with 1) a certificate of participation (a copy is acceptable), 2) a copy of the program in which the presentation is published in and 3) a copy of the abstract that the student has published as a leading presenter. In principle, submit the forms within the same academic year as conference participation. The application form will be examined by the committee of the postgraduate education (generally held on every third Wednesday).
- 2) The committee of the postgraduate education will review all submissions and calculate credit based on the detailed regulations (Attachment 1). The credits will be calculated, and when they reach 2 or more, they will be given to SOSEKI by the Educational Affairs Planning Section. Students need to view SOSEKI to check their acquired credits. If the number of credits doesn't reach 2, it will not be approved (0 credits).

- 3) For the credit application, "Kumamoto University" shall be indicated as your affiliation. If your affiliation is not Kumamoto University, your academic supervisor shall be included in your co-speakers.
- 4) A credit application would be accepted by attending a meeting online as well, only when the school educational committee accepts it. A participant certification of such meeting or an approval from the academic supervisor can be submitted for the required submission, 1)-1).

The Detailed Regulations for Approving the Number of Credits in D3 Medicine and Life Science Training

In a faculty meeting on May 28, 2008, it was approved that beginning from the academic year of 2009, students can acquire up to a maximum of 2 credits as D3 Medicine and Life Science Training (which is an elective subject in the doctoral course) by participating in academic meetings as a leading presenter. The detailed regulations of credit approval are stipulated below.

1. Presentations at academic meetings given in 2008 by students who entered in the academic year of 2008 can be approved for credit. However, the application form and the documents that show proof of the students' presentations must be submitted within the 2008 academic year.

2. The relation between the term of academic meetings and the number of credits to be approved is based on the following criteria.

1) The maximum credits will be given for participation in three (3) day academic meetings. "Riron" lecture-style classes, are lecture courses in a subject that consist of fifteen (15) 90-minute sessions (32.5 hours in total). These are worth 2 credits. Academic meetings are generally held from 8 a.m. to 6 p.m. It can be considered that three days participation in academic meetings is equivalent to about thirty (30) hours of study in a regular class.

2) An academic meeting, which is held for half a day should be counted one sixth (1/6) of one credit. For example, one third (1/3) of the stipulated maximum credits should be given by an academic meeting held for one (1) day, a half (1/2) for one and a half $(1 \ 1/2)$ days and two thirds (2/3) for two (2) days.

3) Specific examples of calculating credits:

When a student gives a presentation as the leading presenter at international meetings or domestic national academic meetings held for three days or more, 2 credits should be given. When meetings are held for one day, two thirds (2/3) of one credit will be given, when they are held for one and a half days, one (1) credit should be given, and when they are held for two days, four thirds (4/3) should be given.

When a student gives a presentation as the leading presenter at local academic meetings held for two days, two thirds (2/3) of one credit should be given, when meetings are held for one day, one third (1/3) of one credit should be given and when they are held for half a day, one sixth (1/6) of one credit should be given.

3. When the number of days a student participate in does not match the stipulations above, credits to be awarded will be decided, after deliberations, by the committee of the postgraduate education.

Application Form for Credits of D3 Medicine and Life Science Training: (Presentations at academic meetings)

	App	lication date:	(year/month/day)
Name:	Year	Student number:	Affiliation :
Course name (if applicable)	:	Phone number:	
E-mail address:			
Name of academic meeting	:		
Date of meeting (y/m/d):	~	City and venue of	meeting:
Date when the applicant par	rticipated in the	meeting(y/m/d):	∼ (days)
Presenters' names (all):			
Title of the presentation:			(circle one) oral poster
The number of credits to be	applied for app	proval	
(Refer to the detailed regula	ations in Attach	ment 1 about how to ca	lculate): credits
Report about what you have	e learned throug	gh participating in the a	cademic meeting (Write 200 words or
more below.)			

Submit 1) a certificate of participation in the academic meeting (a copy is acceptable), 2) a copy of the program in which the presentation is published in, 3) a copy of the abstract that the student has published as a leading presenter in written form together with this application form to Student Affairs Section. (Screening for approval of credits will be conducted in the committee of the postgraduate education, which is held on every third Wednesday.)

If you have lost the participant certification of the meeting to submit or the meeting was held online, you shall submit Form 2. "Appeal for D3 Medicine and Life Science Training (Conference Presentation)"

(Format 2) Appeal for D3 Medicine and Life Science Training (Conference Presentation)

Student ID No.:

Affiliation:

Name (hand-writing):

Academic supervisor (hand-writing):

ame of Conference:	
ppeals:	

[Subject code : 10230 (Master's Elective Subject)]
[Subject code : 26052 (Doctoral Elective Subject)]
*Note that the codes are different for master's and doctoral students.

English (GSMS)

- To improve English language skills, English language proficiency will be assessed and two credits will be awarded according to the CEFR (The Common European Framework of Reference for Languages) standards, which are widely recognized as international standards for language communication skills.
- 2. The University has established English subjects as elective subjects in the Master's and Doctoral Programs of the Graduate School of Medical Sciences, and requires students to take the STEP (Eiken), GTEC/CBT, GTEC for STUDENTs, IELTS, TEAP, TOEFL iBT, TOEFL Junior Comprehensive, or TOEIC/ TOEIC S&W. Credit will be granted by submitting test scores of those tests.
- 3. Level A is defined as C1 level and Level C as B1 level according to the CEFR standards. Evaluation will be based on the following criteria.
 - AA: CEFR C2 level
 - A: CEFR C1 level
 - B: CEFR B2 level
 - C: CEFR B1 level (See Note below)
 - Fail: CEFR A2 level or below

(Note) The CEFR B1 level score will be regarded as 'Fail' if it has not improved from the English score at the time of admission.

4. Conversion of each English test's scores to the CEFR standards will be based on the table approved by the faculty meeting.

5. Evaluation will be made on English scores taken after the second year of the graduate school after a minimum of 90 hours of English study overall, including English conversation in the laboratory and English papers study after entering the graduate school.

	2	} 試験	団体(Dデータ	アによる	SCEF	Rとの	対照表	2015/09/29版
CEFR	Cambridge English	英検	GTEC CBT	GTEC for STUDENTS	IELTS	TEAP	TOEFL iBT	TOEFL Junior Comprehensive	TOEIC / TOEIC S&W
C2	CPE (200+)				8.5-9.0				
C1	CAE (180-199)	1 級 (2810-3400)	1400		7.0-8.0	400	95-120		1305-1390 L&R 945~ S&W 360~
B2	FCE (160-179)	準 1 級 (2596-3200)	1250- 1399	980 L&R&W 810	5.5-6.5	334-399	72-94	341-352	1095-1300 L&R 785~ S&W 310~
B1	PET (140-159)	2 級 ⑴780-2250)	1000- 1249	815-979 L&R&W 675-809	4.0-5.0	226-333	42-71	322-340	790-1090 L&R 550~ S&W 240~
A2	KET (120-139)	準 2 級 ⑴35-2100)	700- 999	565-814 L&R&W 485-674	3.0	186-225		300-321	385-785 L&R 225~ S&W 160~
A1		3級-5級 (790-1875)	-699	-564 L&R&W -484	2.0				200-380 L&R 120~ S&W 80~

Reference

IELTS: ブリティッシュ・カウンシル(および日本英語検定協会)資料より

TEAP:第1回 英語力の評価及び入試における外部試験活用に関する検討会 吉田研作教授資料より Cambridge English (ケンブルッジ支検): ケンブルッジ大学語検定機構 http://www.cambridgeenglish.org/exams-and-qualifications/cefr/cefr-exams/ http://www.cambridgeenglish.org/exams/cambridge-english-scale/

※各試験団体の公表資料より文部科学省において作成

Source: Ministry of Education, Culture, Sports, Science and Technology Website

(https://www.mext.go.jp/b_menu/shingi/chousa/shotou/117/shiryo/_icsFiles/afiel

dfile/2015/11/04/1363335 2.pdf)

(Format)

Application Form for Credits of English (GSMS)

	Application c	late:		(ye	(year/month/day)		
Student number:		Grade:	Master •	Doctor	Year		
Name:		Affiliati	on :				
Course name (if applicable):	Pho	ne numbe	er:				
E-mail address:							
English Score at admission	Date of exam (y/m/d) Type of exam: Score:):					
English Score after the 2nd year *1	Date of exam (y/m/d) Type of exam: Score:):					
Commitment to English Language Learning *2							

- *1) In addition to this application form, please submit <u>a copy of your English test score (a copy is acceptable)</u> to the Student Affairs Section.
- *2) For this course, evaluation will be made on English scores taken after the second year of the graduate school after a minimum of 90 hours of English study overall, including English conversation in the laboratory and English papers study after entering the graduate school. Please describe how you have approached your English study after taking this course.

Practice (Jissen) I, II · Practice (Jissen) III Timetable Code List

Please refer to the URL below for further details of "Departmental Course Practice (Jissen) I, II • Practice (Jissen) III". http://syllabus.kumamoto-u.ac.jp/

Field		Subject	Practice I	Practice II	Field		Subject	Practice I	Practice II
	1	Anatomy	20380	21190		50	Urology	22820	22950
	2	Histology	20280	21090		51	Ophthalmology	22830	22960
	3	Sensory and Cognitive Physiology	20390	21200		52	Otolaryngology-Head and Neck Surgery	22840	22970
	4	Molecular Physiology	20250	21060	Surgery	53	Oral and Maxillofacial Surgery	22860	22990
	5	Molecular and Medical Pharmacology	26055	26056		54	Dermatology and Plastic Surgery	22570	22690
	6	Medical Biochemistry	20500	21310		55	Anesthesiology	22870	23000
		Molecular Genetics	20240	21050			International Medical Cooperation	20950	21760
	8	Pathology and Experimental Medicine					Kidney Development	22490	22610
Basic	9	Cell Pathology	20510	21320		58	Brain Morphogenesis	22500	22620
Medicine	10	Microbiology	20480	21290		59	Cell Modulation	22510	22630
		Immunology	20290	21100	Institute of	60	Cell Maintenance	22520	22640
		Molecular Brain Science	25070	25080	Molecular	61	Cell Differentiation	22530	22650
	13	Molecular Biology of Aging and Longevity	25260	25270	Embryology and	62	Stem Cell Biology	22550	22670
		Lifelong Health Education	25860	25870	Genetics		Medical Cell Biology	22560	22680
		Medical Oncology and Translational Research	22890	23020			Chromosome Biology	25190	25200
		Neuroscience for Metabolic Control	26053	26054	-	65	Muscle Development and Regeneration	25690	25700
		Medical Education	26059	26060			Trophoblast Research	26057	26058
		Public Health	23060	23070			Hematopoiesis	25300	25310
		Forensic Medicine	21010	21820		68	Infection and Hematopoiesis	25320	25330
Environmental		Bioethics	21010	21820	Joint Research	69	Infection and Immunity	25340	25350
and Socio		Clinical Ethics	21020	21850	Center for		AIDS Therapeutics	25360	25370
Medical Sciences		Clinical Psychology	21040	21830	Human Retrovirus Infection	70	Vaccine	25380	25390
		Regulatory Science	23040	23050		72	Genomics and Transcriptomics	25300	25390
		Respiratory Medicine	23040	23030		72		25750	25760
		Cardiology	22790	22920	Institute of Resource	74	Virology and Pathology	26000	26010
		Endocrinology and Metabolism	22300	21510			Reproductive Engineering	20000	21180
		Nephrology	20700	21510			Disease Epigenetics	25560	25570
		Gastroenterology and Hepatology	20720	21500	Development And		Radioisotope and Tumor Pathobiology	26061	26062
		Hematology, Rheumatology and Infectious Disease	25130	21300	Analysis		Functional Genomics	26065	26062
		Neurology	25420	25430		79	Stem Cell Stress	25440	25450
		Pediatrics	20740			80	Transcriptional Regulation in Leukemogenesis	25460	25450
		Diagnostic Medicine	23080				Developmental Morphogenesis	25480	
Internal Medicine		Diagnostic Radiology	23080	23090 21440	International	82	Multi-dimensional Imaging	25480	25490 25530
and Pediatrics		Radiation Oncology	20630		Research Center for		Proteostasis in Stem Cell	25900	25530
				21430	Medical Sciences				
		Neuropsychiatry	22810	22940			Developmental Cardiology Chromatin Organization in Immune Cell	25920	25930
	36	Disaster and Critical Care Medicine	25960	25970		85	Development	25940	25950
	37	General Medicine and Clinical Epidemiology	25980	25990		86	Epigenetic Inheritance	26063	26064
	38	Health Care Science	21000	21810		87	Metabolomics practice II		21860
	39	Medical Information Sciences	20660	21470		88	Metabolic information epidemiology practice II		21870
	40	Diagnostic Pathology	25540	25550					
	41	Physiological Function Assessment	22230	22240					
	42	Advanced Cardiovascular Medicine	22730	22750					Practice
	43	Gastroenterological Surgery	20870	21680		89	Diagnostic Image Analysis practice III		21880
	44	Thoracic Surgery and Breast Surgery	25880	25890		90	Surgocal therapeutics for Cancer practice III		21890
	45	Cardiovascular Surgery	20860	21670		91	Radiation Oncology practice III		21900
Surgery		Pediatric Surgery and Transplantation	22880	23010		92	Cancer Chemotherapy practice III		21910
		Neurosurgery	20920	21730			Paliative Care practice III		21920
		Orthopaedic Surgery	22850	22980		94	Clinical metabolic informatics practice III		21930
		Obstetrics and Gynecology	22580						

Course Work subject

(Medical Experiment Course)

[Subject code : 10170 (Master's Elective Subject)] [Subject code : 20200 (Doctoral Compulsory Subject)] *Note that the codes are different for master's and doctoral students. Academic Year 2025 Graduate School's Medical Experiment Course

			Location	: Lect	ure Roo	om 2(Medical Education & Library Building 3F)	
Date			AM	PM			
April 7	1	8:45 ~ 10:15	Introduction to recombinant DNA technique [eEJ-L] (Molecular Genetics : TERADA Kazutoyo)	3	13:15 ~ 14:45	Fundamentals and Applications of PCR [eEJ-L] (Medical Biochemistry : SATO Yoshifumi)	
(Mon.)	2	10:30 ~ 12:00	Gene Trasfer Technique [eEJ-L] (Molecular Physiology : CHUJO Takeshi)	4	15:00 ~ 16:30	Practice and Guidance for Biological Laboratory Safety [eEJ-L] (Microbiology: TSUTSUKI Hiroyasu)	
April8	5	8:45 ~ 10:15	Cell Imaging and Image Analysis 【eEJ+L】 (Chromosome Biology: SHIMADA Ryuki)	6	13:15 ~ 14:45	Analysis of Transcriptional Regulation [eEJ-L] (:Molecular and Medical Pharmacology KANAMORI Yohei)	
(Tue.)		10:30 ~ 12:00		7	15:00 ~ 16:30	Pharmacokinetics [eEJ-L] (Pharmacology and Therapeutics : SARUWATARI Jyunji)	
April 9	8	8:45 ~ 10:15	Production of polyclonal and monoclonal antibodies [eEJ-L] (Immunology : IRIE Atsushi)		13:15 ~ 14:45		
(Wed.)	9	10:30 ~ 12:00	How to use ChIP-Atlas [eEJ-L] (Institute of Resource Development and Analysis: OKI Shinya)		15:00 ~ 16:30		
April 10	10	8:45 ~ 10:15	Immunohistochemistry [eEJ-L] (Tumor Pathology : YANO Hiromu)		13:15 ~ 14:45		
(Thu.)	11	10:30 ~ 12:00	Basic Methods in Immunology [eEJ-L] (Immunology : IRIE Atsushi)	12	15:00 ~ 16:30	Proteomics [eEJ-L] (Tumor Genetics and Biology : ARAKI Norie)	
April 11	13	8:45 ~ 10:15	Experimental animals and animal Experimentations I [eJ-L] (Division of Microbiology and Genetics: TORIGOE Daisuke)	15	13:15 ~ 14:45	Analytical methods for intracellular signaling [eEJ-L] (Infection and Hematopoiesis : SUZU Shinya)	
(Fri.)	14	10:30 ~ 12:00	Experimental animals and animal Experimentations II [eJ-L] (Division of Microbiology and Genetics: TORIGOE Daisuke)	16	15:00 ~ 16:30	In situ hybridization 【eEJ-L】 (Chromosome Biology: KIKUCHI Koji)	
April 14		8:45 ~ 10:15		18	13:15 ~ 14:45	Reproductive Engineering Techniques (Reproductive Engineering: TAKEO Toru)	
(Mon.)	17	10:30 ~ 12:00	Introduction to flowcytometry 【eEJ-L】 (Immunology : IRIE Atsushi))		15:00 ~ 16:30		
e-learning only	19		Experiment study and safety control [eEJ-0] (Environmental Safety Center: YAMAGUCHI Yoshihiro)				

Developmental Biology and Regenerative Medicine

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)		Eligible Student ar(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7	-024-67-1	2025v	vhole year	Graduate School of Medical Sciences (22140)	-	1, 2, 3, 4	2	others	
		Co	ourse Title(Th	neme)(科目名(講義題目))	•	Instructor(s)(担当教員)			
Speci Spe	ial Lecture "T cial Lecture	「okuron" "Tokuror	on Developr " on Develop	on Developmental Biology and Regenerative Medicine I(E1 on Developmental Biology and Regenerative Medicine I) on Developmental Biology and Regenerative Medicine I) Yuta, Guojun Sheng, Mizuno Hidene					
				Goals with their ratio(学修成果と	その割れ	 合)			
1.Advanced expert knowledge, skill and research capability ····40% 2.Profound inter-disciplinary knowledge ····30% 3.Global perspect and ability to take initiative action ····20% 4.Social leadership drive ····10%									
Туре о	of Class(授業)	の形態)	Lecture	· · · · · ·					
Teachir	ng Method(捂 法)	受業の方	PowerPoint reports are	will be used in the lectures, and active pa considered for remote students and worki	rticipat ng stud	ion in the di lents. Evalua	scussion is enc tion will be bas	ouraged. E-learning and ed on reports.	
Course	e Goals(授業)	の目的)	organogene pluripotent ectoderm, e	se, you learn basic aspects of early develo esis, and stem cell biology. Through the co stem cells and tissue stem cells, the devel endoderm, and mesoderm, the regulatory hat controls cell differentiation and prolife	urse, yo opmen nechar	ou will under tal mechanis hisms of cellu	stand the regul sms of organs d	latory mechanisms of erived from the	
Course	Learning goo 目標)	als(学修	Mechanism Developmen mechanism proliferation [C level (C Students ard Mechanism Developmen mechanism	e expected to acquire professional compe s of maintenance and differentiation of plu ntal mechanisms of organs derived from e s of cellular functions, and (4) Epigenomic n at higher levels.	ripoter toderr regula to une ripoter toderr	nt stem cells n, endoderm tion that cor derstand and nt stem cells n, endoderm	and tissue ster and mesoder atrols cell differ d explain the fo and tissue ster and mesoder	n cells, (2) m, (3) Regulatory entiation and llowing subjects; (1) n cells, (2) m, (3) Regulatory	
Following topics including the most recent progress will be shown and discussed in addition to reading o papers. • Stem cells and regenerative medicine • Pregnancy and placental development • Renal development and regeneration • Development and regeneration of the brain • Germ cell development • Body plan of amniotes • Development and epigenomic regulation						ition to reading original			
			Developm	nent and epigenomic regulation	- 1- 114				
			• Body plar • Developm	n of amniotes nent and epigenomic regulation Details for Individual Classes(各回	の授業内	内容)			
No.(回)	Date(月	日)	• Body plar • Developm	nent and epigenomic regulation			ef Outline of Cl	ass(内容概略)	
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) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	10/0 10/1 10/1 10/2 10/3 11/0 11/1 11/2 11/2 12/0 12/1 12/1 12/2 01/0	2 9 6 3 0 6 3 0 7 7 4 1 8 5 8 5 5	Developm Thu. 4th pe Thu. 4th pe	nent and epigenomic regulation Details for Individual Classes(各回 Class Theme(授業テーマ) riod. Hitoshi Niwa riod. Hitoshi Niwa riod. Takumi Era riod. Takumi Era riod. Takumi Era riod. Hiroaki Okae riod. Hiroaki Okae riod. Hiroaki Okae riod. Ryuichi Nishinakamura riod. Kenji Shimamura riod. Koji Kikuchi riod. Koji Kikuchi riod. Shinya Oki riod. Shinya Oki riod. Guojun Sheng	Self Diffe Plur Clin Preg Ster Mol Plur rege How the Role path Biot Reg Epig deve	Brie -renewal of p erentiation o ipotent stem ical applicat gnancy and p n cell-based ecular Mech ipotent stem enerative me v animals de germline in f nologies caus echnologies ulation of sp genome proge elopment niote body p aembryonic	oluripotent sten of pluripotent sten of cells and tissu ion of stem cell placental develo pregnancy reso anism of Kidne of cells for devel dicine of the br velop: what we ruit flies, Droso aling in animal sed by its abno of germ cells a atial gene expri gramming and r lan: gastrulation	n cells em cells ee stem cells ls for human diseases opment earch y Development opmental biology and rain can learn from studies of ophila. development and rmalities nd early-stage embryos ession eprogramming during n and embryonic-	
) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Estim	10/0 10/1 10/2 10/3 11/0 11/1 11/2 11/2 12/0 12/1 12/1 12/2 01/0 01/1 mated out-of-	2 9 6 3 0 6 3 0 7 4 1 8 5 8 5 5 class	Developm Thu. 4th pe Thu.	nent and epigenomic regulation Details for Individual Classes(各回 Class Theme(授業テーマ) riod. Hitoshi Niwa riod. Hitoshi Niwa riod. Takumi Era riod. Takumi Era riod. Takumi Era riod. Hiroaki Okae riod. Hiroaki Okae riod. Hiroaki Okae riod. Ryuichi Nishinakamura riod. Kenji Shimamura riod. Koji Kikuchi riod. Koji Kikuchi riod. Shinya Oki riod. Shinya Oki riod. Guojun Sheng	Self Diffe Plur Clin Preg Ster Mol Plur rege How the Role path Biot Reg Epig devu Amr extr Con	Brid -renewal of p erentiation of ipotent stem ical applicat gnancy and p n cell-based ecular Mech ipotent stem enerative me v animals de germline in f e of Wnt sign nologies caus echnologies ulation of sp genome prog elopment niote body pl aembryonic struction of	oluripotent sten of pluripotent sten of cells and tissu ion of stem cell placental develo pregnancy reso anism of Kidne of cells for devel dicine of the br velop: what we ruit flies, Droso aling in animal sed by its abno of germ cells a atial gene expri gramming and r lan: gastrulation	n cells em cells ee stem cells ls for human diseases opment earch y Development opmental biology and rain can learn from studies of ophila. development and rmalities nd early-stage embryos ession eprogramming during n and embryonic-	
) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Estim Require	10/0 10/1 10/2 10/3 11/0 11/1 11/2 11/2 12/0 12/1 12/1 12/1	2 9 6 3 0 6 3 0 7 4 1 8 5 5 8 5 5 class (\mathcal{F} + \mathcal{X}	Developm Thu. 4th pe Thu. 4th pe	nent and epigenomic regulation Details for Individual Classes(各回 Class Theme(授業テーマ) riod. Hitoshi Niwa riod. Hitoshi Niwa riod. Takumi Era riod. Takumi Era riod. Takumi Era riod. Hiroaki Okae riod. Hiroaki Okae riod. Hiroaki Okae riod. Kenji Shimamura riod. Kenji Shimamura riod. Koji Kikuchi riod. Koji Kikuchi riod. Shinya Oki riod. Shinya Oki riod. Guojun Sheng riod. Hidenobu Mizuno	Self Diffe Plur Clin Preg Ster Mol Plur rege How the Role path Biot Reg Epig dev Amr extr Con	Brid -renewal of p erentiation o ipotent stem ical applicat gnancy and p n cell-based ecular Mech ipotent stem enerative me v animals der germline in f e of Wnt sign hologies cau vechnologies ulation of sp genome prog elopment hiote body pl aembryonic istruction of d. WW Norton a	oluripotent sten of pluripotent sten of cells and tissu ion of stem cell olacental devela pregnancy rese anism of Kidne n cells for devel dicine of the br velop: what we fruit flies, Drosc aling in animal sed by its abno of germ cells a atial gene expre gramming and r lan: gastrulation demarcation functional neur	n cells em cells ee stem cells ls for human diseases opment earch y Development opmental biology and rain can learn from studies of ophila. development and rmalities nd early-stage embryos ession eprogramming during n and embryonic- ronal circuit in the brain	

条件)	Having basic knowledge related to this class
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on the student's understanding of the course subject matter as well as participation in class discussions. The students' understanding will be evaluated on the basis of reports or exams via the LMS e-learning Moodle system. Final grades will be based on the average of the top 10 scores.
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)		emester/Ter 度・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-	-025-79-1	2025v	whole year	Graduate School of Medical Sciences (22150)	1	, 2, 3, 4	2	others			
		Co	ourse Title(Th	neme)(科目名(講義題目))		Instructor(s)(担当教員)					
Specia	al Lecture "T	okuron"	on Developm	nental Biology and Regenerative Medicine II	(E2)	ASAI Kob	,Norika Liu, Ke ayashi, Shunsu	Yuichiro Arima, Rieko nichi Miharada, Akio ke Tanigawa,Hitoshi suke Ono, Ryuki Shimada			
				Goals with their ratio(学修成果とその割合)							
1.Advan and abil	iced expert k ity to take in	nowledg	ge, skill and r action ••••10	e, skill and research capability ····60% 2.Profound inter-disciplinary knowledge ····25% 3.Global perspective ction ····10% 4.Social leadership drive ····5%							
Type of	f Class(授業)	の形態)	Lecture								
Teachin	ng Method(挤 法)	受業の方	PowerPoint	and/or OHP will be used in the lectures, an	d activ	ve participa	tion in discussi	on is encouraged.			
Course	e Goals(授業)	の目的)	developmen Furthermori investigatio on embryor mechanism sensory and	ntal and regenerative medicine aims at curin nt and the origin of diseases in order to deve e, this course will up-to-date with the presen ns on replacement of lost cells, tissues or or ic stem cells, tissue stem cells, their proper s of development and repairs of epithelial ti d circulatory organ, tissue injury and restora ns in transplant medicine.	elop a nt statu gans. ties an ssues,	diagnosis a us of the reg In this cours id application methodolog	nd treatment for generation mec se, you will obta on on regenerat gies in the rege	or the diseases. licines, the on going ain essential knowledge tive medicine, inerative medicine of			
Course	Learning go 目標)	als(学修	developmer	nding the lectures in this course, students a ntal biology and specific developmental bio le liver, lung, heart, nervous tissue, inner ea	logy ar	nd mechani:	sms of diseases				
Course	Outline(授業	の概要)	and tissue s abnormaliti analyses of regeneratio pathophysic heart diseas	se, lectures on the following fields will be given tem cells · properties and application of eres of epithelial cells · damage, repair and n hereditary amyloidosis · development of tr n of skin (recovery of injury) · denervatio ology of hematopoietic stem cells · basic are se · pathological analysis and treatment of trus and problems of liver transplant	ndoder nechar eatmer n and nd clin	rmal tissue s nisms of tiss nt for hered reinnervatic ic on vascul	stem cells • gro ue reconstituti- itary amyloidos on of the larynx lar neogenesis	with, differentiation and on · pathological is · development and · Physiology and · treatment of ischemic			
			•	Details for Individual Classes(各回の授業内容)							
No.(回)	Date(月	日)		Class Theme(授業テーマ) Brief Outline of Class(内容概略)							
1	03/0	9	【1st grade 4th period `] Yuichiro Arima 【eE-0】	Vasc	ular develo	pment and patl	nological changes			
2	03/0	9	5th period I	Rieko ASAI 【eE-0】		liac develop genital heart		ecular mechanisms of			
3	03/1	6	4th period I	Norika Liu	Hem	atopoiesis a	and morphoger	nesis			
4	03/1	6	5th period I	Kenichi Miharada	in fet	tal developr	ment	regulation of proteostasis			
5	03/2	3		Akio Kobayashi			s during kidney	•			
6			[2nd grade Shunsuke T	e) anigawa	biolo	ogy		s based on developmental			
7			Jun Hatakey	/ama	neur	al stem cell	s	ntelligence generated by			
8			Jun Hatakey	/ama	brair	n in utero	-	portance of nurturing the			
9			Hitoshi TAK	IZAWA	Phys	iology of he	matopoietic st	em cell			
10			Hitoshi TAK		Path	ophysiology	of hematopoie	etic stem cell			
11			[3rd grade Joji Watase				opment and ag	5			
12			Yusuke Ond					of skeletal muscle			
13			Yusuke Ond			icity in skel					
14			Keiichiro IS		-	•	mammalian ge				
15			Ryuki Shima	ada	Gern	n cells for re	egenerative me	dicine			
	ated out-of- study time										
	ed Textbook										
	ing List(参考										
Enrollmo	ent Conditic 条件)	ons(履修									
	ment Metho ia(評価方法・		on the stud	l be based on active class participation, pap ent's understanding of the course subject m papers and quizzes related to the topics de	atter.	The student	ts' understandiı	ng will be evaluated on			

Assessment Methods and Criteria(評価方法・基準)	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)	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(年度	mester/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)			
RDM7	-026-79-1	2025w	/hole year	Graduate School of Medical Sciences (22160)		, 2, 3, 4	2	others			
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)			
	Speci	al Lecture	e "Tokuron" c	on Transplantation immunology(E3)		OS	OSHIUMI Hiroyuki, IRIE Atsushi, Hibi Taizou, Takashima Ken				
				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 ad	e, skill and ro ction ••••25	e, skill and research capability ·····25% 2.Profound inter-disciplinary knowledge ·····25% 3.Global perspective stion ·····25% 4.Social leadership drive ·····25%							
Туре о	of Class(授業	の形態)	Lecture								
Teachir	ng Method(挑 法)	受業の方		and/or OHP will be used in the lectures, an s or video lectures are considered for those							
Course	e Goals(授業	の目的)	 (1) The mec (2) Allo-anti (3) The strue (4) Basic im 	this lecture are to understand the following hanism of rejection in allo-transplantation gens that induce allo-reactivity cture and function of human major histocor munology and clinical immuno-regulation th status and future direction of transplantatio	npatib nerapy	to avoid gr					
Course	Learning go 目標)	als(学修		ing of the mechanisms of rejection in allo-tr and the basics in clinical immuno-regulatior							
Course	Outline(授業	(の概要)	However, th species, due allogeneic c Among such lecture on t will provide lecture on t	patients, transplantation of the cells, tissue ere are structural differences of proteins, lip to genetic polymorphism. Therefore, follow lonor, the recipient immune system is activa allogeneic antigens, MHC are the stronges he basic and clinical immunology related to the latest information on the issue of clinica he transplantation immunology at the level inical medicine, including recent advances	bids, an ving th ited by t in sti the m al trans of cells	nd sugars b te transplan such polyr mulating all ethodology splantation s, tissues, ar	etween differer Itation of a graf morphic molect lo-reactive imm t o avoid such i and regenerati nd organs, from	nt individuals of the same t obtained from an ules and reject the graft. une response. We will rejection. In addition, we we medicine. We will the viewpoint of both			
				Details for Individual Classes(各回の	授業内	容)					
No.(回)	Date(月	日)		Class Theme(授業テーマ)		Brief Outline of Class(内容概略)					
1			Hiroyuki Os	hiumi eE-JO, eJ-O	Intro	duction to I	Innate Immunit	у			
2			Hiroyuki Os	hiumi eE-JO, eJ-O	Intro	duction to /	Adaptive Immu	nity			
3	10/2	27	Mon 4th pe	riod, Atsushi Irie	Polyr	norphism o	f MHC and T ce	ell- activation signals			
4	11/1	0	Mon 4th pe	riod, Atsushi Irie	Reco	gnition of a	lloantigens by	T cells			
5			Hiroyuki Os	hiumi eE-JO, eJ-O	Anti-	Tumor Imm	une Response				
6	12/0)1	Mon 4th pe	riod, Atsushi Irie	Majo	r and mino	r histocompatik	oility antigens			
7	12/0	8	Mon 4th pe	riod, Atsushi Irie	Immu	une respons	se and dendriti	c cells			
8	12/1	5	Mon 4th pe	riod, Atsushi Irie	Cyto	kine and Cł	nemokine				
9			Hiroyuki Os	hiumi eE-JO, eJ-O	Hum	oral Factors	s regulating Imr	nunity			
10	01/0)5	Mon 4th pe	riod, Ken Takashima	Immu	une toleran	се				
11			Hiroyuki Os	hiumi, eE-JO, eJ-O	Host	immune re	sponses to graf	İts			
12			Hiroyuki Os	hiumi eE-J0, eJ-0	Immu	une senesce	ence and Inflam	nmaging			
13			Ken Takashi	ma eE-JO, eJ-O	Immu	unosuppres	sant and transp	olantation			
14			Taizo Hibi e	E-J0, eJ-0	Trans	splantation	in Japan and th	ne world			
15			Taizo Hibi e	E-J0, eJ-0	Liver	transplant	from living don	or			
Estim	nated out-of- study time	-class									
Require	ed Textbook ト)	(テキス	Textbooks a	re not specified, and handouts will be distri	buted.						
Read	ling List(参考	文献)	• "Janeway' Science, Tay	une System" by Peter Parham. Garland Publ s Immunobiology Seventh Edition" by Ken ylor & Francis Group LLC. New York and Abi y of transplantation immunology" (Leslie B	neth N ngdon	lurphy, Pau 1. 2008.	ll Travers, Mark	n, 2004 Walport. Garland			
Enrollm	ient Conditio 条件)	ons(履修	It is recomm	nended for you to read a syllabus and indica	ted re	commende	d readings in a	dvance.			
	ment Metho ia(評価方法,	ds and · 基準)	will be spec matter. The to the topic	Achievement of the Objectives will be evaluated by active class participation and the reports of which the theme will be specified after the lectures. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of the reports and brief examinations related to the topics dealt with in the class to be scored from 0 to 100. Final grades will be based on the average of the best 10 scores of the reports and brief examinations as well as the participation in class discussions.							
Lar Instr	nguage Used ruction(使用)	d in 言語)	Japanese ar	id English							
Тех	ktbook/Mate	erial	Combinatio	n of Japanese and English		_					

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

	Coding(科 ンバー)	Year/Sei m(年度	mester/Ter 度・学期)	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	-027-81-1	2025w	hole year	Graduate School of Medical Sciences (22170)		1, 2, 3, 4	2	others			
		Cou	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)			
		Speci	al Lecture "T	okuron" on Bioethics(E4)		KADOOKA Yasuhiro					
1.Advanced expert knowledge, skill and research capability ····25% 2.Profound inter-disciplinary knowledge ····50% 3.Global perspectand ability to take initiative action ····25%											
Туре о	f Class(授業	の形態)	Lecture								
Teachir	ng Method(挡 法)		E-learning system will be provided for classes on research ethics/integrity. Classes of "Highly Advanced Medicine" and "Step-up lecture on RCR" are held in intensive courses. Several pedagogic strategies including video-lecture and e-learning will be used according to student condition and COVID-19 status.								
Course	e Goals(授業	の目的)	medicine, w technologie	lecture on bioethics will deal with ethica hich may be relevant to organ transplant s, and so on. This course is aimed to pro ing concerning major bioethical issues a	ation, vide lif	human stem c	ell research, ge archers with ac	enetic research and dequate knowledge and			
Course	Learning go 目標)	als(学修	and biomed 2. make eth 3. express th 4. comprehe [C level (C 1. to unders researches,	e able to a variety of issues on biomedical ethics ical researches, and identify fundamenta ically consistent discussion basing on re heir own ethical views, and end academic materials in the field of bio 水準)] tand ethical issues related to life science	al prob evant omedia es, higl	blems inherent norms of biom cal ethics. hly advanced b	in them, edical ethics,	-			
Course	Outline(授業	きの概要)	and student	will consist of lectures concerning impor s' presentation. Participating students r own arguments.							
				Details for Individual Classes(各回	回の授業	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			[1st grade] Responsible] e Conduct of Research (RCR) 1	e	eAPRIN (CITI e-learning system)					
2			RCR 2		_	eAPRIN (CITI e-learning system)					
3			RCR 3		e/	APRIN (CITI e-le	earning system)			
4			RCR 4			PRIN (CITI e-learning system)					
5			RCR 5		e/	eAPRIN (CITI e-learning system)					
6			2nd grade Highly adva	e) nced medicine 1	0	Organ Transplantation					
7			Highly adva	nced medicine 2	R	Regenerative medicine					
8			Highly adva	nced medicine 3	G	Gene diagnosis and therapy					
9			Highly adva	nced medicine 4	A	ssisted reprodu	uctive technolo	gy			
10			Highly adva	nced medicine 5	Er	nhancement					
11			[3rd grade Step-up lect] ture on RCR 1	Pi	rofessionalism	of scientists				
12			Step-up lect	ture on RCR 2	С	onflict of Intere	est				
13			Step-up lect	ture on RCR 3	R	esearch Integri	ty				
14			Step-up lect	ture on RCR 4	R	esearchers' Soc	cial Responsibi	lities			
15			Step-up lect	ture on RCR 5	So	cience Commu	nication				
Estim	nated out-of- study time	-class									
Require	ed Textbook ト)	(テキス	Textbooks a	re not specified and handouts are provid	led.						
Read	ling List(参考	文献)	The Hastings Center. Bioethics Briefings (https://www.thehastingscenter.org/publications-resources/hastings- center-bioethics-briefings/) Ravitsky V. et al. (Edition) The Penn Center Guide to Bioethics. Springer, 2009. Bonnie Steinbock (Edition) The Oxford handbook of Bioethics. Oxford University Press, 2007. Singer PA. et al (Edition) The Cambridge Textbook of Bioethics. Cambridge university Press, 2008. Carl Mitchan (Editor in Chief) Encyclopedia of Science, Technology, and Ethics. Volume 1-4, Macmillan Reference USA, Thomson/Gale, 2005. Beauchamp TL, Childress JF. Principles of Biomedical Ethics 4th edition. NY, Oxford University Press, 1994. Alastair Campbell. Bioethics the basics. Routledge, 2013. British Medical Association. Medical Ethics Today 3rd edition. London, BMJ, 2011. and so on								
Enrollm	ent Conditio 条件)	ons(履修									
	ment Metho ia(評価方法,	ods and ・基準)	Students ard understandi	e evaluated for their course grades and c ing and knowledge earned about informa	redits ation ir	based on the c n the research t	course hours co for bioethics, a	ompleted, their bility of summarizing and			

Assessment Methods and Criteria(評価方法・基準)	presenting bioethical deliberation of their own themes, and so on. Grading will be based on the student's understanding of the course subjects.
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 (The teacher with academic degrees of bioethics and medicine, and practical work experiences including research and education on biomedical ethics, ethical review of medical research protocols, and clinical ethics support.)

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 r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)			
RDM7-117-99-1	2025	whole year	Graduate School of Medical Sciences (22180)	1	, 2, 3, 4	2	others			
	Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)			
Practice "Enshu "Enshu	iu" on Dev u" on Dev	velopmental velopmental l	Biology and Regenerative Medicine I(Practi Biology and Regenerative Medicine I)	се	ryuki, Mitsuh	, ABE Hironori, iro, KOGA Saor	KAE Hiroaki, SHIMADA FUJIMAKI Shin, Endo i, HINO Shinjiro, KOGA KUCHI Koji, WATASE Joji			
			Goals with their ratio(学修成果とその割合)							
1.Advanced expert and ability to take i	knowledg nitiative a	ge, skill and reaction ····20	esearch capability ····30% 2.Profound inte % 4.Social leadership drive ····20%	er-disci	iplinary kno	wledge ····30	% 3.Global perspective			
Type of Class(授業	の形態)	Seminar								
Teaching Method(法)	授業の方	PBL, group	work training							
Course Goals(授業	の目的)	biology, mo fields of bio diseases fro to repair ag related to a practice into	ntal and regenerative medicine is an extrem lecular biology, genetics, immunology, histo sciences. Characterizing pathological cond m the viewpoint of developmental biology, eing and injured tissues and organs, may ne bove interdisciplinary fields. Based on the k ends to enhance the ability of approaching juest for an arbitrarily-selected issue throug	ology, r itions a as well ed to s nowled solutio	reconstructi and etiology l as establis surmount va dge learned on of proble	ve surgery, bio and developir hing regenerati arious critical p in the special ms from a mult	ethics and other broad or medical treatment for ve medicine in an effort roblems that should be lectures "Tokuron", this ilateral perspective by			
Course Learning go 目標)	oals(学修	[A level (A水準)] Students are expected to acquire the ability to approach solutions to problems from a multilateral perspective based on their knowledge in interdisciplinary fields. [C level (C水準)] Students are expected to acquire the ability to approach solutions to problems from a perspective based on their knowledge in the fields.								
Course Outline(授考	業の概要)	Students form a small group and raise an issue related to developmental and regenerative medicine. (An example of the issue might be finding a way to recover kidney function avoiding relying on dialysis treatment.) Students then find obstacles to settlement of the issue and examine literatures cooperatively with the group members and make discussions in order to explore methodology and strategy to solve the raised problems. The instructors listed above appropriately support the group work to facilitate learning. Results of the study are summarized in report. Students will also have opportunities for the presentation of the results.								
			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		Issues will b	e raised by students.	Issue	es will be rai	ised by student	S.			
Estimated out-of study time		60 hours								
Required Textbool ト)	<(テキス									
Reading List(参考	,									
Enrollment Conditi 条件)	ons(履修									
Assessment Metho Criteria(評価方法		of evaluatio	be based on active participation in the gro n are (i) whether problems are appropriatel oblems are appropriately presented, (iii) wh	y raise	d from the s	selected issue,	(ii) whether strategies to			
Language Use Instruction(使用		Japanese and English								
Textbook/Mate Language(教科書・ 語)		English	English							
Course Based on F Work Experience(を活かした授	実務経験	Not applica	ble							

Course Cod 目ナンバ・	ing(科 一)	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)		
RDM7-118-	-99-1	2025whole yea		Graduate School of Medical Sciences (22190)	1	, 2, 3, 4	2	others		
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)		
				Biology and Regenerative Medicine II(Pract Biology and Regenerative Medicine II)	ice	ryuki, Mitsuh	, ABE Hironori, iro. KOGA Saor	KAE Hiroaki, SHIMADA FUJIMAKI Shin, Endo i, HINO Shinjiro, KOGA KUCHI Koji, WATASE Joji		
				Goals with their ratio(学修成果とその割合)						
1.Advanced and ability to	expert k o take in	nowledg itiative a	ge, skill and ro ction ••••10	esearch capability ·····50% 2.Profound int % 4.Social leadership drive ····10%	er-disc	iplinary kno	wledge ····30	% 3.Global perspective		
Type of Clas	ss(授業(の形態)	Lecture and	Seminar						
Teaching Me	ethod(搒 法)	受業の方	Students att summary of for one repo	end the seminars that are authorized by th the lectures and his/her own discussion a ort.	e cour oout th	se and write le topics. In	e reports. The re principle, one l	eports should include nour seminar is suitable		
Course Goa	als(授業(の目的)	life science. regenerative and present	ntal and regenerative medicine is an interd This practice consists of lectures from res- e medicine in Japan and overseas. Researc latest developments of their own. Student edge of regenerative medicine and related	earche hers co s are e	rs who work ommitted to ncouraged 1	on developme cutting-edge re to attend the se	ntal biology and esearch will be invited eminars to acquire up-to-		
Course Lean E	ning goa 目標)	als(学修	Students are medicine. [C level (C	【C level (C水準)】 Students are expected to acquire competence to understand the research developments of regenerative						
Course Outli	ine(授業	の概要)	Topics of the seminars may encompass full range of issues that are related to developmental biology and regenerative medicine, including cell engineering, genetic engineering, biomedical materials, reproductive medicine and bioinformatics.							
				Details for Individual Classes(各回0	D授業内	3容)				
No.(回)	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1			the latest re medicine	search developments of regenerative		atest resear icine	ch developmer	nts of regenerative		
Estimated stud	l out-of- dy time	class	75 hours							
Required Te	extbook ト)	(テキス								
Reading L	.ist(参考	文献)								
Enrollment C 条	Conditio 译件)	ons(履修								
Assessment Criteria(評f				e obligated to attend 15 or more lectures a t maximum. Grading will be based on the r			The attendanc	e can be extended to		
Languaş Instructio			English							
Textboo Language(教	ok/Mate ≅科書・資 語)	rial 資料の言	English	English						
Course Base Work Experi を活か		務経験	Not applica	ble						

				F	Eligible				
Course Coding(目ナンバー)		semester/Ter ≅度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	S	Student (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-119-99-	1 2025	whole year	Graduate School of Medical Sciences (22200)	1	, 2, 3, 4	2	others		
	С	ourse Title(Th	neme)(科目名(講義題目))		Instructor(s)(担当教員)				
			Biology and Regenerative Medicine III(Pract Biology and Regenerative Medicine III)	ce	ryuki, Mitsuh	ABE Hironori, iro, KOGA Saor	KAE Hiroaki, SHIMADA FUJIMAKI Shin, Endo i, HINO Shinjiro, KOGA KUCHI Koji, WATASE Joji		
			Goals with their ratio(学修成果とそ	の割合	ን)				
1.Advanced expe and ability to tak	ert knowled e initiative	lge, skill and r action ····20	esearch capability ····30% 2.Profound inte % 4.Social leadership drive ····20%	r-disci	plinary kno	wledge ····30	% 3.Global perspective		
Type of Class(拐	業の形態)	Seminar							
Teaching Metho 法)	d(授業の方		tend domestic or international conferences d research fields, and present findings obta				nerative medicine and		
Course Goals(扨	業の目的)	present reserved	process of conducting research on develop earch findings and discuss with other scient ns at expanding capability to make a produc and to present and discuss own findings in	ists at tive di:	domestic ar	nd internationa n a subject pres	l conferences. This ented by other		
Course Learning 目標)	goals(学修	Students ar researchers [C level (C Students ar	[A level (A水準)] itudents are expected to acquire skills to make a productive discussion on a subject presented by other esearchers and to present and discuss their own findings in an effective manner at an academic conference. [C level (C水準)] itudents are expected to acquire skills to make a discussion on a subject presented by other researchers and to present and discuss their own findings at an academic conference.						
Course Outline(受業の概要)	other relate present find appropriate	Students attend domestic or international conferences on developmental biology, regenerative medicine and other related research fields. In addition to discuss on the subjects presented by other researchers, students will present findings obtained from their own research in poster or oral sessions. The instructors listed above appropriately support discussions and preparations of presentation. Students finally write a report that includes the state of achievement of the activities at the conferences.						
		_	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)			ass(内容概略)		
1		student's ov	vn research theme	stude	ent's own re	search theme			
Estimated out study tir		60 hours							
Required Textbo ト)	ook(テキス								
Reading List(콓	🕏考文献)								
Enrollment Cond 条件)	litions(履修								
Assessment Me Criteria(評価方		developmer more in sun	Students are obligated to attend and make a presentation in domestic or international conferences on developmental biology and regenerative medicine. Length of the activities at the conferences should be 4 days or more in sum total. Student should present their own research findings at least once in any of the conferences they attend. The attendance can be extended to four years at maximum. Grading will be based on the final report.						
Language U Instruction(使		English	English						
Textbook/M Language(教科書 語)		English	English						
Course Based o Work Experienc を活かした	e(実務経験	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)	S	Eligible tudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	-120-99-1	2025v	vhole year	Graduate School of Medical Sciences (22210)	1,	, 2, 3, 4	2	others		
		Co	ourse Title(Th	eme)(科目名(講義題目))	Instructor(s)(担当教員)					
Med	Practical Tr icine(Practio	aining " cal Traini	ʻJisshuu" on [ng "Jisshuu	Developmental Biology and Regenerative " on Developmental Biology and Regenerativ	ve			AE Hiroaki, SHIMAMURA A Ryuichi, Yusuke Ono		
				Goals with their ratio(学修成果とその割合)						
1.Advan and abil	ced expert ity to take ir	nowledg itiative a	ge, skill and r ction ••••10	esearch capability ····50% 2.Profound inte % 4.Social leadership drive ····10%	r-disci	plinary kno	wledge ····30	% 3.Global perspective		
Туре о	f Class(授業)	の形態)	Practice							
Teachin	ng Method(挑 法)	受業の方		g course will be held in a laboratory in char en practical handling will be trained. Results						
Course	e Goals(授業)	の目的)	medicine, w histology. F practically. methods an in specific r	erimental methods and techniques are appl hich is an interdisciplinary research based of or researchers in the field, it is required to le Even for researcher outside the filed, it is im d techniques, since it gives us a multilateral esearch fields. Principles and practical proc were trained in practical training of Develop	on cell earn su portar viewp edures	biology, mo ich experim it to unders oint and wo s for severa	olecular biolog iental methods itand a backgro ould support to l important exp	y, immunology and and techniques und of the experimental resolve various problems erimental methods and		
Course	Learning go 目標)	als(学修	Students ar advanced e [C level (C Students ar	[A level (A水準)] tudents are expected to acquire competence to understand principles and practical procedures for several dvanced experimental methods and to perform them by themselves. [C level (C水準)] tudents are expected to acquire competence to understand principles and practical procedures for several eneral experimental methods and to perform them by themselves.						
Course	Outline(授業	(の概要)	 Fraction Isolation Operant Two-pho Lipofect Inductio 	 Scanning electron microscopy (Brain Morphogenesis) Fractionation and isolation of cells by FACS (Cell Differentiation) Isolation of RNA/DNA and quantification by PCR (Medical Cell Biology) Operant conditioning test, Open field test, Fear-conditioning test (Molecular Physiology) Two-photon fluorescence microscopy for neurons (Sensory and Cognitive Physiology) Lipofection, Western blot (Kidney Development) Induction of protein expression in bacteria, protein purification (Molecular Cell Biology) 						
				, 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			Schedule of separately.	each session will be forwarded to you		ents of eac rately.	h session will b	e forwarded to you		
Estim	ated out-of- study time	class	40 hours							
Require	ed Textbook ト)	(テキス								
Read	ing List(参考	文献)								
Enrollm	ent Conditic 条件)	ons(履修								
	Assessment Methods and Criteria(評価方法・基準)		Students must participate in at least 8 sessions and submit reports for each session. Grading will be based on the student's understanding of the subject matter as well as activities in the classes. The students' understanding will be evaluated on the basis of reports to be scored from 0 to 100 for each session. Final grades will be based on the average of the top 8 scores.							
	nguage Usec uction(使用		English							
Textbook/Material Language(教科書・資料の言 語)			English	English						
Work E	Based on P xperience(実 活かした授美	彩経験	Not applica	ble						

Educational Program for Advanced Research in Infectious Diseases and AIDS

	Coding(科 ンバー)	Year/Se m(年度	mester/Ter 叓・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-	-004-99-2	2025whole year		Graduate School of Medical Sciences (25580)		, 2, 3, 4	2	others	
		Co	urse Title(Th	neme)(科目名(講義題目))			Instructor(s)(担当教員)	
Spec	ial Lecture I	on Infect	tious Diseases and AIDS(B4 Infection and Immune Control)			SATO Yorifumi, KUWATA Takeo, IKEDA Masanori, KUBOTA Ryuji, OKADA Seiji, OSHIUMI Hiroyuki, MOTOZONO, Chibiro, SAWA Tomohiro, SUZU			
				Goals with their ratio(学修成果とそ	の割合	∋)			
1.Advan and abil	1.Advanced expert knowledge, skill and research capability ····30% 2.Profound inter-disciplinary knowledge ····30% 3.Global perspective and ability to take initiative action ····20% 4.Social leadership drive ····20%								
Туре о	of Class(授業)	の形態)	Lecture						
Teachir	ng Method(挑 法)	受業の方	PowerPoint will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons. (Before starting this course students will be informed of the individual lecture style of instructors in detail.)						
Course	e Goals(授業)	の目的)	The aim of this lecture series "Special Lecture I on Infectious Diseases and AIDS" is to learn following topics important for basic and clinical research of infectious diseases: (1) interaction between pathogen and host response, (2) molecular pathogenesis of viral infection, (3) immune control and vaccine research, (4) management of nosocomial/opportunistic infection, (5) diagnosis and treatment of emerging/re-emerging infectious diseases, (6) pathogenesis and treatment of infectious diseases.						
Course Learning goals(学修 目標)			[A level (A水準)] Students will learn following topics important for basic and clinical research of infectious diseases. Students will learn following topics important for basic and clinical research of infectious diseases. (1) interaction between pathogen and host response,(2) molecular pathogenesis of viral infection, (3) immune control and vaccine research, (4) management of nosocomial/opportunistic infection, (5) diagnosis and treatment of emerging/re- emerging infectious diseases, (6) Pathogenesis and treatment of HIV-1 infection. [C level (C水準)] Understanding for the following points. (1) interaction between pathogen and host response (2) molecular pathogenesis of viral infection (3) immune control and vaccine research (4) management of nosocomial/opportunistic infection (5) diagnosis and treatment of HIV-1 infection (6) Pathogenesis and treatment of HIV-1 infection						
Course	Outline(授業	きの概要)	The course addresses the introduction (bacteriology, virology) and particulars of various pathogenic organisms (including gram-positive and negative bacteria, a DNA or RNA viruses) focusing on topics of pathogenesis, control and prevention of infectious diseases and emerging and reemerging infectious diseases. The course addresses protective immunity of host against infectious diseases including HIV-1 infection. Especially, recent topics such as the mechanism of T-cell recognition of the viral antigens, differentiation of immune cells from hematopoietic stem cells and the strategy for the development of effective vaccine against HIV-1 infection will be discussed.						
				Details for Individual Classes(各回の)授業内	3容)			
No.(回)	Date(月	3日)		Class Theme(授業テーマ)		Brief Outline of Class(内容概略)			
1			Terumasa Ik	keda [eE-O]	Retrovirus life cycle				
2			Tomohiro S	awa【eE-O】	Bacterial infection and pathogenesis			enesis	
3			Hiroyuki Os	hiumi 【eE-O】	Inna	te immune i	responses to pa	ithogens	
4			Chihiro Mot	tozono [eE-O]	Cellu	ular immune	e responses to p	pathogens	
5			Takeo Kuwa	ata 【eE-O】	Hum	umoral immune responses to pathogens			
6	06/3	0	5th period(16:45~18:15) Kazuaki Monde【eE-O】	Ada	ptive evolution of viral genes			
7	07/0)7	5th period(O]	16:45~18:15) Jyunichirou Yasunaga 【eE-	Eme	rging/re-em	erging infection	us diseases	
8			Shinya Suzu	J [eE-O]	Retroviruses-host interaction				
9			Yorifumi Sat	to [eE-O]	Retr	oviral infect	ions and latenc	у	
10			Masanori Ik	eda 【eE-O】	Molecular pathogenesis of hepatitis v			atitis viruses	
11	11		Yasuhito Ta	naka [eE-O]	Hepatitis viruses and Liver cancer			cer	
12	12		Ryuji Kubot	a [eE-O]	Virus-induced neurological diseases			eases	
13			Seiji Okada	[eE-O]	Anin	nal model re	search in infec	tious diseases	
14				atsui [eE-O]	Role	s of laborate	ory medicine fo	r infectious diseases	
15				akata [eE-O]			portunistic infe		
	Estimated out-of-class study time		• This course consists of content that requires hours (90 hours) of study. Since the class is 30 hours (2h x 15 frames), 60 hours of pre- and post-study (including assignments) is necessary to understand the class. It is necessary to deepen.						
Require	ed Textbook ト)	(テキス	Textbooks are not specified, and handouts will be distributed.						
Reading List(参考文献)			"Atlas of AIDS" edited by Gerald L. Mandell and Donna Mildvan. Current Medicine, Inc. Philadelphia, 2001. "Infectious Diseases and Medical Microbiology" 2nd Edition, Abraham I. Braude et al., W.B. Saunders Company						

Enrollment Conditions(履修 条件)	Have basic knowledge concerning what is taught in this course.
Assessment Methods and Criteria(評価方法・基準)	This class consisted of a series of omnibus lectures by 15 lecturers as listed in the schedule. Evaluation will be done based on active class participation, examination test and/or report for subjects by each lecturer. In order to get credits students have to take more than 2/3 lectures. Grading will be based on the average of top 10 scores among ones obtained by the student.
Language Used in Instruction(使用言語)	English
Textbook/Material Language(教科書・資料の言 語)	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/Ser m(年度	mester/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)		
RDM7-0	028-81-1	-1 2025whole yea		Graduate School of Medical Sciences (25590)		1, 2, 3, 4	2	others		
		Cou	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)		
Spec	cial Lecture	e II on Infe	ectious Diseases and AIDS(Special Lecture II on Infectious Diseases and AIDS (F2))			UENO Takamasa, GATANAGA Hiroyuki, SUGIURA Wataru, WATANABE Koji, YAMAMOTO Hiroyuki, TACHIKAWA Ai, MATANO Tetsuro, MAEDA Kenji, NAKAHATA Shingo, NOMURA Takushi,SUGATA Kenji, TAKAHASHI Naofumi				
				Goals with their ratio(学修成果と	その割	合)				
1.Advanc	ced expert l	knowledge	e, skill and r	esearch capability ····25% 2.Profound in	ter-dis	ciplinary kno	wledge ····35	% 3.Global perspective		
	Class(授業)		action ····35% 4.Social leadership drive ····5%							
			PowerPoint will be used in the lectures, and active participation in the discussion is encouraged. Extra classes or							
Teaching	g Method(挑 法)	支来の方	video lectures are considered for those who are regularly absent for unavoidable reasons. (Before starting this course students will be informed of the individual lecture style of instructors in detail.)							
Course Goals(授業の目的)		の目的)	The aim of this lecture series "Special Lecture II on Infectious Diseases and AIDS" is to learn following topics important for clinical, epidemiological and social science research of infectious diseases: (1) diagnosis and treatment of infections, (2) pathogenesis and complications in infectious diseases, (3) principles in medical statistics, (4) Surveillance and epidemiology in infections at domestic and global levels, (5) prevention of transmission and educational approaches to high risk groups, (6) antiviral drugs and viral resistance to drugs.							
Course Learning goals(学修 目標)		als(学修	[A level (A水準)] Students will learn following topics important for clinical, epidemiological and social science research of infectious diseases: (1) diagnosis and treatment of infections, (2) pathogenesis and complications in infectious diseases, (3) principles in medical statistics, (4) Surveillance and epidemiology in infections at domestic and global levels, (5) prevention of transmission and educational approaches to high risk groups, (6) antiviral drugs and viral resistance to drugs. [C level (C水準)] Students will learn following topics important for clinical, epidemiological and social science research of infectious diseases: (1) diagnosis and treatment of infections, (2) pathogenesis and complications in infectious diseases, (3) principles in medical statistics, (4) Surveillance and epidemiology in infections at domestic and global levels, (5) prevention of transmission and educational approaches to high risk groups, (6) antiviral drugs diseases, (3) principles in medical statistics, (4) Surveillance and epidemiology in infections at domestic and global levels, (5) prevention of transmission and educational approaches to high risk groups, (6) antiviral drugs and viral resistance to drugs.							
Course C	Dutline(授業	きの概要)	It would not be an overstatement if we say the history of mankind has been a long history of fight against infectious diseases. Researches on infectious diseases have been contributed enormously to the health and longevity of the life in developed nations at present. Development of diagnosis and treatment strategy against infectious diseases, management of comorbidities and complication, surveillance of infections, understanding epidemics provided a big impact to our society. These accomplishments have been made possible by accumulation and collaboration of research studies in clinical sciences, epidemiology, and social sciences. The up-to-date research results including the lecturers' own experiences will be presented. In addition, students are expected to learn principles of statistical approaches in medical sciences. Details for Individual Classes(各回の授業内容)							
No.(回					Brief Outline of Class(内容概略)					
)	Date(月	3日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容慨略)		
1			Hiroyuki Ga	tanaga 【eE-0】	Dia	ignosis and tr	eatment of HIV	'infection		
2			Hiroyuki Ga	tanaga 【eE-0】		nical pharmao ents	cology and long	g-term toxicity of antiviral		
3			Wataru Sug	iura [eE-0]	Cu	rrent issues ir	n global infectio	ons		
4			Wataru Sug	iura [eE-0]	Ge	nomics in Infe	ectious disease	s		
5			Watanabe k	coji [eE-0]		portunistic in ients	fection among	progressed HIV infected		
6			Watanabe k	oji [eE-0]	Epi tra	demiological nsmission sou	strategy based urce	on the size of		
7			Hiroyuki Ya	mamoto 【eE-0】	An	tiviral immuni	ty: defense ver	sus perturbation		
8			Hiroyuki Ya	mamoto 【eE-0】	Ad	aptive immun	e responses in	HIV/SIV infection		
9			Ai Tachikaw	a [eE-0]	No	vel approach	es in immunoth	nerapy		
10			Tetsuro Ma	ano [eE-0]	Va	ccine-based c	control of infect	tious diseases		
11			Kenji Maeda	a [eE-0]	De	velopment of	antiviral therap	by against viral infection		
12			Shingo Nak	ahata [eE-0]	On	cology in the	area of viral int	fectious diseases		
13			Takushi No	nura [eE-0]	An	mal models f	or control of in	fectious diseases		
14			Kenji Sugat	a [eE-0]		tigen present ease	ation and T cel	l response of infectious		
15			Naoumi Tak	ahashi (eE-0)	_		viral persisten	ce		
Estimated out-of-class study time			This course consists of content that requires 90 hours of study. Since the class is 30 hours long, the equivalent of 60 hours of prior and post-course study is required.							
Required Textbook(テキスト)		(テキフ	Textbooks are not specified, and handouts will be distributed.							
Readir	Reading List(参考文献)			"AIDS info Web site; http//AIDSinfo.nih.gov. Atlas of AIDS 3rd edition; Current Medicine, Inc.,2001. (edited by G,L.Mandelland D.Mildvan.) Harrison's principles of internal medicine 16th ed.						

Enrollment Conditions(履修 条件)	
Assessment Methods and Criteria(評価方法・基準)	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 5 scores among ones obtained by the student.
Language Used in Instruction(使用言語)	English
Textbook/Material Language(教科書・資料の言 語)	English
Course Based on Practical Work Experience(実務経験 を活かした授業)	Not applicable

Course Coding(科 目ナンバー)	Year/Se m(年)	emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)] Ye	Eligible Student ear(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-158-82-1	RDM7-158-82-1 2025whole y		Graduate School of Medical Sciences (25600)		1, 2, 3, 4	2	others	
	Co	ourse Title(Theme)(科目名(講義題目))				Instructor(s)(担当教員)		
Training I on Infec	ctious Dis	seases and AIDS(Practice I on Infectious Diseases and AI			S) SUZU Shinya, Yasunaga Jiyunichirou			
Goals with their ratio(学修成果とその割合)								
1. Advanced expert knowledge, skill and research capability ·····25% 2. Profound inter-disciplinary knowledge ····40% 3. Global perspective and ability to take initiative action ····25% 4. Social leadership drive ····10%								
Type of Class(授業)	の形態)	Training						
Teaching Method(挑 法)	受業の方	Attend a 1-week training course as an observer, and lectures related to the diagnosis of infectious diseases, at Kumamoto University Hospital						
Course Goals(授業)	の目的)	It is very important for basic researchers to know actual clinical practice. Especially on the infectious diseases field to see the advance of treatment allows their research motivations upward. The aim of this course is to visit clinic and see patients with infectious diseases.						
Course Learning go 目標)	als(学修	【A level (A水準)】 Students can learn importance of feedback of basic research outputs to clinics. 【C level (C水準)】						
Course Outline(授業	の概要)	 Attend a 1-week training course as an observer, that includes lectures on the following topics: 1. Introduction to Infectious Diseases 2. Overview on opportunistic infections 3. Patient support 4. Outpatient clinic and ward building tours 5. Clinical conference 						
		-	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 Cla	ass(内容概略)	
1		2. Overvie 3. Patient 4. Outpat	12 Iction to Infectious Diseases ew on opportunistic infections support ient clinic and ward building tour I conference		Attend practical training courses (as an observer) and ectures			
Estimated out-of- study time	class							
Required Textbook ト)	(テキス	Nothing in particular						
Reading List(参考	文献)	Nothing in particular						
Enrollment Conditions(履修 条件)		Japanese Medical License holders will be allowed to see patients. Those that do not have a license, will focus on lectures, tours and rounds						
Assessment Methods and Criteria(評価方法・基準)		Evaluation will be performed considering active participation and contribution during the course, in addition to the report						
Language Used in Instruction(使用言語)		Japanese and English						
Textbook/Material Language(教科書・資料の言 語)		Combination of Japanese and English						
Course Based on Practical Work Experience(実務経験 を活かした授業)		Not applicable						

Course Coding(科 目ナンバー)	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)	
RDM7-159-82-1	2025	whole year	Graduate School of Medical Sciences (25610)	1	, 2, 3, 4	2	others	
	Co	ourse Title(Theme)(科目名(講義題目))			Instructor(s)(担当教員)			
Training II on Infe	ctious Di	seases and A	ses and AIDS(Training II on Infectious Diseases and AIDS) SUZU Shinya, GATAN			TANAGA Hiroyuki		
			ት)					
1.Advanced expert and ability to take in	knowledg nitiative a	ge, skill and rest action ····25	esearch capability ····25% 2.Profound inte % 4.Social leadership drive ····10%	r-disci	iplinary kno	wledge ····409	% 3.Global perspective	
Type of Class(授業	の形態)	Training						
Teaching Method(法)	受業の方		week training course on HIV clinical practic nter for Global Health and Medicine	e, the	as an obser	ver, at the Cent	ter Hospital of the	
Course Goals(授業	の目的)	the advance	portant for basic researchers to know actual of treatment allows their research motivati ee patients with HIV infection.					
Course Learning go 目標)	oals(学修	[A level (A Students ca [C level (C	n learn importance of feedback of basic res	earch	outputs to a	clinics.		
Course Outline(授美	きの概要)	 HIV revie Opportu Patient s Meeting 	inistic infections associated with HIV infecti					
		-	Details for Individual Classes(各回の	授業内	9容)			
No.(回 Date(月	3日)	Class Theme(授業テーマ) Brief Outline of Class(内容権				ass(内容概略)		
1		2. Overvie 3. Patient 4. Outpat	action to HIV infection ew on opportunistic infections : support ient clinic and ward building tours I conference	Atter lectu		training course	es (as an observer) and	
Estimated out-of study time								
Required Textbook ト)	(テキス	Nothing in p	particular					
Reading List(参考	(文献)	Nothing in p	particular					
Enrollment Conditio 条件)	ons(履修	Only Japane	ese Medical License holders					
Assessment Metho Criteria(評価方法	++ >++ >	Evaluation w the report.	vill be performed considering active partici	pation	and contrib	ution during th	e course, in addition to	
Language Used in Instruction(使用言語) Japanese								
Textbook/Mate Language(教科書・ 語)	erial 資料の言	Japanese						
Course Based on P Work Experience(身 を活かした授	钅務経験	Not applica	ble					

Course Cod 目ナンバ		Year/Se m(年)	mester/Ter 叓・学期)	Faculty Offering Course(時間割所属・時 割コード)	間	S	Eligible tudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-160	-79-1	2025v	vhole year	Graduate School of Medical Sciences (25620)	5	1,	, 2, 3, 4	8	others		
		Co	ourse Title(Theme)(科目名(講義題目))				Instructor(s)(担当教員)				
Practice I	on Infec	tious Dis	seases and AIDS(Practice I on Infectious Diseases and AIDS)			OS)	MACHIDA Hiroyuk YASUNAG Hiroyu	Sinichi, MATA i, TACHIKAWA A Junichirou, S ıki, OKADA Seii	MIZUSHIMA Daisuke, NO Tetsuro, YAMAMOTO Ai, TANAKA Yasuhito , AWA Tomohiro, OSHIUMI i, SUZU Shinya, SATO nasa, UENO Takamasa,		
				Goals with their ratio(学修成果。	とその	の割合	(1				
1.Advanced and ability to	expert k o take in	nowledg itiative a	e, skill and rection ••••30	esearch capability ····40% 2.Profound i %	inter-	-disci	plinary knov	wledge ····309	% 3.Global perspective		
Type of Cla	ass(授業の	の形態)	Practice								
Teaching M	ethod(授 法)	受業の方	Journal club)							
Course Goa	als(授業0	の目的)	in scientific	ll participate in a journal club held in ead literature (written in English). Students v he form of a journal review.	ch Ial vill b	borat e give	ory listed al en opportur	bove to critical nities to presen	ly evaluate recent articles t and discuss the latest		
Course Lear E	rning goa 目標)	als(学修	related to th 【C level (C Students wi	I get the ability to critically evaluate rece heir research				0			
Course Outl	line(授業	の概要)	The format of each journal club may vary. Students are expected to follow the guidelines set forth by each aboratory.					es set forth by each			
				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 Cla	ass(内容概略)		
1			Acquire kno	wledge related to own research topic			ire knowlec ng meeting		esearch topic during the		
Estimated stud	d out-of- dy time	class	This course Since the cl	consists of content that requires 360 ho ass is 240 hours long, the equivalent of 7	ours o 120 l	of stu hours	dy. of prior and	d post-course s	study is required.		
Required Te	extbook(ト)	(テキス	Nothing in p	particular							
Reading L	_ist(参考)	文献)	Nothing in p	particular							
Enrollment (Conditio 条件)	ons(履修									
Assessment Criteria(評			Grades will	be determined based on active participa	ation	and ι	understandi	ing of journal c	lub materials		
Langua Instructio	ge Used on(使用言	l in 言語)	English								
Textboo Language(教	ok/Mate (科書・資 語)	rial 資料の言	English								
Course Base Work Exper を活か		務経験	Not applica	ble							

Course	Coding(科	Year/Se	emester/Ter	Faculty Offering Course(時間割所属・時間 割コード)		Eligible Student	Credits(単位	Weekday and Period(曜	
目ナ	ンバー	m(年)	度・学期)	割コード)		(開講年次)	数)	白・時限)	
RDM7-	161-79-1	2025v	vhole year	Graduate School of Medical Sciences (25630)	1,	, 2, 3, 4	2	others	
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(ctor(s)(担当教員)	
Practic	e II on Infec	tious Dis	seases and A	ases and AIDS(Practice II on Infectious Diseases and AIDS) MOTOZONO Chihiro, OKA					
				Goals with their ratio(学修成果とそ	の割合	(1			
1.Advand and abili	ced expert k ity to take ir	nowledg iitiative a	ge, skill and r ction ・・・・30	esearch capability ····30% 2.Profound inte % 4.Social leadership drive ····10%	r-disci	plinary kno	wledge ····30	% 3.Global perspective	
Type of	f Class(授業)	の形態)	Seminar						
Teachin	g Method(挑 法)	受業の方		on the latest progress in the research of inf "Kumamoto AIDS Seminar"	ectiou	s diseases a	and AIDS, by at	tending the International	
Course	Goals(授業)	の目的)	in realted fie 2. Learn a presentation	bout presentation techniques, by presenting	g your	own work ii	n the form of a	poster or oral	
Course l	Learning go 目標)	als(学修	to further di 2. Learn h discussion [C level (C	ble to understand the latest advance in the scuss on the topic now to clearly explain the content of your re	search	project to	others, and to e		
Course (Outline(授業	の概要)	Learn about skill by mak	earn about global status of infectious diseases by joining Kumamoto AIDS seminar. Also, learn about discussion kill by making presentation in the international seminar.					
				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					ass(内容概略)	
1				umamoto AIDS seminarThe 39th Annual the Japanese Society of AIDS Research	joinir discu interi Japar	ng the Kuma Ission skills national ser nese Societ	amoto AIDS ser by making pres ninar.The 39th y of AIDS Resea	ectious diseases by ninar. Also, learn about sentations in the Annual Meeting of the arch will be held as a joint eminar in 2025.	
	ated out-of- study time	class	Pre-study is advance.	needed for better understanding the invited	d lectu	ıres. Carefu	lly Read the "	Abstract book" in	
Require	ed Textbook ト)	(テキス	Abstract bo	ok of Kumamoto AIDS seminar					
Readi	ing List(参考	文献)	NONE						
Enrollme	ent Conditic 条件)	ons(履修							
	ment Metho a(評価方法・		Evaluation v and discuss	vill be done by reports about presentation. ion. Students should submit the report with	The re in 2 we	eport contai eeks after th	ns abstract of t ne seminar.	he presentation, Q & A,	
Lan Instru	iguage Usec uction(使用	l in 言語)	English						
Text Languag	tbook/Mate ge(教科書・資 語)	rial 資料の言	English						
Work Ex	Based on Pi (perience(実 活かした授業	彩経験	Not applica	ble					

Course Coding(称 目ナンバー)		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)	
RDM7-162-79-1	2025	whole year	Graduate School of Medical Sciences (25640)	1	, 2, 3, 4	2	others	
	Co	ourse Title(Th	neme)(科目名(講義題目))			Instructor(s)(担当教員)	
Practice III on Infe	ectious Dis	eases and Al	DS(Practice III on Infectious Diseases and A (WYIS))	IDS	IKEDA Ter	rumasa, SATO ነ	′orifumi, UENO Takamasa	
			Goals with their ratio(学修成果とそ	の割合	う)			
1.Advanced exper and ability to take	t knowled initiative a	ge, skill and r action ····30	esearch capability ····40% 2.Profound inte %	r-disci	iplinary kno [,]	wledge ····30	% 3.Global perspective	
Type of Class(授	業の形態)	Practice						
Teaching Method 法)	(授業の方		Neely Young Investigator Seminar (WYIS) wl sentations related to your research.	nich in	volves acro	ss laboratories,	ask questions and	
Course Goals(授	業の目的)	Gain skills a Weekly You	nd experience in making presentations and ng Investigator Seminar (WYIS)	condu	ucting scien	tific discussion	s, by attending the	
Course Learning ₆ 目標)	goals(学修	Improve ski Weekly You [C level (C Improve ski	[A level (A水準)] mprove skills and techniques in making presentations and conducting scientific discussions, by attending t Veekly Young Investigator Seminar (WYIS) [C level (C水準)] mprove skills and techniques in making presentations and conducting scientific discussions, by attending t Veekly Young Investigator Seminar (WYIS)					
Course Outline(授	業の概要)		Presentations in English (15minutes) and debates (5 minutes) will be conducted, in relation to research topics (including introduction, data interpretation, significance and discussion)					
			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			Conduct research presentations and discussion at the WYIS seminar Research presentations and scientific discu					
Estimated out-o study tim			This course consists of content that requires 90 hours of study. Since the class is 60 hours long, the equivalent of 30 hours of prior and post-course study is required.					
Required Textbo ト)	ok(テキス							
Reading List(参	考文献)							
Enrollment Condi 条件)	tions(履修							
Assessment Metl Criteria(評価方法		questions, o	will be performed based on attendance, acti content of research presentations, technical ns are required					
Language Us Instruction(使)	ed in 月言語)	English	English					
Textbook/Ma Language(教科書 語)	terial ・資料の言	English						
Course Based on Work Experience を活かした打	(実務経験	Not applica	ble					

					Eligible			
Course Coding(科 目ナンバー)		emester/Ter 度・学期)	Faculty Offering Course(時間割所属・B 割コード)	寺間	Student Year(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-163-79-1	2025	vhole year	Graduate School of Medical Science (25650)	S	1, 2, 3, 4	2	others	
	Co	ourse Title(Th	neme)(科目名(講義題目))			Instructor(s)(担当教員)	
Practice IV on Infe	ctious Dis	seases and A	IDS(Practice IV on Infectious Diseases a	nd All	OS)	SUZU	Shinya	
			Goals with their ratio(学修成果	とその)割合)			
1.Advanced expert and ability to take in	knowledg nitiative a	ge, skill and r	esearch capability ····40% 2.Profound % 4.Social leadership drive ····10%	inter-	disciplinary kno	wledge ····40	% 3.Global perspective	
Type of Class(授業	の形態)	Seminar						
Teaching Method(法)	受業の方	By taking se	minars presented by invited qualified s	beakeı	rs.			
Course Goals(授業	の目的)	Learn about lecturers.	t the latest progress in the fields of Infec	tious	Diseases, Medic	cine and Life Sc	iences, from external	
Course Learning go 目標)	als(学修		e expected to be exposed by current re- iseases and other basic and clinical me				rch topics, across from	
Course Outline(授業	きの概要)	occasional	itudents can take "D1 Medical and Life Science Seminar" and "D2 Learning from Experienced Doctor" or accasional seminar presented by invited speakers and Invited Speaker Seminar Series hosted by the Program nstructors or by instructors' laboratories.					
			Details for Individual Classes(各	回の授	發業内容)			
No.(回 Date(月)	3日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
1		informed ac	cordingly	i	informed accord	lingly		
Estimated out-of- study time	-class							
Required Textbook ト)	(テキス	Nothing in p	particular					
Reading List(参考	文献)	Nothing in p	particular					
Enrollment Conditio 条件)	ons(履修	Nothing in p	particular					
Assessment Metho Criteria(評価方法		Students are students are	e required to attend more than 15 lectu e required to submit essays/reports bas	res/se ed on	eminars before c all lectures atte	completion of th nded.	ne Thesis research. Also,	
Language Used Instruction(使用 ⁻	d in 言語)	English	English					
Textbook/Mate Language(教科書, 語)	erial 資料の言	English						
Course Based on P Work Experience(身 を活かした授う	€務経験	Not applica	ble					

Course Coding(利 目ナンバー)		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)
RDM7-603-79-2	2025	whole year	Graduate School of Medical Sciences (25660)	1	, 2, 3, 4	10	others
	Co	ourse Title(Th	neme)(科目名(講義題目))			Instructor(s)(担当教員)
Research on In	ectious Di	seases and A	IDS(Research on Infectious Diseases and Al	DS)	TACHIKA Junichiro	AWA Ai, TANÁK ou, SAWA Tomo eiji, SUZU Shin	ki, MATANO Tetsuro, A Yasuhito, YASUNAGA hiro, OSHIUMI Hiroyuki, ya, SATO Yorifumi, IKEDA NO Takamasa,
			Goals with their ratio(学修成果とそ	の割合)		
1.Advanced expe	t knowled	ge, skill and r	esearch capability ····80% 3.Global perspe	ective	and ability t	o take initiative	e action ····20%
Type of Class(授	業の形態)	Other					
Teaching Methoo 法)	(授業の方	Research at	each laboratory and thesis preparation				
Course Goals(授	業の目的)		aration; students will report their research p and receive their comments/advices for fur				and interim review
Course Learning 目標)	goals(学修	their resear scientific pa [C level (C Students wi	II perform research and prepare their thesis ch results at domestic/international confere aper(s). 水準)) II perform research and prepare their thesis ch results at domestic/international confere	ence(s) based) and publis d on results	h their results i obtained. Stud	n academic journal(s) as ents will also present
Course Outline(扔	業の概要)	interview, a	II perform research at their laboratory and p nd receive the comments/advices for furthe nternational conference(s).				
		•	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			ass(内容概略)
1		Research ar	nd thesis preparation	Rese	earch on Infe	ectious Disease	es and AIDS
Estimated out- study tim			consists of content that requires 300 hours ass is 240 hours long, the equivalent of 60 l			post-course st	udy is required.
Required Textbo ト)	ok(テキス	Nothing in p	particular				
Reading List(参	考文献)	Nothing in p	particular				
Enrollment Cond 条件)	tions(履修		nning of third year, students will have an int nd receive the comments/advices for furthe				which consists of 3
Assessment Met Criteria(評価方》	nods and よ・基準)	Grade will b progress at	be assessed based on their research, prepara interim interview, and presentation of resea	ation o rch re	of thesis and sults at dom	l scientific pape nestic/internati	er, report of research onal conference(s).
Language Us Instruction(使		English					
Textbook/Ma Language(教科書 語)		English					
Course Based or Work Experience を活かした	(実務経験	Not applica	ble				

	Coding(科 ンバー)		emester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	 Ye	Eligible Student ear(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	604-79-2	2025v	vhole year	Graduate School of Medical Sciences (25670)		1, 2, 3, 4	2	others	
		Co	ourse Title(Th	neme)(科目名(講義題目))			Instructor(s)(担当教員)	
Spec	cial Researc	h I on Inf		ases and AIDS(pecial Research I on Infections and AIDS)	MACHIDA Hiroyuk YASUNAG Hiroyu	sinichi, MATA i, TACHIKAWA A Junichirou, S ıki, OKADA Seii	MIZUSHIMA Daisuke, NO Tetsuro, YAMAMOTO . Ai, TANAKA Yasuhito , AWA Tomohiro, OSHIUMI i, SUZU Shinya, SATO nasa, UENO Takamasa,		
				Goals with their ratio(学修成果と-	その害	削合)			
1.Advan	ced expert l	knowledg	ge, skill and r	esearch capability ····50% 3.Global persp	ectiv	e and ability t	o take initiative	e action ····50%	
Type of	f Class(授業)	の形態)	Other						
Teachin	ig Method(挑 法)	受業の方	Research ar developing	nd training activities at advanced research countries for 6 weeks or longer	facilit	ties in develop	oed countries o	r medical facilities in	
Course	Goals(授業)	の目的)	High quality advanced re	research and fostering of world-class rese esearch facilities in developed countries or	arche	ers through th lical facilities i	e research and n developing c	training activities at ountries	
Course	Learning go 目標)	als(学修	training acti countries 【C level (C High quality	r research and cultivation of students as ful ivities at advanced research facilities in dev	velop ture v	ed countries o world-class res	or medical facil searchers throu	ities in developing igh the research and	
Course	Outline(授業	(の概要)	Research ar developing	Research and training activities at advanced research facilities in developed countries or medical facilities in developing countries for 6 weeks or longer					
				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			Research ar	nd training abroad for 6 weeks or longer	Re	esearch and tra	aining abroad		
	ated out-of- study time	-class	This course Since the cl	consists of content that requires 60 hours ass is 48 hours long, the equivalent of 12 h	of stu nours	udy. of prior and p	oost-course stu	dy is required.	
Require	ed Textbook ト)	(テキス	Nothing in p	particular					
Readi	ing List(参考	文献)	Nothing in p	particular					
Enrollme	ent Conditic 条件)	ons(履修							
Assessr Criteri	ment Metho a(評価方法・	ds and · 基準)	Grades will	be assessed based on research/training pl	ans a	ind reports aft	er the research	/training abroad	
Lan Instru	nguage Usec uction(使用	t in 言語)	English						
	tbook/Mate ge(教科書・資 語)		English						
Work Ex	Based on P xperience(実 活かした授美	≧務経験	Not applica	ble					

Course 目ナ	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)	Yea	Eligible Student ar(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7-	605-79-2	2025v	vhole year	Graduate School of Medical Sciences (25680)		1, 2, 3, 4	4	others	
		Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)	
Specia	al Research	ll on Infe	ectious Disea Disea	ses and AIDS(Special Research II on Infecti ses and AIDS)	ous	MACHIDA Hiroyuk YASUNAG Hiroyu	A Sinichi, MATA i, TACHIKAWA iA Junichirou, S ıki, OKADA Seij	MIZUSHIMA Daisuke, NO Tetsuro, YAMAMOTO Ai, TANAKA Yasuhito , AWA Tomohiro, OSHIUMI ii, SUZU Shinya, SATO nasa, UENO Takamasa,	
				Goals with their ratio(学修成果とそ	その割	合)			
1.Advano	ced expert l	knowledg	ge, skill and r	esearch capability ····50% 3.Global persp	ective	and ability t	o take initiative	e action ····50%	
Type of	f Class(授業)	の形態)	Practice and	d Training					
Teachin	ig Method(挑 法)	受業の方		nd training activities at advanced research f countries for 4 months or longer	aciliti	es in develop	oed countries o	r medical facilities in	
Course	Goals(授業	の目的)	High quality advanced re	research and fostering of world-class resea esearch facilities in developed countries or	archei medio	rs through th cal facilities i	e research and n developing c	training activities at ountries	
Course l	Learning go 目標)	als(学修	training acti countries 【C level (C High quality	research and cultivation of students as fut vities at advanced research facilities in dev	elope ure w	d countries o orld-class res	or medical facil searchers throu	ities in developing igh the research and	
Course (Outline(授業	(の概要)	Research and training activities at advanced research facilities in developed countries or medical facilities in developing countries for 4 months or longer						
				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			Research ar	nd training abroad for 4 months or longer	Res	earch and tr	aining abroad		
	ated out-of- study time	class	This course Since the cl	consists of content that requires 180 hours ass is 120 hours long, the equivalent of 60	s of st hours	udy. of prior and	post-course st	udy is required.	
Require	ed Textbook ト)	(テキス	Nothing in p	particular					
Readi	ing List(参考	文献)	Nothing in p	particular					
Enrollme	ent Conditio 条件)	ons(履修							
	nent Metho a(評価方法・		Grades will	be assessed based on research/training pla	ans an	d reports aft	er the research	/training abroad	
Lan Instru	nguage Used uction(使用)	t in 言語)	English	English					
Text Languag	tbook/Mate ge(教科書・資 語)	erial 資料の言	English						
Work Fx	Based on P xperience(実 活かした授業	≧務経験	Not applica	ble					

Endocrinology and Metabolism Course

	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	igible tudent (開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7-	122-82-0	2025w	hole year	Graduate School of Medical Sciences (22250)		, 2, 3, 4	2	others		
		Со	urse Title(Th	eme)(科目名(講義題目))		Instructor(s)(担当教員)				
		Pract	ical Training	g of Metabolic Medicine()			Oike Yuuichi, Katou Takahiko, YAMAGATA Kazuya, SAWA Tomohiro, KOMOHARA Yoshihiro, TSUJITA Kenichi, MOROISHI Toshiro			
				Goals with their ratio(学修成果とそ	の割合	ī)				
1.Advan and abil	ced expert l ity to take ir	knowledg nitiative ad	e, skill and research capability ····30% 2.Profound inter-disciplinary knowledge ····30% 3.Global perspective ction ····30% 4.Social leadership drive ····10%							
Type of	f Class(授業		Practice							
Teachin	ng Method(排 法)	受業の方	Each training course will be held in a laboratory in charge. First, the principle of a method or a technique will be lecureted, then practical handling will be trained. Results, which will be discussed, must be surmarized in a report.							
Course	e Goals(授業	の目的)	Medicine, w pharmacolo methods an background support to r important e	erimental methods and techniques are apply which is an interdisciplinary research based of gy, histology and cell biology. For researche d techniques practically. Even for researche of the experimental methods and technique esolve various problems in spesific research xperimental methods and techniques were alar Medicine.	on epic ers in tl er outsi es, sin n fields	demiology, he field, it is ide the filec ce it gives ι . Principles	internal medici s required to le l, it is importan us a multilateral and practical p	ne, pathology, arn such experimental t to understand a l viewpoint and would procedures for several		
Course	Learning go 目標)	als(学修	[A level (A: Principles a practical tra [C level (C	nd practical procedures for several importa ining of Metabolism and Cardiovascular Me	nt expe dicine	erimental m	ethods and tec	chniques were trained in		
Course	Outline(授業	,	 Introducti Introducti Introducti Metabolic Signaling ar Metabolic Metabolic Metabolic Histologic Oxidative 	ethods and techniques are trained: on of epidemiology: Epidemiological and st ion of metabolic analysis: Method of analyzi analysis 1: Analyzing intracellular signal tra d Metabolic Medicine) analysis 2: Measurements of insulin by ELI analysis 3: Whole body metabolism, CT (M analysis 4: Cardiovascular disease model (al analysis: Histopathology, Immunohistoch stress analysis: Measurements of reactive o se, sessions in Practical training of Developr	ng met ansduc SA (Me olecula Cardio nemistr xygen nental	tabolic dise tion in resp ar Genetics vascular M y (Cell Path species (Mi Biology and	ease (Molecular conse to metabo) edicine) cology) icrobiology)	olic changes (Cell		
			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 Cla	ass(内容概略)		
1			Introductior	n of epidemiology	Epide	emiological	and statistical	analysis (Public Health)		
2			Introductior	n of metabolic analysis		od of analy ratory Med		disease (Molecular		
3			Metabolic a	nalysis 1	Analy meta Medi	bolic chang	ellular signal tra ges(Cell Signalii	ansduction in response to ng and Metabolic		
4			Metabolic a	nalysis 2		surements o nemistry)	of insulin by ELI	SA (Medical		
5			Metabolic a	nalysis 3	Whol	e body met	tabolism, CT (M	lolecular Genetics)		
6			Metabolic a	nalysis 4	Card	iovascular o	disease model ((Cardiovascular Medicine)		
7			Histological	analysis	Histo	pathology,	Immunohistocl	hemistry (Cell Pathology)		
8			Oxidative st	ress analysis		surement of ers (Microb		s and inflammatory		
Estim	ated out-of- study time	-class								
Require	ed Textbook ト)	(テキス	Textbooks a	re not specified, and handouts for each pra	ctice v	vill be distri	buted.			
Readi	ing List(参考	文献)								
Enrollme	ent Conditio 条件)	ons(履修								
	ment Metho ia(評価方法,		Grading will comments o	be based on active class participation and concerning at least 8 sessions sould be sum	discutt marize	tion and the d in one or	e final report. Ir two A4 sheets.	n the report, results and		
	nguage Used uction(使用)		Japanese ar	nd English						
Tex Languag	tbook/Mate ge(教科書・う 語)	erial 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)										

Educational Program for extension of healthy life expectancy

	e Coding(科 - ンバー)		mester/Ter 度・学期)	Faculty Offering Course(時間割所属・時間 割コード)	Stu	igible udent 開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7	-164-79-2	2025w	/hole year	Graduate School of Medical Sciences (25790)	1, 2	2, 3, 4	2	others		
		Co	urse Title(Th			Instructor(s)(担当教員)				
	Spe	cial Lectu	ture I on CMHA(G1 Special Lecture I on CMHA)				ARIMA Yuichiro, MIURA Kyoko, YAMAGATA Kazuya, SENOKUCHI Takafumi, MIYAMOTO Hideaki, TAKIZAWA Hitoshi, KUROTAKI Daisuke, TOMIZAWA Kazuhito, Sou Bunketsu, IWAMOTO Kazuya, INOUE Toshihiro, ONO Yusuke			
			Goals with their ratio(学修成果とその割合)							
1.Advar	nced expert l	knowledg	e, skill and r	esearch capability ·····30% 2.Profound inte	er-discip	linary kno	wledge ····40	% 3.Global perspective		
	of Class(授業)		Lecture	5% 4.Social leadership drive ····5%						
Туре о	」Class(按来)			typetage of repeated loarning and attendan	co from	romoto lo	cations locture	s will be conducted by a-		
Teaching Method(授業の方法) By taking advantage of repeated learning and attendance from remote locations, lectures will learning. Students will take a video class, and ask questions they may have after the class. Students by submitting a report related to the lecture, or by answering questions preserved the lecture.						s. Students will check for				
Course	e Goals(授業	(四日(1))	bring the he life) as close elucidate th diseases (e. basic knowl	dly aging global population due to increased ealthy life expectancy (=the period during w e as possible to the limit life expectancy. In ne basic mechanism of aging in humans and g., diabetes, heart failure, cancer, dementia ledge of aging and aging-related disorders i e pathogenic basis of aging-related diseases	vhich one order to l develop l). By tak n a wide	e can live extend he methods ing this cla range of i	a healthy life w ealthy life expects to prevent and ass, students and research fields,	ithout disturbing daily ctancy, we need to I treat aging-related e encourage to gain a including the physiology		
Course	Learning go 目標)	als(学修	(1) To acqu pathogenic(2) To discu[C level (C The followir	ng aims have been excellently achieved. ire a basic knowledge of aging and aging-re basis of aging-related diseases, epidemiolo iss the latest academic research on aging ar :水準)] ng aims have been acceptably achieved.	egy, thera nd health	apeutic str hy longevi	ategies, and so ty.	cial medicine.		
			pathogenic	ire a basic knowledge of aging and aging-re basis of aging-related diseases, epidemiolo iss the latest academic research on aging a	gy, thera	apeutic str	ategies, and so			
Course	Outline(授業		prevention research on CMHRA (ind Research /	Ill learn about the physiology of aging as we and treatment methods). In addition, studen aging and healthy longevity through omnib cluding all research division: Metabolic and Nervous System, Sensory, and Locomotive I gical Research).	nts will d ous-style Cardiov	leepen the lectures p ascular Re	eir understandi provided by the esearch / Canc	ng of latest academic faculty members in er and Stem Cell		
				Details for Individual Classes(各回の)授業内容	字)				
No.(回)	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1			1st MIURA	A Kyoko 【eE-0】	The bi	ology of a	ging			
2			2nd YAMA	AGATA Kazuya 【eE-0】	Regula	ation of glu	ucose metaboli	sm by insulin		
3			3rd YAMA	GATA Kazuya 【eE-0】	Molec	ular mech	anism of type 2	2 diabetes		
4			4th YAMA	GATA Kazuya 【eE-0】	Mono	genic form	n of diabetes m	ellitus		
5			5th SENO	KUCHI Takafumi 【eE-0】	To ach compl	nieve healt ications a	thy longevity -L nd their therap	earn about diabetic eutic approaches		
6			6th MIYAN	MOTO Hideaki【eE-0】	The la	test advan	ices in gastroin	testinal cancer treatment		
7			7th KURO	TAKI Daisuke【eE-0】	Overvi	ew of Chr	omatin Structu	re Analysis		
8			8th TAKIZ	AWA Hitoshi【eE-0】	Inflam	m-aging o	f blood system			
9			9th KURO	TAKI Daisuke【eE-0】	Overvi	ew of Chr	omatin Structu	re Analysist		
10			10th SON	G Wen-Jie 【eE-0】	Learni	ng and me	emory			
11			11th IWA	MOTO Kazuya 【eE-0】	Aging- disord		oigenetic chang	es and psychiatric		
12			12th INOL	JE Toshihiro【eE-0】	Glauce	oma that t	hreatens health	nful longevity		
13			13th ONC	Yusuke [eE-0]	Age-re	lated cha	nges in skeletal	muscle and sarcopenia		
14	14 14th ARIMA Yuichiro [eE-0] Cardiovascular diseases that increase with aging 1						crease with aging 1			
15			15th ARIM	1A Yuichiro【eE-0】	Cardio	ovascular d	diseases that in	crease with aging 2		
Estimated out-of-class study time This course consists of content that requires 90 hours of study. Since the lesson is 30 hours (2 hours x 15 frames), 60 hours of pre- and post-study (including reports) is required to deepen the understanding of the lesson.						ours (2 hours x 15 nderstanding of the				
Require	ed Textbook ト)	(テキス	No particula	ar textbook. Materials summarizing the poin	its of the	e lecture w	vill be distribute	ed.		
	ling List(参考	,	Biology of A The Biology	nging (2nd Edition, by Roger B. McDonald) I v of Senescence: A Translational Approach (SBN 978 by Berna	30815345 ard Swyng	671 hedauw) ISBN	9783030151102		
Enrollm	ent Conditio	ons(履修	Have basic	knowledge concerning what is taught in this	s course					

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)		mester/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)	
RDM7-	-165-79-2	2025v	vhole year	Graduate School of Medical Sciences (25800)		1, 2, 3, 4	2	others	
		Co	urse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)	
	Spec	cial Lectu	re II on CMH	A(G2 Special Lecture II on CMHA)		Kazuya, S Yoshihiro,	OÙ Bunketsu, KADOMATSU IMA Tatuya, Cl	O Kazuya, YAMAGATA ARAKI Kimi, KOMOHARA Tsuyoshi, MASUDA Shota, HUJO Takeshi, FUJIMAKI "A Akihiro	
				Goals with their ratio(学修成果と	その割	合)			
1.Advan and abil	ced expert ity to take ir	knowledg nitiative a	e, skill and r ction ····20	esearch capability ·····35% 2.Profound int % 4.Social leadership drive ····10%	er-dis	ciplinary know	wledge ····35	% 3.Global perspective	
	f Class(授業)		Lecture and						
Teaching Method(授業の方 法) This class can be completed within one year or extended over multiple years to earn credits. Both remote a face-to-face formats. The student in charge will commence the presentation with a self-introduction and por hD plans, followed by a detailed explanation of their research, including an overview of relevant previous studes. Active participation in Q&A sessions and discussions is anticipated from all participants. Non-present students are required to submit reports for each session, while presenters are exempt from this requirement Grades will be determined based on both presentations and reports.							introduction and post- f relevant previous icipants. Non-presenting		
Course	e Goals(授業)	の目的)	Practical lea	arning of the latest research on the biology h, epidemiology, research tools, how to co	of agi nduct	ng, the mech research, an	anisms of seve d training of pr	ral age-related diseases, resentation etc.	
Course	Learning go 目標)	als(学修	[A level (A Students ar presentatio [C level (C Students sh	水準)] e expected to have a good understanding η, actively participate in the question and a	of thei answei	r own researc r session, and	ch content, give I submit a com	e an excellent PowerPoint prehensive report.	
Course	Outline(授業	(の概要)	diseases, pu	se, students will study research on the biol ıblic health, epidemiology, research tools, n skills through making presentations, enga	and le	earn how to co	onduct researc	h and improve	
				Details for Individual Classes(各回0	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			Tutorial 1: (Dct. 10th, 6th period (18:30 - 20:00)	be	oduction (Ho counted as tv delayed.	ow to make a pi vo classes, and	resentation)This class will the end of the class will	
2			Tutorial 1: (Dct. 17th, 6th period (18:30 - 20:00)	rese			s of their respective s, discussions, and report	
3			Tutorial 1: (Dct. 24th, 6th period (18:30 - 20:00)	rese	1 .1 1	· · · · ·	s of their respective s, discussions, and report	
4			Tutorial 1: (Dct. 31th, 6th period (18:30 - 20:00)	rese writ	earch throug ting.	h presentations	s of their respective s, discussions, and report	
5			Tutorial 1: N	Nov. 7th, 6th period (18:30 - 20:00)	rese writ	earch througl ting.	h presentations	s of their respective s, discussions, and report	
6			Tutorial 1: N	lov. 14th, 6th period (18:30 - 20:00)	rese			s of their respective s, discussions, and report	
7			Tutorial 1: N	lov. 21th, 6th period (18:30 - 20:00)	rese			s of their respective s, discussions, and report	
8			Tutorial 1: N	lov. 28th, 6th period (18:30 - 20:00)	rese writ	earch througl ting.	h presentations	s of their respective s, discussions, and report	
9			Tutorial 1: [Dec. 5th, 6th period (18:30 - 20:00)	Students will study the contents of their respective research through presentations, discussions, and report writing.				
10			Tutorial 1: [Dec. 12th, 6th period (18:30 - 20:00)	Students will study the contents of their respective research through presentations, discussions, and repowriting.				
11			Tutorial 1: [Dec. 19th, 6th period (18:30 - 20:00)	Students will study the contents of their respective research through presentations, discussions, and repowriting.				
12			Tutorial 1: J	an. 9th, 6th period (18:30 - 20:00)	Students will study the contents of their respective research through presentations, discussions, and report writing.				
13			Tutorial 1: J	an. 16th, 6th period (18:30 - 20:00)	rese	dents will stu earch throug ting.	dy the content n presentations	s of their respective s, discussions, and report	

13		Tutorial 1: Jan. 16th, 6th period (18:30 - 20:00)	This class will be counted as two classes, and the end of the class will be delayed.					
14								
15								
Estim	nated out-of-class study time							
Require	ed Textbook(テキス ト)	None	None					
Read	ling List(参考文献)	The instructor for each session will upload the paper on Moodle.						
Enrollm	ent Conditions(履修 条件)	Students should have basic knowledge related to this class.						
	ment Methods and ia(評価方法・基準)	Students must attend over 10 classes within a single year or across multiple years before completing their Thesis research. Additionally, students must deliver at least one PowerPoint presentation. For all classes except the one they present in, students are required to submit essays/reports on the class's presentation via Moodle within one month (for more than 9 classes). Attendance is recorded upon report submission. There will be no final exam.						
		Note: Classes marked as 'counted as two' will be recorded as two attendances/reports in a single session, even if they end later.						
	nguage Used in ruction(使用言語)	English						
	ktbook/Material ge(教科書・資料の言 語)	English						
Work E	urse Based on Practical prk Experience(実務経験 を活かした授業) Not applicable							

	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)	9	Eligible Student r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)		
RDM7	-020-81-2	2025v	vhole year	Graduate School of Medical Sciences (26051)	1	, 2, 3, 4	2	others		
		Co	ourse Title(Th	neme)(科目名(講義題目))	Instructor(s)(担当教員)					
Specia	al Lecture on	Bioethic	s (For studer A1 ∙ Mas	nts admitted in 2023 and later)(Doctoral Coster's Course A5)	ourse		KADOOK	A Yasuhiro		
	Goals with their ratio(学修成果とその割合)									
1.Advar	nced expert l	nowledg	ge, skill and r	esearch capability ····50% 2.Profound int	er-disc	iplinary kno	wledge ····50	%		
Type of Class(授業の形態) Lecture										
Teachir	ng Method(挑 法)	受業の方		ing (discussion and presentation) and onlir		5				
Course	e Goals(授業)	の目的)	order for gr	aims to support students to have relevant aduate research and future career.	knowle	dge and pra	ictical skills for	biomedical ethics in		
Course	Learning go 目標)	als(学修	interdiscipli 【C level (C	ethical issues in actual settings of biomed nary discussion and moral reasoning			·			
Course	Outline(授業	(の概要)		ine program will be adopted to learn basic ng methods will be adopted to gain skills fo aking.				esearch and medical		
				Details for Individual Classes(各回0)授業内	9容)				
No.(回)	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)		
1			Research in	tegrity 1	eAPF	RIN online p	rogram			
2			Research in	tegrity 2	eAPF	RIN online p	rogram			
3			Research in	tegrity 3	eAPF	RIN online p	rogram			
4			Research in	tegrity 4	eAPF	RIN online p	rogram			
5			Research et	hics 1	eAPF	RIN online p	rogram			
6			Research et	hics 2	eAPF	RIN online p	rogram			
7			Research et	hics 3	eAPF	eAPRIN online program				
8			Research et	hics 4	eAPRIN online program					
9	08/28 3rd period Step-up lecture on research ethics			Step-up lecture on research ethics 1	Active learning will be held. (The instructor will set a related topic. Students will audit a small lecture, discuss and then make presentation or comment.)					
10	09/0	14	3rd period	Step-up lecture on research ethics 2	Active learning will be held. (The instructor will set a related topic. Students will audit a small lecture, discus and then make presentation or comment.)			it a small lecture, discuss		
11	09/0	4	4th period	Step-up lecture on research ethics 3	relat	ed topic. St		ne instructor will set a it a small lecture, discuss comment.)		
12	09/1	1	3rd period	Step-up lecture on research ethics 4	relat	ed topic. St	vill be held. (Th udents will aud presentation or	e instructor will set a it a small lecture, discuss comment.)		
13	09/1	1	4th period	Step-up lecture on research ethics 5	relat	ed topic. St	vill be held. (Th udents will aud presentation or	e instructor will set a it a small lecture, discuss comment.)		
14	09/1	8	3rd period	Medical ethics 1	relat	ed topic. St		e instructor will set a it a small lecture, discuss comment.)		
15	09/1	8	4th period	Medical ethics 2	relat	ed topic. St		ne instructor will set a it a small lecture, discuss comment.)		
Estim	nated out-of- study time	class	60 hours of	60 hours of self-learning (out-of-class study) is recommended in addition to 30-hours lecture (2hrs X 15 times).						
Require	ed Textbook ト)	(テキス	NA							
Reading List(参考文献)			Principles of Biomedical Ethics. Beauchamp TL and Childress JF. OXFORD University Press. Bioethics Briefings. The Hastings Center. https://www.thehastingscenter.org/publications-resources/hastings- center-bioethics-briefings/ Responsible Conduct of Research. Shamoo AE and Resnik DB. OXFORD University Press. The Oxford Textbook of Clinical Research Ethics. Emanuel EJ, Crady C et al eds. OXFORD University Press. Medical Ethics Today. British Medical Association Ethics Department. Wiley-Blackwell. Resolving Ethical Dilemmas A Guide for Clinicians. Lo B. LWW.							
Enrollm	ient Conditic 条件)	ons(履修	Participatin	g students are recommended to have basic	knowl	edge life-sc	iences.			
	iment Metho ia(評価方法 ·		Students ar subject and	e evaluated for their grades and credits bas abilities of discussion and ethical reasonir	ed on g.	the course h	nours complete	ed, understanding of each		
Lar	nguage Usec	l in	Japanese ar	nd English						
_						-				

Instruction(使用言語)	Japanese and English
Textbook/Material Language(教科書・資料の言 語)	Combination of Japanese and English
Course Based on Practical Work Experience(実務経験 を活かした授業)	Applicable

Course Coding(科 目ナンバー)	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)		
RDM7-166-99-2	2025	whole year	Graduate School of Medical Sciences (25810)	1, 2, 3, 4		2	others		
	Co	ourse Title(Th	eme)(科目名(講義題目))			Instructor(s)(担当教員)		
		Special Pract	tice(Special Practice)		ARIMA Yu		ATA Kazuya, Oike Yuuichi, Kenichi		
Goals with their ratio(学修成果とその割合)									
1.Advanced expert knowledge, skill and research capability ····40% 2.Profound inter-disciplinary knowledge ····30% 3.Global perspective and ability to take initiative action ····20% 4.Social leadership drive ····10%									
Type of Class(授業	(の形態)	Other							
Teaching Method 法)	授業の方		n take seminars presented by invited speak m Experienced Doctor").	ers (in	cluding "D1	Medical and L	ife Seminar" and "D2		
Course Goals(授美	(の目的)	Students are expectancy.	e encouraged to gain a basic knowledge abo	out ag	ing, aging-re	elated diseases	, and healthy life		
Course Learning g	oals(学修	Students ex	【A level (A水準)】 Students excellently acquired a knowledge about aging/aging-related diseases/ therapeutic strategies for healthy life expectancy, and can discuss about the problems.						
目標)		【C level (C水準)】 Students acceptably acquired a knowledge about aging/aging-related diseases/ therapeutic strategies for healthy life expectancy, and can discuss about the problems.							
Course Outline(授	業の概要)		n learn about recent advances of the resear D1 Medical and Life Seminar" and "D2 Learr				ented by invited speakers		
_			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 Cla	ass(内容概略)		
1		Research se	eminar	Rese	arch semina	ar by invited sp	eakers		
Estimated out-o study time		This course frames), 60 lesson.	consists of content that requires 90 hours of hours of pre- and post-study (including repo	of stud orts) is	y. Since the required to	e lesson is 30 ho deepen the ur	ours (2 hours x 15 nderstanding of the		
Required Textboo ト)	k(テキス	No particula	ar textbook.						
Reading List(参	考文献)	Biology of Aging (2nd Edition, by Roger B. McDonald) ISBN 9780815345671 The Biology of Senescence: A Translational Approach (by Bernard Swynghedauw) ISBN 9783030151102							
Enrollment Condit 条件)	ions(履修	Have basic knowledge concerning what is taught in this course.							
Assessment Meth Criteria(評価方法		Students are required to attend seminars (more than 12 times) presented by invited speakers (including "D1 Medical and Life Seminar" and "D2 Learning from Experienced Doctor") for credit before completion of their Thesis research. Students are also required to write at least 4 essays about the seminars. Students have to submit the essay to the professors in charge within one month by e-mail.							
Language Use Instruction(使用	ed in]言語)	Japanese ar	nd English						
Textbook/Material Language(教科書・資料の言 語)									
Course Based on Work Experience(を活かした授	実務経験	Not applica	ble						

	e Coding(科 マンバー)		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)	
RDM7	-167-79-2	2025v	vhole year	Graduate School of Medical Sciences (25820)		1, 2, 3, 4	2	others	
	Course Title(Theme)(科目名(講義題目))							s)(担当教員)	
		Pra	ctice I on CM	IHA(Practice I on CMHA)		ARIMA Yu		ATA Kazuya, Oike Yuuichi, Menichi	
	Goals with their ratio(学修成果とその割合)								
1.Advan and abi	nced expert k lity to take ir	nowledg	ge, skill and r ction ····20	esearch capability ····40% 2.Profound in % 4.Social leadership drive ····10%	er-diso	ciplinary kno	wledge ····30	% 3.Global perspective	
Туре о	of Class(授業)	の形態)	Other						
Teachir	ng Method(扔 法)	受業の方	Students wi	Il present their research results at a domes	tic cor	nferences/m	eeting.		
Course	e Goals(授業)	の目的)		n present and discuss their research resul) as a first author at a domestic conference			-related diseas	es, and healthy life	
Course	Course Learning goals(学修 目標) [A level (A水準)] Students can excellently present and discuss their research results (e.g. about aging, aging-related diseases healthy life expectancy) at a domestic conferences/meeting. [C level (C水準)] Students can acceptably present and discuss their research results (e.g. about aging, aging-related diseases healthy life expectancy) at a domestic conferences/meeting.						с ,		
Course	Outline(授業	の概要)		n present and discuss their research resul) as a first author at a domestic conference			-related diseas	es, and healthy life	
				Details for Individual Classes(各回)	の授業の	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			Presentation	n at domestic conferences/meeting.	Pres	sentation at	domestic confe	rences/meeting.	
Estim	nated out-of- study time	class		consists of content that requires 90 hours hours of pre- and post-study (including re					
Require	ed Textbook ト)	(テキス	No particula	ar textbook.					
Read	ling List(参考	文献)	No particula	ar textbook.					
Enrollm	ient Conditic 条件)	ons(履修	Have basic	knowledge concerning what is taught in th	is cour	se.			
	ment Metho ia(評価方法・		(1) Presenta abstract) is		ences	nces/meeting. (2) The record of presentation (e.g.			
	nguage Usec ruction(使用		Japanese ar	nd 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	務経験	Not applica	ble					

(Reference Translation)

Guidelines for Approval of Credits for Practice I on CMHA (Presentation at domestic conferences)

(Purpose)

Article 1

These guidelines prescribe the matters regarding the approval of credits for Practice I on CMHA (hereinafter referred to as "Practice I") offered by the Educational Program for Extension of Healthy Life Expectancy of the Graduate School of Medical Sciences.

(Overview of Practice I)

Article 2

In Practice I, students are required to attend academic conferences, lectures, symposiums, and other academic meetings organized by universities and other academia (excluding those organized by the private sector) held in Japan (hereinafter referred to as "academic conferences"), and credits are granted for oral or poster presentations at academic conferences.

(The number of credits to be granted)

Article 3

In Practice I, a maximum of two (2) credits shall be granted according to the type of academic conference at which the presentation is made, as listed below. However, the judgment as to which academic conferences credits can be granted for shall be made by the chief instructor of Practice I.

- (1) A maximum of two (2) credits is allowed for each oral or poster presentation at a domestic academic conference as the first author of the presentation abstract.
- (2) For presentations at regional conferences (regional meetings, etc.), the maximum number of credits is one (1) per attendance with oral or poster presentation as the first author of the presentation abstract.
- 2 The criteria for the number of credits to be granted shall be as listed in the following table according to the number of days of the academic conferences mentioned in each item of the preceding paragraph.

Academic conference	The number of credits to be granted	Examples of credits to be granted
National	One third $(1/3)$ of one credit is granted for each	• 1-day conference: 2/3
	half day (approximately 5 hours) of the	• 2-day conference: 4/3
	conference period.	• 3 or more-day conference: 2
Regional	One sixth (1/6) of one credit is granted for	• 1-day conference: 1/3
	each half day (approximately 5 hours) of the	• 2-day conference: 2/3
	conference period.	• 3 or more-day conference: 1

*Remarks

(a) In principle, the stipulated maximum number of credits shall be granted for three days of attendance at an academic conference. The rationale for this is that 15 hours of class attendance in lectures and seminar courses at the Graduate School of Medical Sciences is defined as one credit and that as the regular program of academic conferences is from 8:00 a.m. to around 6:00 p.m., three days of attendance at an academic conference is equivalent

to approximately 30 hours of class attendance.

(b) When the academic conference is held online only, the number of days actually attended online should be counted for credits.

(c) When an academic conference is held as a hybrid of on-site and online meeting, and there is a period of streaming service, such period should not be included in the number of days of the conference, but only the number of days held on-site should be counted for credits.

(d) The number of credits for attendance at academic conferences that do not conform to the above-mentioned rules shall be determined by the chief instructor of Practice I.

(Application)

Article 4

When a student wishes to earn credits for Practice I, the documents listed below must be submitted, in principle, during the academic year in which the presentation is made to the Student Affairs Office of the Graduate School of Medical Sciences (hereinafter referred to as the "GSMS Student Affairs Office").

- Application for Approval of Credits for Practice I on CMHA (Presentation at domestic academic conferences) (Form 1)
- (2) A copy of the certificate of participation in the academic conference
- (3) A copy of the conference program containing the applicant's presentation information
- (4) A copy of the conference abstract containing the applicant's name as a leading presenter
- (5) Request for Approval of Credits for Practice I on CMHA (Presentation at domestic academic conferences) (Form 2)

(Submit this form when the applicant has lost any of the required documents above or has participated in an online conference.)

- 2 The application requirements for credits are as follows:
 - (1) The applying student must be the first presenter.
 - (2) The applicant's affiliation must be with Kumamoto University, in principle. If the applicant's affiliation is not with Kumamoto University, the applicant's academic advisor must be included in the presentation as a copresenter.
 - (3) In principle, conferences shall be attended in person. In the case of online attendance, the request form stipulated in (5) of Article 4 must be submitted.

(Screening)

Article 5

The instructor of Practice I shall review the application documents submitted to the GSMS Student Affairs Office and calculate the number of credits requested in accordance with the credit conversion table stipulated in Paragraph 2 of Article 3.

(Approval of Credits)

Article 6

The instructor of Practice I shall approve the credits calculated as in the preceding Article and report the granted

credits to the GSMS Student Affairs Office. When two credits are to be granted, a grade evaluation shall be made at the same time.

2 The number of credits approved in accordance with the preceding paragraph may be accumulated from year to year until two credits are earned. When the total number of credits accumulated reaches two credits, the instructor shall grant the credits and grade the student.

Supplementary Provisions

- 1. These guidelines shall come into effect as of May 29, 2024.
- 2. Only within the academic year 2024, regardless of the provisions of Paragraph 1 of Article 4, students may apply with respect to conferences attended in the past.

Application for Approval of Credits for Practice I on CMHA (Presentation at domestic academic conferences)

× ·			Application Date:	(yea	r/month/day)
Name:	Year:	St	udent ID No.:	Department:	
Course Name (If applicable):					
Phone number:		Er	nail address:		
Name of academic conference	e:				
Date of conf. (y/m/d):	-		City and venue of confere	nce:	
Date when the applicant parti	cipated in the co	nfe	rence (y/m/d): -	(day	s)
Presenters' names (all):					
Title of presentation:				Circle Oral or Po	ster
The number of credits to be a	pplied for approv	val	credits		
*Refer to Article 3 of the Gui	delines.				
Report on what you have lead presentations). Write at least	200 words within	n th	is page.		
Submit this application form	together with 1) a (copy of the certificate of pa	ticipation in the acad	emic confere
2) a copy of the conference	program contain	ing	the applicant's presentati	n information, and	3) a copy of

S nce, 2) the conference abstract containing the applicant's name as a leading presenter to the GSMS Student Affairs Office. (Screening for approval of credits will be conducted by the faculty member in charge of Practice I on CMHA.)

When the applicant has lost any of the required documents or has participated in a conference online, Form 2 "Request for Approval of Credits for Practice I on CMHA (Presentation at domestic academic conferences)" should be submitted.

(Form 2)

Request for Approval of Credits for Practice I on CMHA (Presentation at domestic academic conferences)

Student ID No.:

Department:

Student's name (handwritten by student):

Academic advisor's name (handwritten by advisor):

Name of Conference:

Content of Request:

	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 r(開講年次)	Credits(単位 数)	Weekday and Period(曜 日・時限)	
RDM7	-168-79-2	2025v	whole year	Graduate School of Medical Sciences (25830)	1	, 2, 3, 4	2	others	
	Course Title(Theme)(科目名(講義題目))							s)(担当教員)	
		Prac	tice II on CM	IHA(Practice II on CMHA)		ARIMA Yu		ATA Kazuya, Oike Yuuichi, Menichi	
	Goals with their ratio(学修成果とその割合)								
1.Advar and abi	nced expert k lity to take ir	knowledg nitiative a	ge, skill and r action ••••20	esearch capability ·····40% 2.Profound into 1% 4.Social leadership drive ····10%	er-disc	iplinary kno	wledge ····30	% 3.Global perspective	
Туре о	of Class(授業)	の形態)	Other						
Teachir	ng Method(扔 法)	受業の方	Students wi	Il present their research results at internati	onal co	onferences/	meeting.		
Course	e Goals(授業)	の目的)		n present and discuss their research result) as a first author at international conference			elated diseases	, and healthy life	
Course	Course Learning goals(学修 目標) [A level (A水準)] Students can excellently present and discuss their research results (e.g. aging, aging-related diseases, and healthy life expectancy) at international conferences/meeting. [C level (C水準)] Students can acceptably present and discuss their research results (e.g. aging, aging-related diseases, and healthy life expectancy) at international conferences/meeting.							,	
Course	Outline(授業	¢の概要)		n present and discuss their research result) as a first author at international conference			elated diseases	, and healthy life	
				Details for Individual Classes(各回の)授業内	9容)			
No.(回)	Date(月	日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
1			Presentation	n at international conferences/meeting	Pres	entation at i	international co	onferences/meeting	
Estim	nated out-of- study time	class		consists of content that requires 90 hours hours of pre- and post-study (including rep					
Require	ed Textbook ト)	(テキス	No particula	ar textbook.					
Read	ling List(参考	文献)	No particula	ar textbook.					
Enrollm	ient Conditic 条件)	ons(履修	Have basic	knowledge concerning what is taught in thi	s cours	se.			
	iment Metho ia(評価方法 ·		(1) Presenta abstract) is	ation of research results at international con necessary.	nferend	ces/meeting	g. (2) The record	d of presentation (e.g.	
	nguage Usec ruction(使用		Japanese ar	nd 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					

(Reference Translation)

Guidelines for Approval of Credits for Practice II on CMHA (Presentation at international conferences*)

*Academic conferences held outside of Japan

(Purpose)

Article 1

These guidelines prescribe the matters regarding the approval of credits for Practice II on CMHA (hereinafter referred to as "Practice II") offered by the Educational Program for Extension of Healthy Life Expectancy of the Graduate School of Medical Sciences.

(Overview of Practice II)

Article 2

In Practice II, students are required to attend academic conferences, lectures, symposiums, and other academic meetings organized by universities and other academia (excluding those organized by the private sector) held outside of Japan (hereinafter referred to as "academic conferences"), and credits are granted for oral or poster presentations at academic conferences.

(The number of credits to be granted)

Article 3

In Practice II, a maximum of two (2) credits shall be granted according to the type of academic conference at which the presentation is made, as listed below. However, the judgment as to which academic conferences credits can be granted for shall be made by the chief instructor of Practice II.

- (1) A maximum of two (2) credits is allowed for each oral or poster presentation at an international academic conference as the first author of the presentation abstract.
- (2) For presentations at regional conferences (regional meetings, etc.), the maximum number of credits is one (1) per attendance with oral or poster presentation as the first author of the presentation abstract.
- 2 The criteria for the number of credits to be granted shall be as listed in the following table according to the number of days of the academic conferences mentioned in each item of the preceding paragraph.

Academic conference	The number of credits to be granted	Examples of credits to be granted
International conferences	One third $(1/3)$ of one credit is granted for each	• 1-day conference: 2/3
held outside of Japan	half day (approximately 5 hours) of the	• 2-day conference: 4/3
	conference period.	• 3 or more-day conference: 2
Regional conferences	One sixth (1/6) of one credit is granted for	• 1-day conference: 1/3
held outside of Japan	each half day (approximately 5 hours) of the	• 2-day conference: 2/3
	conference period.	• 3 or more-day conference: 1

*Remarks

(a) In principle, the stipulated maximum number of credits shall be granted for three days of attendance at an academic conference. The rationale for this is that 15 hours of class attendance in lectures and seminar courses at the Graduate School of Medical Sciences is defined as one credit and that as the regular program of academic conferences is from 8:00 a.m. to around 6:00 p.m., three days of attendance at an academic conference is equivalent

to approximately 30 hours of class attendance.

(b) When the academic conference is held online only, the number of days actually attended online should be counted for credits.

(c) When an academic conference is held as a hybrid of on-site and online meeting, and there is a period of streaming service, such period should not be included in the number of days of the conference, but only the number of days held on-site should be counted for credits.

(d) The number of credits for attendance at academic conferences that do not conform to the above-mentioned rules shall be determined by the chief instructor of Practice II.

(Application)

Article 4

When a student wishes to earn credits for Practice II, the documents listed below must be submitted, in principle, during the academic year in which the presentation is made to the Student Affairs Office of the Graduate School of Medical Sciences (hereinafter referred to as the "GSMS Student Affairs Office").

- (1) Application for Approval of Credits for Practice II on CMHA (Presentation at international academic conferences) (Form 1)
- (2) A copy of the certificate of participation in the academic conference
- (3) A copy of the conference program containing the applicant's presentation information
- (4) A copy of the conference abstract containing the applicant's name as a leading presenter
- (5) Request for Approval of Credits for Practice II on CMHA (Presentation at international academic conferences) (Form 2)

(Submit this form when the applicant has lost any of the required documents above or has participated in an online conference.)

- 2 The application requirements for credits are as follows:
 - (1) The applying student must be the first presenter.
 - (2) The applicant's affiliation must be with Kumamoto University, in principle. If the applicant's affiliation is not with Kumamoto University, the applicant's academic advisor must be included in the presentation as a copresenter.
 - (3) In principle, conferences shall be attended in person. In the case of online attendance, the request form stipulated in (5) of Article 4 must be submitted.

(Screening)

Article 5

The instructor of Practice II shall review the application documents submitted to the GSMS Student Affairs Office and calculate the number of credits requested in accordance with the credit conversion table stipulated in Paragraph 2 of Article 3.

(Approval of Credits)

Article 6

The instructor of Practice II shall approve the credits calculated as in the preceding Article and report the granted

credits to the GSMS Student Affairs Office. When two credits are to be granted, a grade evaluation shall be made at the same time.

2 The number of credits approved in accordance with the preceding paragraph may be accumulated from year to year until two credits are earned. When the total number of credits accumulated reaches two credits, the instructor shall grant the credits and grade the student.

Supplementary Provisions

- 1. These guidelines shall come into effect as of May 29, 2024.
- 2. Only within the academic year 2024, regardless of the provisions of Paragraph 1 of Article 4, students may apply with respect to conferences attended in the past.

Application for Approval of Credits for Practice II on CMHA (Presentation at international academic conferences)

		Application Date	2:	(year/month/day)
Name:	Year: S	tudent ID No.:	Department:	
Course Name (If applicable)	:			
Phone number:	E	mail address:		
Name of academic conference	ce:			
Date of conf. (y/m/d):	-	City and venue of c	onference:	
Date when the applicant part	icipated in the conf	erence (y/m/d):	- (days)
Presenters' names (all):				
Title of presentation:			Circle O	ral or Poster
The number of credits to be	applied for approva	l: credits		
Refer to Article 3 of the Gu	idelines.			
Submit this application forr	n together with 1) a	copy of the certificate	e of participation in	the academic confere

(Screening for approval of credits will be conducted by the faculty member in charge of Practice I on CMHA.) When the applicant has lost any of the required documents or has participated in a conference online, Form 2 "Request for Approval of Credits for Practice II on CMHA (Presentation at international academic conferences)" should be submitted.

conference abstract containing the applicant's name as a leading presenter to the GSMS Student Affairs Office.

(Form 2)

Request for Approval of Credits for Practice II on CMHA (Presentation at international academic conferences)

Student ID No.:

Department:

Student's name (handwritten by student):

Academic advisor's name (handwritten by advisor):

Name of Conference:

Content of Request:

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)	
RDM7-169-79-2	2025	whole year	Graduate School of Medical Sciences (25840)	1	, 2, 3, 4	2	others	
	Course Title(Theme)(科目名(講義題目))						s)(担当教員)	
		Practice	e III on CMHA(-)		OKI Shir		ko, YAMAGATA Kazuya, SUJITA Kenichi	
Goals with their ratio(学修成果とその割合)								
1.Advanced expert knowledge, skill and research capability ····40% 2.Profound inter-disciplinary knowledge ····30% 3.Global perspective and ability to take initiative action ····20% 4.Social leadership drive ····10%								
Type of Class(授業	の形態)	Other						
Teaching Method(法)	受業の方	Students wi conference)	ll present their research results at CMHA cr).	oss-cu	tting confer	ence (e.g. CMH	IA borderless	
Course Goals(授業	の目的)	Students wi conference)	ll present and discuss their research results).	at CM	HA cross-ci	utting conferen	ce (e.g. CMHA borderless	
Course Learning go 目標)	oals(学修	Students ca healthy life [C level (C Students ca	A level (A水準)] udents can excellently present and discuss their research results (e.g. aging, aging-related diseases, and ealthy life expectancy) at CMHA cross-cutting conferences (e.g. CMHA borderless conference). (C level (C水準)] udents can acceptably present and discuss their research results (e.g. aging, aging-related diseases, and ealthy life expectancy) at CMHA cross-cutting conferences (e.g. CMHA borderless conference).					
Course Outline(授美	美の概要)	Students ca expectancy	n present and discuss their research results) at CMHA cross-cutting conferences (e.g. C	s (e.g. a MHA k	aging, aging oorderless c	-related diseas onference).	es, and healthy life	
			Details for Individual Classes(各回の	授業内	容)			
No.(回 Date()]日)		Class Theme(授業テーマ)		Brie	ef Outline of Cl	ass(内容概略)	
1		Presentation	n at CMHA cross-cutting conference	Prese	entation at	CMHA cross-cu	tting conference	
Estimated out-of study time								
Required Textbool ト)	(テキス	None						
Reading List(参考	(文献)	None						
Enrollment Conditi 条件)	ons(履修	Having basic knowledge about this class.						
Assessment Metho Criteria(評価方法		Presentation	Presentation of research results at CMHA cross-cutting conference at least one time.					
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 F Work Experience(を活かした授	実務経験	Not applica	ble					