

## Educational purpose

School of Medicine and Health Sciences cultivates good medical professionals, that is, those who can deal with every person backed up by solid communication ability in addition to outstanding medical skills in adherence with the global standards, as well as the world's level researchers in the disciplines of medicine, nursing and medical sciences.

# College of Medical Sciences

■ Bachelor of Medical Sciences

■ Bachelor of International Medical Sciences

## Educational purpose

College of Medical Sciences educates fundamental knowledge and technical skills in health and medical science. Students are expected to have a sense of mission and responsibility as medical professionals. Graduates will promote research and education, contribute to the advancement of medical care, and engage in advanced specialized medical care to develop new diagnostic and therapeutic technologies.

## Desired students

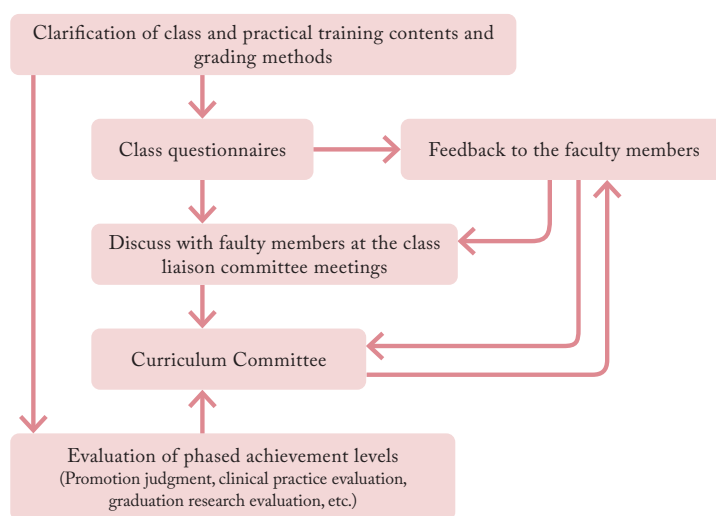
We are seeking individuals who have a strong interest in medical science, and are motivated to play an active role in research, facilitate medicine and medical care technologies, and are flexible to understand of their roles in a medical care team.

## Measures to ensure and improve the quality of education

The levels of achievement of students' academic goals are tested with quizzes and achievement tests. At the end of each semester, class questionnaire surveys are conducted to continuously evaluate educational courses. The results of the surveys are used as a base for discussions on educational processes and course contents to improve the quality of education. In addition, we implement faculty development and evaluate the results to strengthen the quality of education each year.

In order to ensure the quality of education, students' academic achievements are assessed when they move on to the third year, when they decide their majors. In addition, students' academic achievement, and their clinical skills are evaluated by clinical competency tests to ensure their capabilities before taking clinical practice courses. In the major of Medical Science, students are given individual guidance and preparation for the national examination for clinical laboratory technicians through on-campus mock examinations. They are ensured to be competent as clinical laboratory technicians at the time of graduation. In the major of International Medical Sciences, students are expected to be proficient in taking courses taught in English and acquired academic knowledge to conduct research in medical science.

### Measures to ensure and improve the quality of education



# Bachelor of Medical Sciences

## Diploma Policy

A bachelor's degree (Medical Science) will be awarded to those who have advanced their knowledge and capability beyond the general competence level, described under the educational purpose of the University of Tsukuba's bachelor's program.

Acquire a broad knowledge of human biology and view humanity with respect to dignity and life ethics.

Acquire fundamental knowledge and skills necessary for learning and advancing human sciences as well as medical knowledge of human health and disease.

Learn essential knowledge and skills in clinical laboratory techniques, and acquire academic skills, clinical knowledge, and ethical practice required for a clinical laboratory technician.

Acquire basic knowledge and learning skills through laboratory training and experiences to develop and promote your own research.

Understand your roles as a clinical laboratory technician in a medical team and acquire knowledge and medical communication skills to work in a team setting.

## Curriculum Policy

The curriculum is based on the following policies to obtain a bachelor's degree in Medical Sciences.

### General policy

The curriculum offers students a broad range of subjects, including specialized knowledge, skills, and ethical practice, essential for the clinical laboratory technician.

### Course sequence policy

Students must study basic subjects consisting of liberal arts, science, and medical science subjects before proceeding to specialized subjects. The specialized subjects consist mainly of classes and practical training to acquire the specialized knowledge and skills necessary for clinical laboratory technicians. After completing these subjects, students are required to take hospital practical training to develop practical skills. In addition, medical and nursing schools offer joint courses to learn how to work in a team of medical professionals. Moreover, graduation research allows students to explore the basics of medical research beyond clinical medicine.

### Policy on evaluation of learning outcomes

Students are required to select a major in Medical Science when they advance to their third year. Students will be evaluated for their academic performance through their transcript of courses taken. Hospital training is permitted on the condition that students acquire the specialized knowledge and skills necessary for clinical laboratory technicians.

### Policy for evaluation of learning outcomes

Achievements in ethics and humanity as a medical professional will be assessed objectively through examinations scores from the courses and other means. Understanding of human health and disease will be assessed by examination scores and reports submitted in classes and practical training courses. Clinical testing knowledge and practical skills will be evaluated through scores achieved on the examinations and reports. The results from the clinical practice exam will be considered as well.

The ability to promote research in medical science will be assessed through interviews, presentations, and graduation research thesis. The ability to understand and practice team medicine will be evaluated based on the performance in Care Colloquium and Clinical Practice courses.

### Characteristics

We provide education centered on classes and practical training that cultivates specialized knowledge and skills in the medical field with a focus on laboratory techniques, as well as clinical skills and teamwork skills.

Curriculum structure				
	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year
General Foundation Subjects	Common foundation subjects courses Major subjects courses			
Foundation Subjects for Major	Human Anatomy Human Physiology Medical Biochemistry Medical Molecular Biology Electromagnetic and other related courses	Practice of Clinical Physiology Transfusion Medicine Coagulation and Fibrinolysis Clinical Pharmacology and other related courses	Medical Science Course	
Major Subjects	Introduction of Medical Science	Clinical Laboratory Science Clinical Pathophysiology Cytology Histopathology Clinical Biochemistry Clinical Hematology Immunology Genetic Engineering and Cytogenetics Basic of Medical Physics and other related courses		Graduation Research
			Practice of Clinical Physiology Transfusion Medicine Coagulation and Fibrinolysis Clinical Pharmacology Practice of Genetic Testing Practice of Clinical Microbiology and other related courses	Clinical Laboratory Medicine
				Frontier of Clinical Laboratory Science
			International Medical Science Course	
			Course Selection	

# Bachelor of International Medical Sciences

## Diploma Policy

A bachelor's degree (International Medical Science) will be awarded to those who have reached and advanced their knowledge and capability beyond the general competence level, described under the educational purpose of the University of Tsukuba's bachelor's program.

Acquire a broad knowledge of human biology and view humanity with respect to dignity and life ethics.

Acquire fundamental knowledge and skills necessary for learning and advancing human sciences as well as medical knowledge of human health and disease.

Acquire basic knowledge and learning skills through laboratory training and experiences to develop and promote your own research.

Acquire basic principles and experimental skills essential for medical science research.

Acquire the skills in basic knowledge and scientific communication skills, the willingness to learn and explore, and the ability to cope with medical issues to play an active role on a global scale in the field of medical science.

## Curriculum Policy

To obtain a bachelor's degree (International Medical Science), the program implemented the following academic policies.

### General policy

The curriculum offers a broad range of subjects, including specialized knowledge, scientific communication skills, and ethical practices, for students to conduct and contribute to medical research on a global scale.

### Course sequence policy

Students must study subjects consisting of liberal arts, basic science, and medical science subjects before proceeding to specialized subjects. The specialized subjects consist mainly of classes and practical training to acquire the technical knowledge and skills necessary for clinical laboratory technicians. After completing these subjects, students are required to take hospital practical training to develop practical skills. Medical and nursing schools offer joint courses to learn how to work in a team setting with other medical profession. Moreover, graduation research allows students to explore the basics of medical research beyond clinical medicine.

### Implementation policy

Students are required to select a major in Medical Science when they advance to their third year. Students will be evaluated academically based on the transcript of their courses taken and their English proficiency. Students take advanced subjects together with international students to strengthen their English discussion skills. Students are assigned to a faculty supervisor and engage in a laboratory activities to master fundamental and technical research skills for their graduation research.

### Policy for evaluation of learning outcomes

Achievements in ethics and humanity in the life sciences will be assessed objectively through examination scores from the courses and other means. Understanding human health and disease, medical science knowledge and skills will be

assessed by examination scores and reports submitted in classes and practical training courses. The ability to promote research in medical science will be evaluated through interviews, research presentations, and graduation research thesis. Students' ability to understand and respond to international issues will be assessed from the following courses: Workshop for Medical Science, International Forum on Medical Biology Research, Training Abroad on Medical Biology, and English Communication for Medical

Sciences.

### Characteristics

The International Medical Science major provides education in which students learn together with international students through English language classes and practical training, and acquire specialized knowledge and skills in medical science, imagination, and academic abilities in the environment of "internationalization in everyday life."

### Curriculum structure

	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year
General Foundation Subjects	Common foundation subjects courses Major subjects courses		Medical Science Course	
Foundation Subjects for Major	Human Anatomy Human Physiology Medical Biochemistry Medical Molecular Biology Electromagnetic and other related courses	Practice of Clinical Physiology Transfusion Medicine Coagulation and Fibrinolysis Clinical Pharmacology and other related courses	International Medical Science Course	Clinical Laboratory Medicine (may take as an elective)
Major Subjects	Introduction of Medical Science	Clinical Laboratory Science Clinical Pathophysiology Cytology Histopathology Clinical Biochemistry Clinical Hematology Immunology Genetic Engineering and Cytogenetics Basic of Medical Physics and other related courses	English Communication for Medical Sciences Topics in Medical Sciences I & II Seminar on Medical Sciences Research Seminar and other related courses	Graduation Research
Course Selection				