

Philosophy and Objectives

Philosophy

Hokkaido University Graduate School of Medicine and Hokkaido University School of Medicine lead the world with cutting-edge research in medical science, and aim to equip the next generation of medical researchers and medical professionals with a strong sense of ethics and a well-rounded character to contribute to the health and welfare of humanity.

Educational and Behavioral Objectives

■ Educational Objective

To help students develop advanced levels of knowledge and research skills in the fields of medical and life sciences and gain profound insights that will help them meet the needs of society.

■ Behavioral Objectives

1. To develop highly specialized knowledge and research skills in the fields of medical and life sciences in order to nurture inquiring minds for in-depth scientific exploration of questions and hypotheses.
2. To develop the skills needed for international promotion of world-leading cutting-edge medical research.
3. To develop the ability and judgment students require to meet diverse and extensive needs related to the public health and safety of local communities and the international community.
4. To instill in students a respect for the sanctity of life so that they can play significant roles in their fields with a strong sense of ethics.

Research and Behavioral Objectives

■ Research Objectives

To promote world-leading research in the school in its role as part of a major Japanese university and to advance knowledge frontiers for the prosperity of humanity.

■ Behavioral Objectives

1. To contribute to the development of unique, pioneering basic research.
2. To promote clinical medicine and social medicine as areas of practical study serving society.
3. To implement translational research from the field of basic medicine to that of clinical medicine.
4. To collaborate with other related departments on campus, other universities and the business community by drawing on the characteristics of university status, and to promote world-leading medical research.

Admissions Policy

Expectations of Students

1. Students who are willing to be engaged in research tailored to clarify life phenomena, to overcome diseases, and to improve human health standards
2. Students who have intellectual curiosity, show the ability to analyze things logically, persevere as a team, and aspire to work as international leaders in each medical field
3. Students who have fundamental reading comprehension in foreign language (English) and writing skills before enrollment

Basic Policy for Entrant Selection

In the general examination, students are selected based on the comprehensive evaluation of the results of written achievement tests and the content of the submitted application documents.

In the special selection examination for international applicants, students are selected based on the comprehensive evaluation of an oral interview examination and the content of the submitted application documents.

(The evaluation methods and the evaluation weight and the relationship between Expectations of Students and the evaluation methods)

(Master's)

Entrance exam classification	Evaluation method	Evaluation weight	Matters related to ①	Matters related to ②	Matters related to ③
general examination	Essay	◎	✓	✓	
	Specialized subject	◎	✓	✓	
	English	◎			✓
	Application Documents	○	✓	✓	
general examination 【Public Health Course (Two-Year Course)】	Essay	◎	✓	✓	
	Specialized subject	◎	✓	✓	
	English	◎			✓
	Application Documents	○	✓	✓	
general examination 【Public Health Course (One-Year Course)】	Essay	◎	✓	✓	
	Specialized subject	◎	✓	✓	
	English	◎			✓
	Oral Examination	◎	✓	✓	
	Application Documents	○	✓	✓	
Special Selection for International Applicants	Oral examination	◎	✓	✓	✓
	Application Documents	○	✓	✓	

(Doctoral)

Entrance exam classification	Evaluation method	Evaluation weight	Matters related to ①	Matters related to ②	Matters related to ③
general examination	Specialized subject	◎	✓	✓	
	English	◎			✓
	Application Documents	○	✓	✓	
Special Selection for International Applicants	Oral examination	◎	✓	✓	✓
	Application Documents	○	✓	✓	

The mark ◎ indicates elements that are particularly important

The mark ○ indicates elements that are important

✓ is the Expectations of Students evaluated in the each evaluation methods

Diploma Policy

Under the basic philosophies of Hokkaido University, "Frontier Spirit", "Global Perspectives", "All-round Education" and "Practical Learning", educational goals of the Graduate School of Medicine aim to nurture individuals who possess high ethical standards, highly specialized knowledge, and research and teaching capabilities, as well as the deep insight to meet the demands of health and safety requirements from local and international community. The Graduate School of Medicine defines the abilities required of students in Master's Program and Doctoral Program, and grants the diploma to those who have attained these abilities and completed academic requirements.

Master's Program in Medical Science

● Master of Medical Science

We grant Master of Medical Science to those who have attained the competencies to continuously contribute to the development of medical and life science research field by understanding the backgrounds of the medical and life science research, making plans for research theme of biologic importance or hypotheses to be validated, analyzing the obtained experimental or research results through verification of the validity and preparing another theme or hypotheses. In addition, students should acquire predefined credits and pass the qualifying review and examination of the Master's thesis.

● Master of Public Health

We grant Master of Public Health to those who have attained the competencies to continuously contribute to the development of public health field setting further measure against newly generated challenges through understanding the mechanism necessary for entire society and people's health, life and security and planning measures to maintain or improve health by collecting or analyzing the information necessary to solve the issues of public health or preventive medicine, as well as through putting those measures into execution effectively and evaluating the obtained results appropriately. In addition, students should acquire predefined credits and pass the qualifying review and examination of the Master's thesis or research achievements of specific assignment.

Degree-granting level - Master's Program

Based on the educational goals of the Graduate School of Medicine, in the Master's Program, we aim to nurture individuals who have basic knowledge and skills to carry out activities to contribute to their own field, as researchers and educators in medical and life science fields, as highly specialized professionals in medical related fields, or as experts in healthcare and health policy management. We grant the Master of Medical Sciences diploma to those who have attained the following abilities.

- 1) Understanding and fair evaluation of current and prior knowledge related to one's research, and ability to make one's own logical statement
- 2) Abilities to perform research planning, collection and analysis of scientific data, and logical thinking based on scientific data, understand that all experiments and observations include errors, and evaluate reliability and reproducibility of results as a scientist
- 3) Presentation skills to discuss one's research in academic conferences or other public events
- 4) Ability to write for academic journals

Doctoral (PhD) Program in Medicine

Degree-granting level - Doctoral Program

The Graduate School of Medicine, in the Doctoral Program, we grant Doctor of Philosophy to those who have attained the following competencies to continuously contribute to the development of basic medicine, clinical medicine, or social medicine research, through properly understanding the backgrounds or circumstances of medical research, making plans for research theme which are academically and internationally significant or hypotheses which should be validated, analyzing the obtained results through verification of the validity and preparing another theme or hypotheses. In addition, students should acquire predefined credits and pass the qualifying review and examination of the Degree thesis (Dissertation).

- 1) Understanding and fair evaluation of current and prior knowledge related to one's research, and ability to make one's own logical statement
- 2) Abilities to perform research planning, collection and analysis of scientific data, and logical thinking based on scientific data, understand that all experiments and observations include errors, and evaluate reliability and reproducibility of results as a scientist
- 3) Presentation skills to discuss one's research in academic conferences or other public events
- 4) Ability to write for publication in academic journals, and make meaningful contribution to the research field or the society.

Curriculum Policy

Educational Philosophies of the Graduate School of Medicine is "cultivation of high ethical standards and rich humanity, as well as acquisition of advanced medical knowledge and technology". Beyond the boundaries of existing academic disciplines, we offer interdisciplinary education aiming at the acquisition of basic knowledge and technology of mutually related fields. In addition, to nurture talented individuals answering the diversified social needs, we introduce the coursework to study systematically through multiple subjects. Students choose the course suits best to their purpose. We implement the graduate education of the new era with emphasis on the [clarification of purpose] and [substantiation of education] in the Graduate School of Medicine.

Curriculum Policy - Master's Program

The following three courses are offered in the Master's Program. Students are allocated to courses based on their preference.

1. Medical Science Course

This course aims to train high level professionals with wide medical knowledge who play active roles in medical fields.

2. Public Health Course (Two-Year Course)

This course aims to train human resources who are capable of playing active roles in addressing the challenges of public health with broad knowledge and high skills for the maintenance and improvement of the entire society and people's health, life and security.

3. Public Health Course (One-Year Course)

This course is intended for medical doctors, dentists, pharmacist and other professionals with a certain amount of practical experiences, and aims to train, in one year, highly specialized professionals who are capable of playing active roles in medical and public health fields.

In the Master's Program in Medical Science, Required Core Subjects, Required Subjects I, Required Subjects II, and Elective Subjects are offered.

"Required Core Subjects" are offered to cultivate the basic quality in the education at the Graduate School of Medicine, and are compulsory in all courses. "Required Core Subjects" include "Introduction to Basic Medical Research" to provide basic and systematic knowledge of medical research, "Basic Experimental Methods and Research Designs" to master designing of research, basics of epidemiology and biostatistics and so on. In line with "All-round Education", one of educational philosophies of Hokkaido University, students learn "Introduction to Medical Ethics" which cultivates bioethics for those engaged in medicine and "Introduction to Translational Research" which promotes the understanding of bridging research aimed at establishing medical technology or pharmaceutical products in the clinical practice utilizing the results gained by basic research.

"Required Subjects I" are the subjects dedicated to the specialty of each course and offered according to the educational goal of each course.

"Required Subjects II" provides the courses aimed at developing skills of statistical analysis, presentation and so on. Furthermore, a supervisor in the laboratory is in charge of "Required Subjects II", which grants credits to the practice and exercise related to master's thesis or the establishment of the research result of specific assignment.

"Elective Subjects" are offered to secure flexibility in selecting credits, and enable students to acquire a broad view and expertise beyond the course and a framework of specialized field.

Public Health Course provides 5 discipline areas of education (Epidemiology, Biostatistics, Social and Behavioral Sciences, Health Services Administration and Environmental Health Sciences) which are set as requirements by accreditation criteria of the Council on Education for Public Health in the United States. Students learn basic subjects at Required Subjects I, which aims at obtaining minimum knowledge and capability required of public health experts and will be conducted under the interdisciplinary educational system by educators specialized in medicine, science and engineering, and humanities and social sciences. "Elective Subjects" are offered to develop expertise regarding extensive and various public health issues, capability for gathering information and proper judgement.

Assessment Policy

I. Assessment Criteria

1. Concerning academic assessment, based on the abilities required of students (degree-granting level) in the program as stated in the Diploma Policy of the Graduate School, achievement goals shall be set for each course subject, and assessment shall be based on achievement level of the students.
2. No guidelines for grade distribution shall be given for course subjects in the program.
3. It shall be possible to assess students' academic performance on a pass/fail basis only for courses in which classes are conducted as practical training.
4. Every semester, the Student Affairs Committee shall verify that appropriate achievement goals have been set for each course as well as the results of grading based on these goals, and shall request the course instructor to reconsider the achievement goals as necessary.

II. Assessment Methods

1. Academic assessment shall be based primarily on examination results, report evaluation, presentation of results, and attitude toward the study.
2. Class attendance may not simply be scored and used for assessment.
3. Students who have attended at least 2/3 of the class sessions shall be eligible for academic assessment.
4. Specific assessment methods shall be determined by the course instructor.

Curriculum Policy - Doctoral Program

The following three courses are offered in the Doctoral Program. Students are allocated to courses based on their preference.

1. Basic Medicine Course

This course aims to train talented individuals who will become researchers or educators in medical and life science fields.

2. Clinical Medicine Course

This course aims to train talented individuals who will become clinicians with advanced clinical techniques and research capabilities.

3. Social Medicine Course

This course aims to train talented individuals who will play leading roles in the areas of health care and safety in local and international communities.

In the Doctoral (PhD) Program in Medicine, Required Core Subjects, Required Subjects, Elective Subjects are offered.

"Required Core Subjects" are offered to cultivate the basic quality in the education at the Graduate School of Medicine, and are compulsory in all courses. "Required Core Subjects" include "Introduction to Medical Research" (such as studies on intellectual property) to provide basic and systematic knowledge of medical research and "Experimental Methods and Research Designs" to master designing of research, basics of epidemiology and biostatistics. Students develop presentation skills as well as Q&A handling skills in "Scientific presentation and communication", and develop presentation skills and academic paper writing skills in English in "Presentation skills I & II". In line with "All-round Education", one of educational philosophies of Hokkaido University, students learn "Medical Ethics" which cultivates bioethics for those engaged in medicine and "Introduction to Translational Research" which promotes the understanding of bridging research aimed at establishing medical technology or pharmaceutical products in the clinical practice utilizing the results gained by basic research. Those who take Doctoral (PhD) Program in Medicine after completing the Master's Program in Medical Science will be granted as having acquired the credits of the four subjects of Required Core Subjects; "Introduction to Medical Research", "Experimental Methods and Research Designs", "Medical Ethics" and "Introduction to Translational Research".

"Required Subjects" are offered according to the educational goal of each course, to acquire not only in-depth knowledge of specialized research field but also the knowledge of outside extensive fields. Out of three courses of "Required Subjects", students should choose one course to enroll. In addition, research work for doctoral dissertation will be certified as credits. A supervisor in the laboratory will be in charge of the subject and carry out exercises for gaining the necessary ability to complete the dissertation.

"Elective Subjects" are offered to secure flexibility in selecting credits, and enable students to acquire a broad view and expertise beyond the course and a framework of specialized field.

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Assessment Policy

Purpose

(1) Based on the Hokkaido University Assessment Policy, the Graduate School of Medicine shall conduct educational assessment to meet the educational goals provided by the Diploma Policy.

Implementation System

(2) The Dean shall be responsible for the educational assessment of the Graduate School of Medicine.

(3) The educational assessment of the Graduate School of Medicine shall be conducted by the Student Affairs Committee of the Graduate School of Medicine.

Implementation and Analysis

(4) The educational assessment of the Graduate School of Medicine shall be conducted using the assessment checklist separately provided.

(5) Educational reforms based on the results of the assessment shall be made public.

(6) Personal information relating to education shall be handled in compliance to the rules and regulations of Hokkaido University.

Philosophy and Objectives

Philosophy

Hokkaido University Graduate School of Medicine and Hokkaido University School of Medicine lead the world with cutting-edge research in medical science, and aim to equip the next generation of medical researchers and medical professionals with a strong sense of ethics and a well-rounded character to contribute to the health and welfare of humanity.

Educational and Behavioral Objectives

■ Educational Objective

To equip the next generation of doctors and medical researchers with extensive medical knowledge, a strong sense of ethics, a well-rounded character and the global outlook needed to contribute to advances in medical science and the practice and development of medical care

■ Behavioral Objectives

1. To develop the fundamental medical knowledge and skills students require to become full-fledged doctors and medical researchers
2. To develop habits and attitudes for independent lifelong self-learning
3. To foster creativity based on scientific thinking/judgment and inquiring minds
4. To foster strong sense of ethics and well-round character that doctors and medical researchers require
5. To clarify the importance of international exchanges and develop necessary language skills, medical knowledge and cultural enrichment
6. To clarify the importance of teamwork and the roles of doctors in medical care

Admissions Policy

Students We Wish to Admit

- (1) Knowledge and skills
Students with a strong wish to learn and with basic scholastic abilities to be able to complete a variety of subjects
- (2) Intellect, judgment and expressiveness
Students with interests in and curiosity about phenomena, possessing comprehensive critical faculties and empathy
- (3) Independence, diversity and cooperativeness
Students who have positive attitudes and are reliable in cooperating with others
- (4) Sense of duty
Students who possess a high sense of ethics and a strong sense of responsibility, a spirit to serve with dedication and a humble yet noble sense of duty

Diploma Policy

Under the basic philosophies of Hokkaido University, "Frontier Spirit", "Global Perspectives", "All-round Education" and "Practical Learning", educational goals of the School of Medicine aim to nurture individuals who are rich in humanity, possess high ethical standards and global perspectives that contribute to the practice and development of medicine, medical care and life sciences by providing a systematic education contributing to the promotion of human health. School of Medicine defines the abilities required of students, and grants diplomas to those who have attained these abilities and completed academic requirements.

Degree-granting level

Based on the educational goals of the School of Medicine, there are three major educational philosophies: 1) cultivation of high ethical standards and rich humanity that supports medicine, 2) acquisition of advanced medical knowledge and technology, as well as acquisition of customs and attitude to continue lifelong learning, and 3) learning about teamwork to perform advanced medical care in collaboration with other professionals in the medical team. We grant the Doctor of Medicine diploma to those who have attained the following abilities.

- 1) High ethical standards to support medicine and medical care
- 2) Attitude to empathize with distress, fear and pain of patients
- 3) Sense of mission and responsibility to contribute to the social development
- 4) Basic medical knowledge and technology
- 5) Scientific validity, inquiring mind, and creativity
- 6) Customs and attitude to continue lifelong learning
- 7) Understanding of the importance of teamwork and the role of doctor in medical care
- 8) Attitude to learn while teaching juniors
- 9) Understanding of the importance of cross-cultural and international exchange

Curriculum Policy

In the School of Medicine, in order to achieve the educational goals, we have established Faculty of Medicine to study medicine, and Department of Health Sciences to study nursing, radiological technology, medical technology, physical therapy, and occupational therapy. We implement a systematic educational approach to train professionals and researchers. The undergraduate curriculum (six-years in the Faculty of Medicine, four-years in the Department of Health Sciences) consists of “subjects of general education” and systematic series of “specialized subjects”. For specialized subjects, each faculty defines curriculum policy and designs curriculum to meet their objectives.

Curriculum Policy of the Faculty of Medicine

In the Faculty of Medicine, we design and implement the following curriculum aiming to nurture individuals who satisfy degree requirements. First-year students study subjects of general education in “Liberal Education Course for Medical Students”. From the second-year, students study specialized subjects for five years until graduation. Students are required to take all three courses: “Basic Medicine Course”, “Clinical Medicine Course”, and “Clinical Clerkship Course” in this order.

1. Liberal Education Course for Medical Students

Curriculum in this course is designed for the first-year students to acquire the knowledge and skills required for all students regardless of major, such as high communication skills, understanding of human and social diversity, critical and creative thinking skills, and social responsibility and ethics.

2. Basic Medicine Course

This course lasts for one and a half years from the 1st semester of the second-year. Students learn the normal structure and functions of human body (anatomy, histology, imaging anatomy, physiology, biochemistry), disease development mechanism and basic principles of treatment (microbiology, immunology, pathology, basic application of oncology, pharmacology) and health and disease from the viewpoints of population, environment, social system and prevention (hygiene, public health, forensic medicine) as well as the foundation to study medicine (medical English practice).

3. Clinical Medicine Course

This course lasts for one year from the 2nd semester of the third-year. Curriculum is designed to learn the basics of internal medicine, surgery, and specialized medicine while getting a multi-dimensional view of various diseases, understanding the patient as a person, and learning the basics of examination, inspection, diagnosis, and treatment. This course includes one-month medical research practice to learn the research methods and thinking skills in the laboratory required for a basic medical researcher or physician scientist. On completion of the course, students take common achievement tests and are evaluated for their knowledge and techniques acquired.

4. Clinical Clerkship Course

From the 2nd semester of the fourth year, clinical clerkship starts and students are trained in all clinical departments in actual clinical settings. Along with the training, students review problems and questions that arose during training or in the lecture.

For six months from the 2nd semester of the fifth year, students are required to begin their clinical clerkships in core clinical departments.

In the 1st semester of the sixth year, students participate in clinical clerkship in medical departments of their choice. MD-PhD course students may perform basic research in basic science departments of their choice. Students may choose to undertake this training overseas.

Before finishing the course, students must attend lectures in clinical pathology and interprofessional/simulation trainings, to acquire practical skills that will be useful after graduation. At the end of the course, students take the National Examination for Medical Practitioners.

From the fifth-year, the MD-PhD course is offered for those who want to become a basic medical researcher or physician scientist in the future.

Assessment Policy

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