

Admission in Spring (April) 2017

Graduate School of Medicine
(Doctoral Program)

Student Application Guidelines

National University Corporation

Shiga University of Medical Science

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Admission Policy, etc.

Admission Policy (Policy for Admitting Students)

○Desired candidates

A candidate should have the research ability required to be independently engaged in creative research activities, academic expertise that serves as a foundation for the former ability, and a sense of humanity.

○Fundamental policy for selecting students for enrollment

A candidate should have an enthusiasm to be engaged in creative research, dedicate himself/herself to advancement and development of medical science and practice, and contribute to the society with a sense of ethics and mission.

Curriculum Policy (Policy for Organizing and Executing Curriculum)

By adopting the three courses (Advanced Medical Science Course, Advanced Medicine for Clinicians Course, and Interdisciplinary Medical Science and Innovation Course) under one major, all faculty members in our school can constitute the cross-disciplinary and organic education and research organization.

1. Advanced Medical Science Course provides a learning environment for doctoral students to develop the ability to accomplish research independently by learning research ethics and advanced research techniques, and by experiencing unique, leading-edge research.
2. Advanced Medicine for Clinicians Course provides a learning environment for doctoral students to play a leading role in the medical front by learning clinical research, medical ethics, and legal medicine, and also provides the support to learn highly specialized skills for obtaining a medical specialist certification.
3. Interdisciplinary Medical Science and Innovation Course provides a learning environment for doctoral students to work actively in industry and academia by learning research methods and interdisciplinary knowledge such as medicine, engineering, and science.

Diploma Policy (Policy for Granting an Academic Degree)

A doctoral degree is granted to a student who acquires sufficient levels of expertise, research skills, and an ability to accomplish research independently, as well as sufficient knowledge on medical ethics, life ethics, and research ethics for a medical researcher.

In addition to the above, the following competency is required to complete each course:

1. In Advanced Medical Science Course, a student should obtain expertise and an ability to play an active role in an international arena.
2. In Advanced Medicine for Clinicians Course, a student should obtain knowledge and medical skills suitable as a specialist and an ability to be a successful leader in a clinical site.
3. In Interdisciplinary Medical Science and Innovation Course, a student should have interdisciplinary knowledge and research ability to integrate medicine and other fields of study.

Student Application Guidelines

Number of Students to Be Admitted

30 students in Medical Science
(including working students)

Advanced Medical Science Course

(*1 Including Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region)

Advanced Medicine for Clinicians Course

(*2 Including the Oncology Specialist Training Course)

Interdisciplinary Medical Science and Innovation Course

*1 For the “Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region,” applications for admission in Spring(April) in 2017 , please refer to the application guidelines .

*2 For details about “the Oncology Specialist Training Course,” please refer to the application guidelines attached.

(Note) For applicants who are willing to enroll while maintaining their job, “Special Exception of Education Method” according to Article 14 of Graduate Schools Establishment Standards shall apply, and we may provide education through appropriate means, which include conducting classes or research guidance in the evening and other certain hours and periods.

Eligibility for Applicants

1. Those who have graduated or are expected to graduate from a school of medicine or dentistry of a university, or a six-year program of pharmacy or veterinary medicine by March 2017
2. Those who have completed or are expected to complete 18 years of school education (must include medicine, dentistry, pharmacy, or veterinary medicine in the curriculum) by March 2017
3. Those who have completed or are expected to complete 18 years of school education in a foreign country (must include medicine, dentistry, pharmacy, or veterinary medicine in the curriculum), by taking courses in correspondence education provided by a school in a foreign country in Japan by March 2017
4. Those who have completed a curriculum (an applicant must complete 18 years of school education in a foreign country (must include medicine, dentistry, pharmacy or veterinary medicine in the curriculum)) in an educational institution in Japan that is deemed to have courses offered by an overseas college according to the educational system of that country and have also been designated by the Minister of Education, Culture, Sports, Science and Technology
5. Those who have academic ability equivalent or superior to those who have completed a master’s program or have earned a master’s degree, and have also been designated by the Minister of Education, Culture, Sports, Science and Technology according to Notification No. 39 dated April 8, 1955, from the Ministry of Education and Notification No. 118 dated September 1, 1989, from the Ministry of Education, including those who are recognized to have an academic ability equivalent or superior to those who have graduated from a school of medicine, dentistry, or veterinary medicine
6. Those who stayed in a six-year college for four years or more without graduating from it (a curriculum must include medicine, dentistry, pharmacy, or veterinary medicine) and are recognized by our school that they have earned a designated number of credits with excellent grades
7. Those who have completed 16 years of school education in a foreign country (a curriculum must include medicine, dentistry, pharmacy, or veterinary medicine); those who have completed 16 years of

school education in a foreign country (must include medicine, dentistry, pharmacy, or veterinary medicine in the curriculum), by taking courses in correspondence education provided by a school in a foreign country; or those who have completed a curriculum (an applicant must complete 16 years of school education in a foreign country (must include medicine, dentistry, pharmacy, or veterinary medicine in the curriculum)) in an educational institution in Japan that is deemed to have courses offered by an overseas college according to the educational system of that country and have also been designated by the Minister of Education, Culture, Sports, Science and Technology, while being recognized by our school that they have earned a designated number of credits with excellent grades

8. Those who are recognized to have academic ability equivalent or superior to those who have graduated from a college (a curriculum must include medicine, dentistry, pharmacy, or veterinary medicine) through individual screening of requirements for admission and who will be 24 years old before or on March 31, 2017.

- (Note)
1. Applicants for working students must apply to one of the above criteria, already work at the point of application, and obtain an approval from their supervisor for enrollment while maintaining their job.
 2. If you apply to any of the above criteria 5-8, please refer to “Screening of Eligibility for Application” on page 7.

Application Procedure

1. Period of Application
Tuesday, November 1 to Monday, November 7, 2016, as indicated by the postmark on the envelope
2. Address to Submit Application Documents and Inquiry
Contact for Entrance Examination, Admissions Office,
Shiga University of Medical Science
Seta Tukinowa-cho, Otsu City, Shiga 520-2192, Japan
Tel: 077-548-2071 (direct)

3. Application Documents (* (asterisk) means that our school’s format is provided)

	Required Document	Note
1	Application for Admission *	
2	Academic Transcript	Prepared and sealed by the President (Dean) of a school attended. Not required for those who have graduated/will graduate from our university. If you have completed/will complete a master’s program, please <u>also submit</u> an academic transcript prepared and sealed by the President (Dean) of the graduate school attended.
3	Certificate of Graduation or Certificate of Expected Graduation	Prepared by the President (Dean) of a school attended. Not required for those who have graduated/will graduate from our university. If you have completed/will complete a master’s program, please <u>submit only</u> a certificate of completion (or a certificate of expected completion) prepared by the President of the graduate school attended.
4	Payment verification form (included at the end of this booklet) *	After paying 30,000 yen as the entrance examination fee using the deposit request form (designated by the university and included at the end of this booklet) between Monday, October 17 and Monday, November 7, 2016, at a bank, attach the sealed “Certificate of Payment” on it.
5	Examination Card/Photo Card *	Attach your photo (upper front body, no hats, taken within the past three months, 4 cm high × 3 cm wide) on the designated field.
6	Envelop for sending an Examination Card *	Fill in your address and attach postage stamps equivalent to 362 yen.
7	Address Card *	Fill in the address where you would like to receive a letter of acceptance. Please do not remove the mount.
8	Letter of Permission for Examination from a Supervisor	Submit only if you currently enroll in another graduate school (unless expected to graduate by March 2017) or work in a government, medical institution, company, etc. (It is not required if you currently attend our university.) (Refer to the attached format example)

- (Note) 1. Any change in the description will not be accepted after submitting your application. Regardless of reasons, application documents will not be returned once they are submitted.
2. If false information is found in the application documents, admission may be canceled even after the enrollment.

4. Application Method

(1) Postal mail

Prepare application documents and send them in a designated envelop enclosed with this guideline by a “registered express mail.”

(2) Bringing in

Bring application documents to “2. Address to Submit Application Documents and Inquiry” on page 3. It will be accepted between 9:00 am and 5:00 pm. (except Saturdays, Sundays, and National Holiday)

5. Consultation with Faculty before the Submission of Application (Mandatory)

To determine a course you would like to apply for, please do not fail to consult our faculty whom you wish to receive guidance from (refer to pages 16-22) before the submission of your application (or before

Screening of Eligibility for Application if you take it).

In that case, call our switchboard (tel: 077-548-2111) or contact our faculty directly.

6. Consideration

- (1) Examination Card will be sent to an applicant by about Tuesday, November 22. If you do not receive it by Thursday, November 24, contact “2. Address to Submit Application Documents and Inquiry” promptly listed on page 3.
- (2) If you may need a consideration for taking an examination or attending our school, for example, for a handicap, please inform “2. Address to Submit Application Documents and Inquiry” listed on page 3 prior to your application.
- (3) Refund procedure for those who are eligible to receive a refund of an examination fee
If you correspond with one of the following conditions, your examination fee can be refunded. If not, the fee is not refunded whatever the reason may be. If you correspond, declare it to “2. Address to Submit Application Documents and Inquiry” listed on page 3 by Friday, December 16, 2016.
 - (i) Those who did not submit an application after paying the examination fee (application documents were neither submitted nor accepted)
 - (ii) Those who paid the examination fee twice by mistake

Selection Method, etc.

1. Selection Method

Academic examinations, interview, and application documents are evaluated for the selection. Working applicants are not specially selected separately from other applicants. Such applicants are also selected through this examination.

2. Schedule of Academic Examination, etc.

Date	Hours	Academic examination, etc.	Point allocation
Thursday, December 1	10:00 – 11:30	Foreign language (English)	120 points
	12:30 – 13:30	General medicine and life science *	120 points
	14:00 –	Interview (individual)	*

- (Note)
1. In the examination of “Foreign language (English),” it is permitted to bring in dictionaries (except electronic dictionary).
 2. Please make sure to refer to the attachment for the scope of examination for “General medicine and life science.”
 3. You can use black pencils (including a mechanical pencil), pencil sharpener (not electronic), eraser, glasses, and watch (with clock function only) only during an academic examination.
 4. *During an interview, your quality and adequacy for becoming an educator or a researcher will be assessed according to a scale, and the results will be considered in overall evaluations.

3. Location

Shiga University of Medical Science (Please refer to the “Campus Map” on page 9.)

The details will be enclosed upon the shipment of an Examination Card.

Result Announcement

10:00 am, Thursday, December 15, 2016 (as scheduled)

Successful applicants’ numbers will be announced on the entrance examination posting area (refer to the “Campus Map” on page 9) and our homepage (<http://www.shiga-med.ac.jp/>), while “a letter of acceptance” will be sent to successful applicants.

We do not answer any inquiry by phone.

Enrollment Registration

1. Date

• Bringing in

From 9:00 am to 5:00 pm on Thursday, March 9

If you are unable to come for the registration on the date designated above due to an inevitable reason, please call the phone number given in item 2. below during the hours specified above and register between 9:00 am and 5:00 pm on Friday, March 10.

• Postal mail

Due not later than 5:00 pm, Friday, March 10

If you send documents via a postal mail, please call the phone number given in item 2. below during the hours specified above.

2. Place of registration (postal address)

Contact for Entrance Examination, Admissions Office,
Shiga University of Medical Science
Seta Tuginowa-cho, Otsu City, Shiga 520-2192, Japan
Tel: 077-548-2071 (direct)

3. Payment

(1) Admission fee 282,000 yen

(2) Tuition fee 267,900 yen (for half a year)

(i) About the payment of admission fee, a notice will be sent separately to successful applicants.

Tuition for the half term should be paid by the end of April 2017, using the deposit request form designated by our school.

(ii) If tuition fee is revised during your enrollment, the new tuition will apply from the time of revision.

(iii) Tuition fee can be paid yearly.

4. Exemption of Payment

Exemption and deferred payment of admission fee and tuition may be applicable, and procedures for these will be announced separately to successful applicants.

5. Documents to Be Submitted

Documents and other information required for the registration will be notified upon shipment of a letter of acceptance.

6. Consideration

- (1) An Examination Card will be necessary for the registration, so please be careful not to lose it.
- (2) If you do not complete the registration by the above date, you will be considered as having declined enrollment.

Screening of Eligibility for Application

If you apply based on any of the criteria 5-8 listed in Eligibility for Applicants, please be certified for the eligibility for applications with the following procedures:

1. Documents for Application

- (1) If you apply based on the criterion 5, submit from (i) to (iv) below.
- (2) If you apply based on the criterion 6 or 7, submit from (i) to (vi) below.
- (3) If you apply based on the criterion 8, submit from (i) to (iv) and (vii) below.
 - (i) Request for Screening of Eligibility for Application (format designated by our school)
 - (ii) Future research theme and research plan (about 1,200 letters on an A4-size sheet)
 - (iii) Academic Transcript (Prepared and sealed by the President (Dean) of a school attended. If you have completed/will complete a master's program, please also submit an academic transcript prepared and sealed by the President (Dean) of the graduate school attended.)
 - (iv) Envelop for sending a screening result: Fill in your name and address and attach postage stamps equivalent to 362 yen on a "Nagagata No. 3" size envelope (120 × 235 mm)
 - (v) Letter of recommendation (Prepared by the President (Dean) of a school attended.)
 - (vi) Curriculum (copy) and syllabus (copy) of the school currently attended
 - (vii) A letter of recommendation (Prepared by the supervisor of a research/medical institution, etc.)

2. Period of Application

Tuesday, October 11 to not later than 5:00 pm, Monday, October 17, 2016

3. Place to Submit the Application Documents

The same as "2. Address to Submit Application Documents and Inquiry" on page 3.

If you send it by a postal mail, send via "simplified registered mail" and write "Enclosed with the request for Screening of Eligibility for Application for Doctoral Program in the Graduate School"

in red ink on the front side of the envelope. If you bring it in, it will be accepted between 9:00 am and 5:00 pm.

4. Eligibility Screening

Eligibility screening is conducted based on documents you will submit. But an interview may be required as appropriate, and in that case, it will be notified to an applicant.

5. Screening Result

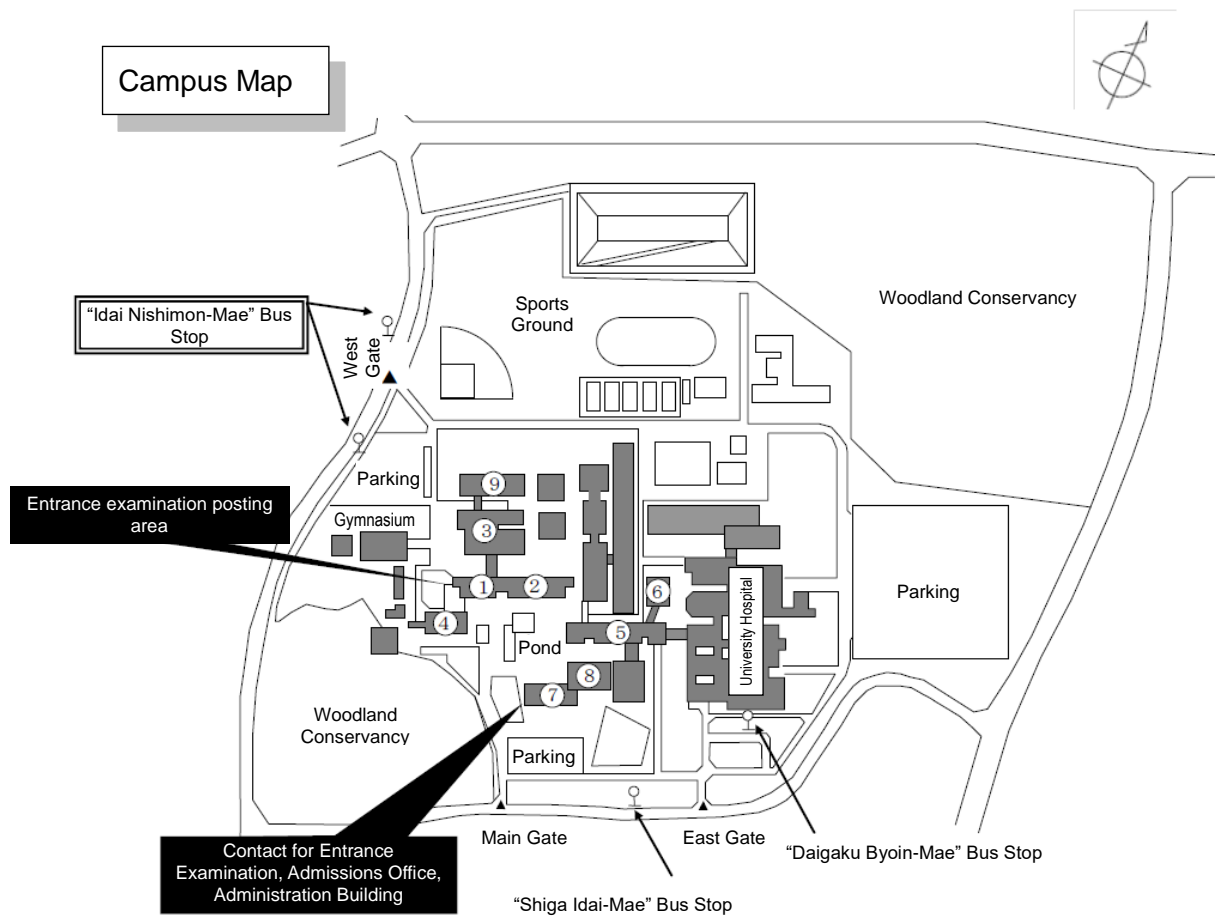
Screening result will be sent to an applicant by about Monday, October 31, 2016.

If you are qualified for the eligibility, please follow the application procedure listed in this guideline (refer to page 3). “Academic transcript” will not be needed upon application as it has been submitted already.

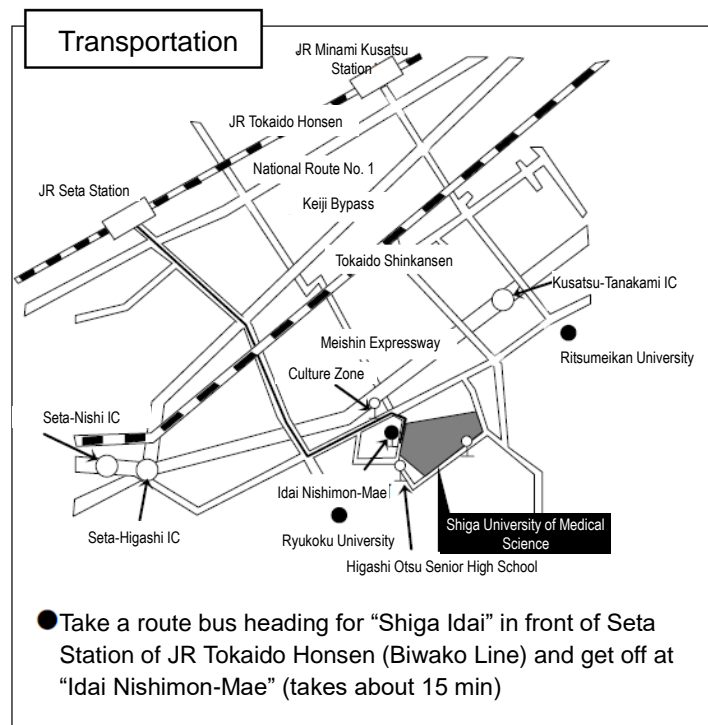
Handling of Private Information

Please note in advance that private information that our school obtains through the entrance examination is handled per conditions specified below.

1. Private information is handled according to “Act on the Protection of Personal Information Held by Independent Administrative Agencies, etc.” and “Rules Regarding Measures for Appropriate Management of Private Information Held by the national University Corporation, Shiga University of Medical Science (as translated).”
2. Name, address, and other private information filled in application documents, etc. are used for (1) applicant selection (application processing and selection), (2) notification of successful applicants, and (3) registration for enrollment.
3. Examination records used in the applicant selection are used for developing materials to consider our applicant selection processes in the future.
4. Private information of enrolling students provided in application documents, etc. is used for (1) teaching (student registration, study guidance, etc.), (2) support for students (health management, employment support, application for exemption of tuition or scholarship, etc.), and (3) administration regarding tuition payment.



- (1) General Education and Research Building
- (2) Basic Medicine Education and Research Building
- (3) Basic Medicine Laboratories and Lecture Halls
- (4) Student Center
- (5) Clinical Medicine Education and Research Building
- (6) Clinical Lecture Halls
- (7) **Administration Building and Health Management Center**
- (8) Library and Multimedia Center
- (9) School of Nursing Building



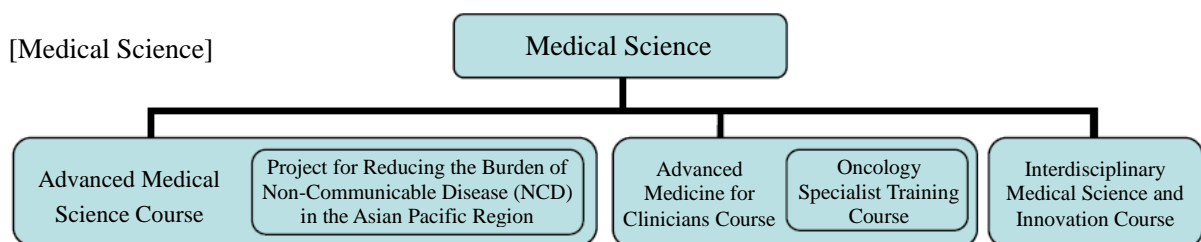
Enrollment

Purpose

The purpose of this Graduate School of Medicine (Doctoral Program) is to grow excellent researchers who have advanced research ability required to be independently engaged in creative research activities, high academic expertise that serves as a foundation for the former ability, and a sense of humanity; and our mission is to dedicate ourselves to the advancement of medical science and improvements in social welfare.

Structure

- Three courses are available under one major.
- The “Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region” has been established as the leading education program for Doctor’s Program within Advanced Medical Science Course.
- The “Oncology Specialist Training Course” has been established within Advanced Medicine for Clinicians Course.



In this major, three courses are offered to grow (1) medical researchers and advanced clinicians who can perform unique and leading-edge research based on high academic expertise and broad knowledge in general medicine; (2) persons with interdisciplinary knowledge and research ability, for example, on medicine and engineering or medicine and biotechnology; and (3) physicians and medical researchers with high expertise, a sense of humanity, and high ethical standards.

[Advanced Medical Science Course]

: Students engage in medical research from basic medicine to clinical medicine and develop a doctoral dissertation to obtain the degree.

- (1) Development of excellent researchers who have an advanced research ability needed to be independently engaged in creative research activities, high expertise that serves as a foundation for the former ability, high ethical standards, and a sense of humanity.
- (2) Development of highly motivated people who have an enthusiastic and inquisitive mind with creativity and who try to solve a variety of medical issues ranging from basic medicine to clinical medicine.
- (3) Development of physicians/medical researchers who have latest knowledge and research ability sufficient to play an active role in an international arena.

[Advanced Medicine for Clinicians Course]

: Students engage mainly in clinical research while working to be qualified as a specialist and develop a doctoral dissertation to obtain the degree.

- (1) Development of advanced clinicians who have excellent research ability, advanced clinical skills, high ethical standards, and a sense of humanity
- (2) Study on issues they face in clinical sites, combined with adoption of research outcomes in clinical medicine, aimed for medical researches to encourage the development of a new diagnostic or therapeutic method
- (3) Study on medical ethics and legal theories with a focus on clinical research and development of people who can be successful leaders in clinical sites

[Interdisciplinary Medical Science and Innovation Course]

: Students study about the creation of a new academic discipline and medical innovation through integration of medicine and other fields of study and develop a doctoral dissertation to obtain the degree. Classes are considered for those who graduated from a department other than a medical school.

- (1) Development of researchers who have interdisciplinary knowledge and high research skills that transcend beyond conventional academic disciplines, such as medicine, engineering, and biotechnology, combined with high ethical standards and a sense of humanity as clinicians.
- (2) Development of people who lead innovations in medical science and practice with interdisciplinary knowledge and high research ability
- (3) Development of researchers who have not only broad knowledge on basic and clinical medicines but also interdisciplinary perspectives and research ability to become successful in research institutions of college, private companies, and other organizations

List of Classes and Number of Credits

Refer to Appendix 1.

However, for Oncology Specialist Training Course and “Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region,” please refer to “Student Application for Oncology Specialist Training Course” and “Student Application for Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region,” respectively.

Major Study Themes of Faculty

Refer to Appendix 2.

Study Guide

1. A student must earn at least 30 credits in total, including 10 credits from compulsory subjects and 4 credits from elective compulsory subjects among the common subjects; 4 credits from compulsory and elective compulsory subjects among the course subjects; and 12 or more credits from elective subjects, over the first, second, and third years.
2. In the third and fourth years, a student should dedicate himself/herself in voluntary research activities, while receiving research guidance suitable for research theme from his/her academic advisor, to nurture advanced research ability needed to be independently engaged in creative research activities and high expertise that serves as a foundation for the former ability. In Oncology Specialist Training Course, advanced research ability and specialized clinical skills are fostered. In Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region, quality to become a global leader who can work actively as the bridge among the industry, government, and academia.
3. For Oncology Specialist Training Course and “Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region,” please refer to “Student Application for Oncology Specialist Training Course” and “Student Application for Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region,” respectively.

Special Exception of Education Methods

In our Graduate School of Medicine (Doctoral Program), “Special Exception of Education Method” has been adopted according to Article 14 of Graduate Schools Establishment Standards. We provide classes and research guidance not only during the daytime but also in the evening and other special hours or periods so that workers can complete a program and receive education and research guidance while maintaining their job. (It does not apply to a part of Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region.)

Grant of Academic Degree

1. The standard term of study is four years.
2. A doctoral degree (medicine) is granted. (Please refer to the attached booklet for Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region.)
3. The degree is granted to those who have stayed in this graduate school for four years or more, earned 30 credits or more in accordance with the above Study Guide, and passed a dissertation review and a final examination after receiving the necessary research guidance. However, those who have stayed in this graduate school for three years or more, achieved extraordinary research results, and fulfilled certain requirements may be granted a degree even if they stayed in the school for less than four years. (This exceptional clause does not apply to Project for Reducing the Burden of Non-Communicable Disease (NCD) in the Asian Pacific Region.)

List of Classes and Number of Credits

Subject classification	Class title	Years and number of credits				Number of credits required for the completion	Note	
		First year	Second year	Third year	Total			
Common subjects	Foundational education	General Medical Theories	6	6		6	30 credits or more	Compulsory
		Technical Seminar	2	2		2		
		Overview of Medicine and Bioethics	1	1		1		
		Overview of Epidemiology and Medical Statistics	1	1		1		
	Fusion Seminars for Basic and Clinical Medicines	Seminar to Integrate Basic and Surgical Medicines		2		2		Elective compulsory
		Seminar to Integrate Basic and Internal Medicines		2		2		
		Seminar to Integrate Basic and Pediatric Medicines		2		2		
		Seminar to Integrate Basic and Geriatric Medicines		2		2		
		Seminar to Integrate Basic Medicine and Study of Lifestyle-related Disease		2		2		
		Seminar to Integrate Basic Medicine and Oncology		2		2		
Course subjects	Advanced Medical Science Course	Pioneer Seminar	2			2	Compulsory	
		Advanced Medical Research Skills	2			2		
	Advanced Medicine for Clinicians Course	General Clinical Medicine Research	2			2	Compulsory	
		Epidemiology and Medical Statistics	1			1		
		General Laws for Medical Ethics	1			1		
	Interdisciplinary Medical Science and Innovation Course	General Basic Medicine	1			1	Elective compulsory	
		General Clinical Medicine	1			1		
		Practicum for Medical-Engineering Collaborative Research	1			1		
		Biomedicine	1			1		
		Genome Science	1			1		
Bioinformatics		1			1			
Overview of Medical Innovations		1			1			
Theory of Intellectual Property Strategies	1			1				
Functional Analysis of Ion Channels	1			1				

Elective subjects	Advanced Medical Science Course	Medical Imaging Practicum	2	2	4	Elective
		Nuclear Magnetic Resonance Practicum	2	2	4	
		Cellular Physiology Practicum	2	2	4	
		Molecular Cell Biology Practicum	2	2	4	
		Genetic Information Practicum	2	2	4	
		Molecular Neurobiology Practicum	2	2	4	
		Neuroscience Practicum	2	2	4	
		Advanced Legal Medicine Practicum	2	2	4	
		Neuropathology Practicum	2	2	4	
		Molecular Psychiatry Practicum	2	2	4	
		Sleep Psychiatry Practicum	2	2	4	
		Visual Pathophysiology Practicum	2	2	4	
		Immunological Control Practicum	2	2	4	
		Endocrine Control Practicum	2	2	4	
		Reproductive Physiology Practicum	2	2	4	
		Perinatal Pathology Practicum	2	2	4	
		Development Engineering and Control Practicum	2	2	4	
		Stem Cell Biology Practicum	2	2	4	
		Oncology Medicine Practicum	2	2	4	
		Pathology Practicum	2	2	4	
		Laboratory Animal Science Practicum	2	2	4	
		Brain Function Control Practicum	2	2	4	
		Cardiovascular Control Practicum	2	2	4	
		Primary Care Medicine Practicum	2	2	4	
		Pneumology Practicum	2	2	4	
		Oral and Maxillofacial Function Control Practicum	2	2	4	
		Surgical Management of Head and Neck Practicum	2	2	4	
		Gastrointestinal Control Practicum	2	2	4	
		Dermatology Practicum	2	2	4	
		Pain Therapy Practicum	2	2	4	
		Renal/Urological Control Practicum	2	2	4	
		Molecular Pharmacology Practicum	2	2	4	
		Pharmaceutics Practicum	2	2	4	
Epidemiological Research Practicum	2	2	4			
Gender Study Practicum	2	2	4			
Nutritional Therapy Practicum	2	2	4			

Elective subjects	Advanced Medicine for Clinicians Course	Clinical Legal Medicine Practicum	2	2	4	Elective
		Cardiovascular/Respiratory Medicine Practicum	2	2	4	
		Gastroenterology/Hematology Practicum	2	2	4	
		Endocrinology/Metabolism, Nephrology, and Neurology Practicum	2	2	4	
		Pediatrics Practicum	2	2	4	
		Psychiatry Practicum	2	2	4	
		Dermatology Practicum	2	2	4	
		Gastroenterology/Mammary Gland/General Surgery Practicum	2	2	4	
		Cardiovascular/Respiratory Surgery Practicum	2	2	4	
		Orthopedics Practicum	2	2	4	
		Neurological Surgery Practicum	2	2	4	
		Otolaryngology Practicum	2	2	4	
		Obstetrics/Gynecology Practicum	2	2	4	
		Urology Practicum	2	2	4	
		Ophthalmology Practicum	2	2	4	
		Anesthesiology Practicum	2	2	4	
		Radiology Practicum	2	2	4	
		Family Medicine Practicum	2	2	4	
		Dentistry and Oral Surgery Practicum	2	2	4	
		Clinical Oncology Practicum	2	2	4	
		Clinical Laboratory Medicine Practicum	2	2	4	
Emergency and Intensive Care Medicine Practicum	2	2	4			
Diagnostic Pathology Practicum	2	2	4			
Clinical Pharmacy Practicum	2	2	4			
Advanced Laboratory Examination Technology Practicum	2	2	4			
Elective subjects	Interdisciplinary Medical Science and Innovation Course	Biological Image Engineering Practicum	2	2	4	Elective
		Bioinformatics Engineering Practicum	2	2	4	
		Industrial Medicine Practicum	2	2	4	
		Anatomical Physiology Practicum	2	2	4	
		Regenerative Medicine Practicum	2	2	4	
		Reproductive Function Control Practicum	2	2	4	
		Genetic Engineering Practicum	2	2	4	
		Interdisciplinary Pain Therapy Practicum	2	2	4	
		System Physiology Practicum	2	2	4	
		Tissue Engineering Practicum	2	2	4	
		Biomaterial Study Practicum	2	2	4	
		Medical Optical Engineering Practicum	2	2	4	
		Robotics Practicum	2	2	4	
		Artificial Organ Technology Practicum	2	2	4	
Neuroscience Research Practicum	2	2	4			

Major Study Themes of Faculty

(As of August 1, 2016)

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Department of Fundamental Biosciences	Division of Physics	Professor	Yutaka Mera	1. Study on nanomaterials, nanostructures and surfaces 2. Development of nano-spectroscopy 3. Medical application of nanotechnology
	Division of Chemistry	Professor	Yoshio Furusho	1. Development of medical materials based on supramolecular chemistry 2. Construction of soft materials utilizing formation of organic salt bridges driven by hydrogen bonding 3. Construction of molecular assembly through hierarchical organization of biomolecules
	Division of Biology	Professor	Takako Hirata	1. Molecular basis of immune cell trafficking 2. Control of lymphocyte migration to the skin and mucosa 3. Immune regulation by cytoskeleton-associated proteins
		Associate Professor	Daisuke Nagakubo	1. Molecular mechanisms of development of thymic epithelial cells 2. Molecular pathogenesis of allergic rhinitis
	Division of Mathematics	Associate Professor	Motoko Kawakita	1. Algebraic curves with many rational points
	Division of Computational Biomedicine	Professor	Masaru Komori	1. Development of innovative laparoscopic surgery simulator 2. 3D modeling of organs with variation 3. Research on medical applications with VR/AR/MR technologies such as depth sensors and haptics
Department of Culture and Medicine	Division of Philosophy	Professor	Yoshihito Muroji	1. Buddha's teachings and his life 2. Philosophy of mahāyāna buddhism 3. Bioethics and medical ethics 4. Asian culture and religions
	Division of Psychology	Associate Professor	Takatsugu Kojima	1. Spatial cognition and language understanding 2. Affective information processing 3. Non-verbal cognition
	Division of English	Professor	Reiko Aiura	1. George MacDonald's views of life and death 2. Study on Byron 3. Inter-Cultural studies 4. Medical English education
	Division of German	Associate Professor	Ippei Morita	1. Integration of regional information and cultural aspects into the teaching of foreign language 2. Making of teaching materials with authentic audio-visual items 3. Apply of the group dynamics to the teaching of foreign language
	Division of Cultural Anthropology	Professor	Tsutomu Kaneshige	1. Anthropological studies on ethnic minorities of P.R.China 2. Anthropological studies on <i>Fengshui</i> 3. Anthropological studies on merit and merit-making
Department of Anatomy	Division of Anatomy and Cell Biology	Professor	Jun Udagawa	1. Analysis of the relationship between prenatal stress and postnatal abnormal behavior or skeletal development 2. Development of the eye 3. Analysis of the relationship between the hand structure and function in the primate
		Associate Professor	Junko Okano	1. Development of new therapy of nonhealing skin ulcer using bone marrow cells 2. The role of bone marrow cells on skin homeostasis
	Division of Morphological Neuroscience	Professor	Yu Katsuyama	1. Analysis of brain morphogenesis 2. Analysis of mechanisms of maintenance and differentiation of the stem cell
Department of Physiology	Division of Integrative Physiology	Professor	Seiji Hitoshi	1. Analysis of the generation, maintenance, and differentiation of neural stem cells 2. Development of regenerative therapy strategy for the damaged central nervous system 3. Understanding the pathogenesis of psychiatry diseases
		Associate Professor	Natsu Koyama	1. Behavioral analysis of transgenic animals 2. Analysis of emotional behavior on the stressed mice 3. Assessments of extinction learning for the fear memory
	Division of Cell Physiology	Professor	Hiroshi Matsuura	1. Functional analysis of cardiac ion channels 2. Analysis of ionic mechanisms underlying cardiac automaticity 3. Analysis of molecular mechanisms of arrhythmogenesis 4. Analysis of molecular mechanisms of ischemia/reperfusion injury in the heart
		Associate Professor	Mariko Omatsu	1. Characterization of stem or progenitor cells originated from fetal stages 2. Mechanisms of the regulation of intracellular Ca ²⁺

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Department of Biochemistry and Molecular Biology	Division of Molecular Physiological Chemistry	Professor	Yasutoshi Agata	1. Epigenetic regulation of gene expression and cancer development 2. Regulation of gene expression and cancer development by chromosome dynamics 3. Regeneration of cancer specific T cells using the iPS cell technology
		Associate Professor	Koji Terada	1. Molecular mechanism of antigen receptor gene rearrangement in lymphocytes 2. Gene-reglation for lymphocyte development
	Division of Molecular Medical Biochemistry	Professor	Hisakazu Ogita	1. Signal transduction reseach and genetic analysis in the field of cancer biology and cardiovascular diseases 2. Molecular mechanism of cell adhesion
		Associate Professor	Akira Sato	1. Signal transduction and cell-cell communication in cancer and inflammatory diseases. 2. Adult diseases triggered by aberrant regulation of Wnt signaling.
	Division of Stem Cell Biology and Regenerative Medicine	Professor	Hideto Kojima	1. Regenerative medicine 2. Stem cell based organogenesis 3. Gene therapy
		Associate Professor	Tomoya Terashima	1. Engineering the novel molecular therapies with cell and tissue specific targeting 2. Application to the regenerative therapies with reprogramming of bone marrow-derived cells 3. Analysis of the relation between bone marrow-derived cells and neurological diseases
Department of Pathology	Division of Molecular Diagnostic Pathology	Professor	Hiroyuki Sugihara	1. Lineage analysis of neoplasms by comprehensive detection of genomic DNA alterations 2. Development and progression of undifferentiated-type gastric carcinomas 3. How epigenetic regulation of gene expression alters during tumor progression?
		Associate Professor	Kenichi Mukaisho	1. Gastric and esophageal carcinogenesis using various animal models 2. Analyses of extra-esophageal symptoms of GERD using reflux animal models 3. Influence of bile acids on carcinogenesis and cancer progression
	Division of Pathology and Disease Regulation	Professor (Vice President)	Kazumasa Ogasawara	1. Establishment of a transplantation model in macaques 2. Establishment of a cancer model in macaques 3. Study of virus deletion and cancer rejection by CTLs
		Associate Professor	Yasushi Itoh	1. Development of vaccines and therapeutic agents against influenza virus 2. Research on genetic diseases using a non-human primate model 3. Analysis of immune responses in cynomolgus macaques
	Division of Microbiology and Infectious Diseases	Professor	Bin Goto	1. Pathogenesis of parainfluenza viruses 2. Basic study on human metapneumovirus infection 3. Viral immune evasion strategies
		Associate Professor	Hirokazu Inoue	1. Studies on mechanism of carcinogenesis by gene-manipulated mice 2. Studies on molecular mechanism of energy metabolism in cancer cells 3. Evaluation of anti-tumor activities of novel low-molecular drugs mimicing the function of tumor suppressor proteins
Department of Pharmacology	—	Associate Professor	Takeshi Imamura	1. Investigating the therapeutic approaches to the insulin resistance,such as diabetes mellitus. 2. Exploring the therapeutic strategies to improve vascular endothelial dysfunction. 3. Pharmacological approaches to the stem cell dysfunction induced by insulin resistance.
Department of Social Medicine	Division of Occupational and Environmental Health	Associate Professor	Kazushi Taoda	1. Prevention of work-related musculoskeletal disorders 2. Study on occupational health among human service care workers 3. Social medicine on health care among disabled people 4. Ergonomics in agricultural labor 5. Occupational health in elderly people and women
	Division of Public Health	Professor	Katsuyuki Miura	1.Epidemiologic research of cardiovascular diseases 2.Preventive medicine of cardiovascular diseases 3.Nutritional epidemiology
		Associate Professor	Akira Fujiyoshi	1. Epidemiology on cardiovascular disease and lifestyle-related disease 2. Coronary artery calcium 3. Mild cognitive impairment and measures up atherosclerosis
	Division of Medical Statistics	Associate Professor	Sachiko Tanaka	1. Prediction of the future incidence and death 2. Statistical methods for epidemiologic researches 3. Pharmacoepidemiology
	Division of Legal Medicine	Professor	Masahito Hitosugi	1. Amalysis of traffic injuries 2. Pathophysiological analysis for sudden death cases due to thrombosis 3. Preventive medicine for deaths of external causes
		Associate Professor	Satoshi Furukawa	1. Cranial cervical vascular medicine 2. The analysis of hypothermia and hyperthermia

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Department of Internal Medicine	Division of Cardiovascular and Respiratory Medicine	Professor	Minoru Horie	1. Basic and clinical cardiac electrophysiology 2. Genetic testing in cardiovascular diseases 3. Regenerative medicine in heart failure 4. Research on mechanisms and treatment of ischemic heart diseases	
		Associate Professor	Yasutaka Nakano	1. Structure and function relationship of the lung 2. Structure and function relationship of respiratory diseases	
		Associate Professor	Takashi Yamamoto	1. The research of catheter-based intervention for coronary artery disease, peripheral artery disease and structure heart disease 2. The research of nutritional science in patients with heart failure	
		Associate Professor	Hideki Hayashi	1. Prognostic significance in electrocardiography 2. Role of aerobic exercise in cardiovascular disease 3. Obesity paradox in heart disease 4. Genetic variation of alcohol metabolism in Burgada syndrome	
		Associate Professor	Taishi Nagao	1. A study of how to transfer an easy-to-understand the difficult content. 2. A study of how to increase the motivation.	
	Division of Gastroenterology and Hematology	Professor	Akira Andoh	1. Mucosal immunology 2. Gut microbiota 3. Cytokine network	
		Associate Professor	Katsuyuki Kito	1. Research about megakaryocytosis 2. Research for the treatment of hematological malignancies 3. Research on bone marrow transplantation	
	Division of Diabetology, Endocrinology and Nephrology	Professor	Hiroshi Maegawa	1. Nutrition and metabolic disease 2. Mechanism of insulin resistance 3. Diabetogenic genes	
		Associate Professor	Shinichi Araki	1. Mechanism of development of diabetic nephropathy 2. Risk factors on development of diabetic vascular complications 3. Nutritional research on renal pathophysiology	
		Associate Professor	Satoshi Ugi	1. Clarification of the mechanisms and pathophysiology of adipokines 2. Clarification of the molecular regulation of metabolism by nutrients 3. Clarification of the mechanisms of improvement in glucose metabolism by bariatric surgery	
	Division of Neurology	Professor	Makoto Urushitani	1. Molecular targeted therapy for amyotrophic lateral sclerosis 2. Cell biological analysis of neurodegenerative diseases 3. Noninvasive diagnosis of neurological diseases	
		Associate Professor	Hirokichi Kawai		
	Department of Pediatrics	-	Associate Professor	Tomoyuki Takano	1. Seizure susceptibility in the cortical dysplasia 2. Pathogenetic mechanisms of neurodevelopmental disorders
			Associate Professor	Takashi Taga	1. Clinical study for developing therapeutic approach of pediatric leukemia
			Associate Professor	Yoshihiro Maruo	
Department of Psychiatry	-	Professor (Vice President)	Naoto Yamada	1. Chronobiological study of psychiatric disorders 2. Sleep medicine of psychiatric disorders	
		Associate Professor	Kenichi Kuriyama	1. Neuropsychology and neurophysiology of traumatic stress burden 2. Sleep-dependent neuroplasticity and vulnerability for psychiatric disorders 3. Functional neuroimaging of neuropsychiatric disorders 4. Chronobiological Pathology of Psychiatric Disorders 5. Development of cognitive enhancer and neurostimulation for treatment of psychiatric and sleep disorders	
		Associate Professor	Masahiro Takahashi	1. Cognitive function 2. Diffusion tensor imaging 3. Psychopharmacology	
		Associate Professor	Masahiro Matsuo		
Department of Dermatology	-	Professor	Toshihiro Tanaka	1. Study for cell adhesion molecules of the skin 2. Study for pathophysiology of blistering disease 3. Development of treatment of cutaneous diseases	
		Associate Professor	Takeshi Kato	1. Research in treatment of hair disease 2. Research in treatment of malignant skin tumor	
		Associate Professor	Noriki Fujimoto	1. Analysis of regulatory B cells on autoimmune diseases 2. Investigation for the treatment of cutaneous malignant tumors 3. Gene editing for treatment of epidermolysis bullosa	

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Department of Surgery	Division of Gastrointestinal Surgery and General Surgery	Professor	Masaji Tani	1. Clinical study for the prevention of post operative complications in pancreatectomy 2. Development of immunotherapies for gastrointestinal diseases 3. Study of the pancreatic function 4. Evaluation of mechanisms for the metastasis 5. Study of the intervention for surgical skill
		Associate Professor	Shigeyuki Naka	1. Study of computer aided surgery 2. Study of MR-Image guided surgery 3. Study of endoscopic minimally-invasive surgery 4. Study of nanomaterials for cancer therapy 5. Study of microwave surgical device
		Associate Professor	Hiroshi Yamamoto	1. Mechanisms of improvement of diabetes mellitus after metabolic surgery 2. Brain-Gut interaction in gastrointestinal disease 3. Treatment of gastric cancer
		Associate Professor	Tomoharu Shimizu	1. Study of surgical stress 2. Development of new endotoxin measurement method 3. Studies of treatment for colorectal cancer and inflammatory bowel diseases
	Division of Cardiovascular Surgery and Thoracic Surgery	Professor	Tohru Asai	1. Vascular functional investigation of coronary artery bypass conduits 2. Hemodynamic functional analysis during off-pump coronary bypass 3. Studies on cardiovascular regenerative therapy 4. Surgical invasiveness in cardiovascular surgical procedures 5. Reparative technical consideration in mitral valve surgery
		Associate Professor	Tomoaki Suzuki	1. Long term outcome of total arterial off-pump CABG 2. The outcome of total arch replacement under mild hypothermia
		Associate Professor	Jun Hanaoka	1. Minimally invasive surgery with VATS for chest diseases 2. A study of the operation method for lung cancer 3. da Vinci® robotic surgery in general thoracic surgery 4. A study of the identification technique of the interlobar/intersegmental plane
		Associate Professor	Takeshi Kinoshita	1. Basic research in endothelial function of coronary artery bypass grafts 2. Three-dimensional quantitative assessment of mitral valve geometry and development of mitral valve repair technique
Department of Orthopaedic Surgery	-	Professor	Shinji Imai	1. Improvement of clinical output in arthroscopic shoulder surgery 2. Improvement of clinical output in shoulder arthroplasty 3. Regenerative medicine for injuries of articular cartilage and spinal cord
		Associate Professor	Taku Kawasaki	1. Hip and knee arthroplasty 2. Epidemiology of rheumatoid arthritis 3. Locomotive rehabilitation
		Associate Professor	Kanji Mori	1. Research for the ossification of the spinal ligaments the posterior longitudinal ligament and ligamentum flavum 2. Research for the diagnosis and treatment for the disease with spine and spinal cord 3. Research for bone metabolism
		Associate Professor	Narihito Kodama	1. A study of bone and soft tissue tumors 2. Microsurgical approach for orthopedics and reconstructive surgery 3. A study of the idiopathic interosseous nerve palsy
Department of Neurosurgery	-	Professor	Kazuhiko Nozaki	1. Research for cerebral ischemia 2. Research for cerebral aneurysms 3. Research for cerebral arteriovenous malformations
		Associate Professor	Takuya Nakazawa	1. Research for pathophysiology and new treatment measure for cerebrovascular disease 2. Development of neuroendovascular therapy
		Associate Professor	Tadateru Fukami	1. Research for the multidisciplinary treatment for glioma 2. Research for the safety and the risk of awake surgery 3. Research for the therapeutic indications about neuroendoscopic surgery
		Associate Professor	Atsushi Tsuji	1. Treatment and pathophysiology for ischemic cerebrovascular disease 2. neuroendovascular treatment 3. Cerebral blood flow and metabolism
Department of Otorhinolaryngology	-	Professor	Takeshi Shimizu	1. Pathogenesis and regulation of upper airway inflammation 2. Mucus hypersecretion and goblet cell metaplasia 3. Immunology and allergy of upper airway
		Associate Professor	Shigehiro Owaki	1. Diagnosis and treatment of voice disorder 2. Diagnosis and treatment of headandneck cancer
		Associate Professor	Hideaki Kohzaki	1. The mechanism and control of epithelial-derived airway allergic diseases 2. The pathophysiological analysis of eosinophilic chronic rhinosinusitis 3. The pathophysiological analysis of Japanese cedar pollen rhinitis
		Associate Professor	Takao Ogawa	1. Regeneration of olfactory sensory neurons 2. Research on new therapeutic strategies for sensorineural olfactory dysfunction 3. Role of coagulation factors on upper airway inflammations

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Department of Obstetrics and Gynecology	-	Professor	Takashi Murakami	1. Gynecologic endoscopy 2. Endometriosis 3. Reproduction endocrinology
		Associate Professor	Fuminori Kimura	1. The regulation of activated primordial follicle 2. Fertility preservation in cancer patients 3. Elucidation of development in endometriosis and adenomyosis
		Associate Professor	Shunichiro Tsuji	1. Maintenance and failure of pregnancy 2. Diagnosis of fetal anomaly using ultrasonography 3. Diagnosis and treatment of cesarean scar syndrome
Department of Urology	-	Professor	Akihiro Kawauchi	1. Research on robotic surgery 2. Research on minimally invasive surgery 3. Research on development of new imaging modality
		Associate Professor	Mitsuhiro Narita	1. Research on the urological laparoscopic surgery. 2. Research on the treatments of the prostate cancer and the quality of life. 3. Research on the robot assisted prostatic surgenry.
		Associate Professor	Kazuyoshi Johnin	1. Surgery in pediatric urology (Research for plastic and laparoscopic surgery) 2. Research for voiding dysfunction in children 3. Application of MRI imaging in pediatric urology
		Associate Professor	Susumu Kageyama	1. Research in urothelial cancer specific molecules 2. Development of new anti-cancer drugs for urologic malignancy 3. Proteomics research in urologic oncology
Department of Ophthalmology	-	Professor	Masahito Ohji	1. Study for vitreoretinal pathogenesis and development of new approach in vitreoretinal surgery 2. Study for intraocular pharmacokinetics of cytokines 3. Study for pathogenesis in the rat of diabetes model mice
		Associate Professor	Sanae Muraki	1. Pathophysiology of strabismus 2. Pathophysiology of amblyopia 3. Visual pigment genes in congenital color-vision deficiencies
		Associate Professor	Yoshitsugu Saishin	1. Molecular biology of retina 2. Intraocular drug therapy
		Associate Professor	Osamu Sawada	1. Pharmacokinetics of intravitreal agents 2. Treatment for diabetic macular edema
Department of Anesthesiology	-	Professor	Hirotohi Kitagawa	1. Multimodal in vivo monitoring of ischemia reperfusion injury 2. Cardioprotection by anesthetic agents and opioids
		Associate Professor	Kan Takahashi	1. Energetic metabolism in organs during hemorrhagic shock 2. Protective effects of hypothermia on organs 3. Respiratory function after surgery
		Associate Professor	Tomoyoshi Seto	1. Mechanisms of Anesthesia at the level of molecular interactions between anesthetic and its binding site. 2. Elucidation of hydrophobic dehydration process of volatile anesthetic binding of ion-channel. 3. Molecular recognition of optical isomeric anesthetics in ion-channel.
		Associate Professor	Sei Fukui	1. MR Spectroscopy (Brain imaging of chronic pain) 2. Voxel based morphometry (Brain imaging of chronic pain) 3. Interdisciplinary pain management of chronic pain 4. Pulsed radiofrequency (PRF) (Minimum invasive therapy of Interventional pain treatment) 5. Resting state functional MRI (Brain imaging of chronic pain)
Department of Radiology	-	Professor	Kiyoshi Murata	1. Researches of diagnosis imaging of the chest 2. Researches of tumor imaging 3. High-resolution CT analysis of diffuse lung diseases
		Associate Professor	Norihisa Nitta	1. Evaluation of a newly-developed diagnostic image system using phantoms 2. Fundamental study for the clinical use of new IVR technologies and systems 3. Investigation of imaging of drug dynamism
		Associate Professor	Shinichi Ohta	1. Fundamental research of IVR for clinical application 2. Research of abdominal diagnostic images
		Associate Professor	Ryuta Itoh	1. Development of magnetic resonance imaging tools for brain morphological and functional analysis
Department of Oral and Maxillofacial Surgery	-	Professor	Gaku Yamamoto	1. Study of the osteoblast for regeneration 2. Pathogenesis and treatment of oral tumor 3. Study on the reconstruction of the jaw 4. Study on microbiota of the oral cavity 5. Study of the Sleep apnea syndrome

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Department of Clinical Laboratory Medicine	-	Professor	Ryoji Kushima	1. Gastrointestinal pathology 2. Diagnostic pathology
		Associate Professor	Tokuhiro Chano	1. Clinical application of genetic medicine 2. Analyzing the biological function RBICCI/FIP200 3. Developing the therapeutic strategy applied with RBICCI/FIP200 4. Inventing novel strategies for cancer treatment, applied with novel biomarkers
Diagnostic Pathology Section	-	Associate Professor	Suzuko Moritani	1. Diagnostic pathology 2. Pathology of the breast and gynecological organs
Department of Critical and Intensive Care Medicine	-	Professor	Yutaka Eguchi	
		Associate Professor	Takahisa Tabata	1. Study of biological reaction mechanism in sepsis 2. Study of the diagnosis and treatment of multiple trauma
		Associate Professor	Yasuyuki Tsujita	1. Study of cardiac dysfunction and arrhythmia under excessive stress 2. Study of septic organ dysfunction 3. Epidemiological study of cardiovascular shock
		Associate Professor	Mikiko Matsushita	1. How to off and on the job training of BLS and ALS 2. Role and education of general physician in Japanese format 3. Analysis of social and environmental factors in emergency department attendance
Department of Medical Oncology	-	Professor	Yataro Daigo	1. Isolation and functional analysis of cancer-related gene. 2. Elucidation of molecular pathology of cancer by genomics and proteomics analysis. 3. Development of molecular-targeted drugs and cancer vaccines through translational research. 4. Development of precision medicine and new cancer biomarkers through translational research
		Associate Professor	Satoshi Murata	1. Analysis of mechanisms and development of treatment for metastasis after surgery for gastrointestinal cancer 2. Control over the perioperative tumor microenvironment in gastro intestinal cancers 3. Development of immune cell therapy for solid cancers
Department of Comprehensive Internal Medicine	-	Professor	Tomoyuki Tsujikawa	1. Study on the pathophysiology and treatment of the inflammatory bowel disease. 2. Study on the diagnosis and treatment using balloon assisted enteroscopy. 3. Study on the method of the medical education.
		Associate Professor	Takao Saotome	1. Study of multiple organ failure development in severe sepsis 2. Development of newly blood purification methods for systemic inflammatory response syndrome 3. Emergency medicine and disaster medicine
		Associate Professor	Toshiro Sugimoto	1. Medical diagnosis 2. Rural medicine 3. Clinical electrolyte abnormalities 4. Development of continuing medical education using ICT
		Associate Professor	Masato Ohnishi	1. Pathophysiology and therapy of chronic heart failure 2. Diagnosis and therapy of hypertension in primary care 3. Simulation-based instruction in healthcare professionals
		Associate Professor	Yasuhiro Maeno	1. Development of effective regional cooperation for medical care of the diabetic patients 2. Development of effective educational techniques for the diabetic or pre-diabetic people
Department of Comprehensive Surgery	-	Professor	Eiji Mekata	1. Multimodality therapy for colorectal cancer 2. Development of the resin of the surgical instrument 3. Anticancer drug sensitivity test 4. Oncology (disease state, therapy and community cooperation)
		Associate Professor	Katsuhisa Kikuchi	1. Three-dimensional analysis of trabecular bone structure of human vertebra in vivo using image data from multidetector row computed tomography
		Associate Professor	Hiroyuki Ohta	1. Multimodality therapy for colorectal cancer 2. Clinical study of postoperative complication 3. Development of the resin of the surgical instrument
Department of Clinical Education	-	Professor	Toshiyuki Ito	1. Medical education
		Associate Professor	Yoshihisa Tsuji	1. Medical education
Department of Sleep and Behavioral Sciences	-	Special Contract Professor	Hiroshi Kadotani	1. Clinical research in sleep medicine 2. Epidemiological study in sleep and mental health 3. Development and verification of sleep monitoring sensor device and application

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Endoscopy Section	—	Associate Professor	Mitsushige Sugimoto	1. Acid-related disease (peptic ulcer and GERD) 2. Helicobacter pylori 3. Therapeutic endoscopy
Blood Service Section	—	Associate Professor	Hitoshi Minamiguchi	1. Phenotypic analysis of hematopoietic stem cell 2. Phenotypic analysis of leukemic stem cell
Medical Informatics and Biomedical Engineering Section	—	Professor	Satoru Nagata	1. Human interface 2. Visual information processing 3. Medical information system development
	—	Associate Professor	Yoshihisa Sugimoto	1. Medical electronics 2. Medical information system 3. Biomedical engineering for cardiology
Pharmacy	—	Professor	Tomohiro Terada	1. Clinical pharmacology of drug transporters 2. Individualized pharmacotherapy of anti-cancer drugs
	—	Associate Professor	Shinya Morita	1. Research on lipid transporters and lipid metabolism 2. Development of methods for measuring lipids
Clinical Nutrition Section	—	Associate Professor	Masaya Sasaki	1. Study of digestion and absorption 2. Study of clinical nutrition 3. Study of energy metabolism
Medical Safety Section	—	Associate Professor	Noriaki Tezuka	1. Clinical Safety
		Associate Professor	Hideki Ito	1. Translational research in genetic disorders 2. Drug safety research
Center for Clinical Research and Advanced Medicine	—	Professor	Hiromu Kutsumi	1. Regulatory science 2. Development of innovative medicine 3. Gastroenterological endoscopy
Clinical Education Center for Physicians	—	Associate Professor	Yasuhiro Nishida	1. Clinical MRI evaluation in extraocular muscles 2. Clinical study of strabismus 3. Extraocular muscle surgery
Molecular Neuroscience Research Center	Basic Neuroscience Research Unit - Department of Molecular Neuropathology	Professor	Masaki Nishimura	1. Molecular neuropathology of Alzheimer's disease 2. Development of preemptive medicine for Alzheimer's disease 3. Molecular and cellular biology of neurodegenerative diseases
	Translational Research Unit - Department of Diagnostics and Therapeutics for Brain Diseases	Professor	Ikuo Tooyama	1. Study on Alzheimer's disease and development of diagnostic and therapeutic methods 2. Prevention and preemptive medicine of dementia 3. Magnetic resonance imaging of neurological diseases 4. Molecular biology on neurological diseases
		Associate Professor	Daijiro Yanagisawa	1. Research on fluorine-19 MR imaging as a diagnostic tool for Alzheimer's disease 2. Research on pathogenesis and therapeutic targets in Alzheimer's disease 3. Research on diagnosis and treatment for neurodegenerative diseases
	Translational Research Unit - Department of Biomedical MR Science	Associate Professor	Akihiko Shiino	1. Development of molecularly targeted agents 2. Study and programming of diagnostic software for brain MR imaging 3. Magnetic resonance spectroscopy 4. Clinical study in neurological disorders
Research Center for Animal Life Science	—	Professor	Masatsugu Ema	1. Research about monkey ES and iPS cells 2. Human disease modeling with genetically engineered monkey 3. Research about mouse ES and iPS cells 4. Molecular mechanism about angiogenesis
		Associate Professor	Shinichiro Nakamura	1. Immunological regulations of endometriosis in non-human primates
Central Research Laboratory	—	Associate Professor	Takahiro Isono	1. Global transcriptome analysis by a next generation sequencer.
Health Administration Center	—	Associate Professor	Emiko Ogawa	1. Research on the pathogenesis of chronic obstructive pulmonary disease (COPD) 2. Clinical research using COPD cohort data
Biomedical Innovation Center	—	Special Contract Professor	Toru Tani	1. Future surgical operation system 2. Robotic navigation surgical operation 3. Less invasive surgical operation 4. Micro wave surgical devices 5. Hyperthermia treatment against malignancy 6. Treatment for medical gavage using TiO ₂
Community Healthcare Education and Research Center	—	Associate Professor	Tomoko Umeda	1. Fibrinolysis factors (uPA etc.) and adhesion factors (CD44 variant etc.) related to the breast cancer invasion and the metastasis. 2. MRI mapping for the intraductal area of breast cancer 3. Tumor infiltrating cells around of the breast cancer, related to the trastuzumab after neoadjuvant chemotherapy



Reference for Applicant Selection, etc.

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