# **Graduate Schools**

Playing a vital role since 1965 in the university's educational mission of contributing to cultural development, the Graduate Schools are dedicated to in-depth research and education in the arts and sciences, from theory to a broad spectrum of real-world applications. At present, the university has ten Graduate Schools offering 34 programs covering a wide range of academic fields, as listed on the right. The programs comprise two-year master's programs, five-year doctoral programs (two years for MA and three years for PhD), four-year doctoral programs in the medical sciences, and three-year professional master's degree programs.

The master's programs are designed to give students both a deep knowledge of their chosen field and the ability to approach it from various perspectives, equipping them either for higher level research or careers demanding specialized knowledge. The aim of the doctoral programs is to give students the high-level theoretical knowledge and research skills necessary for advanced research in their chosen fields as independent researchers. The professional degree programs are designed to instill in students a deep sense of scholarship and equip them with the capabilities necessary for them to pursue careers requiring highly specialized knowledge and skills.

Responding to increasing specialization, diversification and internationalization in all academic fields, the graduate schools admit overseas students from Japan and abroad, while proactively striving for the development of the graduate schools by increasing the number of teaching staff and enhancing welfare services. Graduate students can study at other graduate schools or research institutes both at home and abroad if relevant study is recognized as being beneficial for their education and research. A long-term system has been established in the MA and PhD programs for students who are already employed.

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# Graduate School of Humanities

The Graduate School of Humanities offers seven graduate programs designed to assist students in illuminating humanity in all its forms, nurturing creative professionals with high-level knowledge and proficiency in specialty fields, a broad perspective, and flexible and critical minds.

The Education and Clinical Psychology program is open to working students as well via night classes.



#### History (MA, PhD)

The History graduate program offers four majors covering a wide range of research themes: Japanese History, Asian History, Western History and Archaeology. For the Japanese History major, research themes range from ancient and medieval history to the modern and contemporary eras. The themes of the Asian History major cover Chinese history from the Qin and Han periods through the Ming and Qing. Studies in the Western History major include the history of Britain, America and Germany in the modern age. The Archaeology major mainly focuses on archaeological research of the primeval, ancient and medieval periods.

### Japanese Language and Literature (MA, PhD)

Students in the Japanese Language and Literature graduate program major in either Japanese Language or Japanese Literature. Students can choose from the multiple specialties offered by each major in order to focus their learning while taking other courses as well. In the Japanese Language major, the courses offered include studies of classical, modern and contemporary Japanese. In the Japanese Literature major, courses offered include classical literature, modern literature and comparative literature.

### English Language and Literature (MA, PhD)

Students in the English Language and Literature graduate program major in English Language, English Literature or English Language Education. Each major offers multiple courses: English Language courses offered include syntax, and phonology, while English Literature courses offered include courses in British and American culture, fiction, drama and poetry. Students in the English Language Education major may take courses in design of English learning environments and English language education methodology, among others. Students are assigned to an academic supervisor who helps them deepen their knowledge in their specialized field and guides them through research culminating in their MA or PhD theses.

### German Language and Literature (MA, PhD)

The majors offered in the German Language and Literature program are German Language and German Literature. Courses offered in the German Language major include sociohistorical linguistics and German syntax. The German Literature major offers courses such as History of German Classicism and its Influence, Goethe's *Faust* and Natural Science, Jacob Grimm and Romanticism, Modern German Fiction including the literary criticism of Karl Kraus, works by Franz Kafka and Max Frisch, literature of the Jewish German tradition such as Christian Heine and Wolfgang Hildesheimer, comparative culture between Japan and Germany, and the sociology of art.

### French Language and Literature (MA, PhD)

Students in the French Language and Literature program major in either French Language or French Literature. The courses offered in the French Language major focus mainly on modern French linguistics, centering on syntax and grammatical theory. The French Literature major offers a balanced program ranging from the 17th to the 20th centuries, including courses on contemporary French thought.

## Socio-Cultural Studies (MA)

The Socio-Cultural Studies program comprises two branches: Sociology and Culture Theories (Cultural Anthropology). The Sociology courses stress lectures and practice in the theory of social systems, while the Culture Theories (Cultural Anthropology) courses focus on lectures and practice in empirical and theoretical analysis of cultural phenomena. Several courses on the fundamentals of socio-cultural studies and related methodology courses are required courses common to both branches. The Sociology branch aims at the cultivation of specialist techniques to analyze social structures and trends, including survey, statistical and mathematical approaches. The Culture Theories (Cultural Anthropology) branch aims to produce specialists with the knowledge and skills required for fieldwork, including practical language ability, and intellectuals who have professional knowledge and a solid grounding in Western philosophy.

### Education and Clinical Psychology (MA, PhD)

This evening program includes two fields of study: Education and Clinical Psychology. The Education course is designed for students who wish to deepen their knowledge of education and schoolteachers who wish to upgrade their professional skills. The course promotes practical and comprehensive analysis of the factors involved in education at schools and in the social environment. The aim of the Clinical Psychology course is to produce highly qualified professionals in the field of clinical psychology, focusing mainly on the theory and techniques of clinical psychology. The program also offers intensive continuing education opportunities for working people, and outstanding preparation for the National Clinical Psychologist examination.

Emphasis is placed on meeting the varied needs of students, and the program offers as many as 50 courses. Upon completion of the MA program, students are qualified to take examinations for the Advanced Class Teacher's Certificate and the Certified Clinical Psychologist qualification authorized by the Clinical Psychologist Certification Board of Japan.

# Graduate School of Law

Designed to nurture professionals who can make a real contribution to society through their expertise and deep knowledge of law and government, the Graduate School of Law is divided into Public Law, and Civil and Criminal Law, each with its own curriculum. Study is built around small, highly interactive classes coupled with lectures to provide the education and research students seek. The MA program is open to working students as well via night lectures.



### Public Law (MA, PhD)

The subjects offered in the Public Law program are Constitutional Law, Administrative Law, Tax Law, International Law, Economic Law, Legal Sociology, Legal History, Political Science and History of Political Thought. The staff works with the staff of the Civil and Criminal Law program and collaborates in research with specialists from other major universities in Japan and overseas. This approach has earned praise for research into constitutional law through comparative legal study, and into international law with respect to fundamental ethics.

The admission system offers different admission standards and examinations

according to the students' purposes after completing the course (e.g. students aspiring to be research staff members and students aspiring to be legal specialists or public servants), or according to social status such as working members of society and international students. Students are required to write a master's thesis to complete the master's degree course. When giving advice on researching and writing a thesis, we reflect on the student's purpose for choosing this program as much as possible. We also strive to give lectures in each course in line with the students' purposes for choosing this program.

### Civil and Criminal Law (MA, PhD)

The subjects offered in the Civil and Criminal Law program are Civil Law, Civil Procedure Law, Commercial Law, Criminal Law, Code of Criminal Procedure, Social Security Law, Labor Law, International Private Law, East Asian Corporate Law and Intellectual Property Law. Collaborative research projects are advanced with the staff of the Public Law program, and with researchers from other universities in Japan and overseas. Research results in the civil and commercial fields in particular have earned high praise. The East Asian Corporate Law program begun in 2008 is attracting considerable attention as a unique course taught by a non-Japanese professor.

The admission system offers different admission standards and examinations according to the students' purposes after completing the course (e.g. students aspiring to be research staff members and students aspiring to be legal specialists or public servants), or according to social status such as working members of society and international students. Students are required to write a master's thesis to complete the master's degree course. When giving advice on researching and writing a thesis, we reflect on the student's purpose for choosing this program as much as possible. We also strive to give lectures in each course in line with the students' purposes for choosing this program.

# **Graduate School of Economics**

## Economics (MA, PhD)

Graduates of the school are professionals, equipped with the specialized knowledge needed to contribute to societal growth on the global stage.

Subjects in the MA program include Micro-Economics, Advanced Economic Theory, Applied Macro-Economics, Economic Dynamics, History of Economics, Monetary Theory, Economic History I (Asia), Economic History II (Japan), History of Social Theories, Theory of Economic Policy, Industrial Organization, International Trade Theory, Modern Economic Analysis of the U.S., China and Japan, Theory of Economic Development, Socioeconomics, Economics of Negotiable Securities, Public Finance, Taxation Theory, Public Economics, Social Choice Theory, Mathematical Economics, Quantitative Economics, Applied Econometrics, Economic Time Series Analysis, Statistics, Statistical Economic Theory, Social Engineering, Income Redistribution Theory, Urban Informatics,

Analysis of Urban Models, Analysis of Urban Systems, Operations Research, Game Theory, Cooperative Game Theory, Regional Economics Theory, and Relationship between Asian Economies and Cultures. In addition to regular classes by school faculty, special lectures are also offered by guest lecturers.

The subjects offered in the PhD program include Economic History, Social Engineering, Analysis of Urban Models, Operations Research, Game Theory, Social Economics, and Economic Time Series Analysis.



# Graduate School of Commerce

### Commerce (MA, PhD)

Subjects in the Commerce program include Commercial Theory, Comparative Marketing Systems, Marketing, Information Industry, Market Analysis, Marketing Models, Consumer Behavior, Theory of Money and Banking, Principles of Insurance, Risk Management, Transport Economic Theory and Policy, International Transport Economic Theory, Theory of International Trade, International Trade, Foreign Trade Policy, International Business Management, International Finance, Foreign Exchange, Comparative Financial Systems, US Economy, Asian Economy, Development Economics, History of Japanese Commerce, Business Administration, Business Management, Business Organization, Financial Management, Human Resources Management, Theory of Business Enterprise, Management of Small and Medium-sized Business, International Business, Operations Research, Business Strategy, Accounting, Financial Reporting,

Financial Accounting, Advanced Book-keeping Principles, Advanced Cost Accounting, Management Accounting, International Accounting and Corporation Tax Law. With its array of advanced specialized courses, the aim of the program is to produce topflight researchers and educators, tax accountants, certified public accountants and other professionals who can play active roles in the business world.



# Graduate School of Science

The Graduate School of Science nurtures professionals who can contribute to a better relationship with the natural world, and improved welfare, through the application of research in natural science, deep knowledge of the field and research proficiency.



## Applied Mathematics (MS, PhD)

To meet the needs of the rapidly developing information-oriented society, the Applied Mathematics program provides a broad education in pure and applied mathematics. The subjects offered are Fundamental Mathematics, Geometry, Analysis, Applied Analysis, Applied Mathematical Science, Statistics and Mathematics of Information. Courses in algebra, topology, differential geometry, functional analysis, complex

analysis, differential equations, probability theory, statistics and mathematics of society are offered. In recent years, the staff's cutting-edge research on algebraic geometry, homotopy theory, Riemannian geometry, non-linear differential equations, stochastic analysis, theory of multi-variable functions, information geometry, computerized image processing and network programming has attracted widespread attention.

## Applied Physics (MS, PhD)

The Applied Physics program is dedicated to producing scientists with the knowledge, skill and vision to apply physics in a wide range of fields. Core subjects offered are Basic Physics, Physical Properties, Nanophysics and Physical Information Acquisition. In the Basic Physics course, students study nuclei and other structures of multi-quantum structures, astrophysics such as nebulas, and material properties including magnetism. In

the Physical Properties course they study the properties of functional molecular coagulates, magnetic materials, superconductors and alloys. In the Nanophysics course the emphasis is on nanoscale structures, with study on the properties of materials used in semiconductors and ultra-small electronic components. The course on Physical Information Acquisition probes methods of measuring physical properties.

### Chemistry (MS, PhD)

The program consists of research and education designed to contribute to the continued development of chemistry and to provide answers to society's needs, by clarifying the processes of life, pioneering environment-friendly "Green Chemistry," and creating powerful new functional materials. Fields of specialty are Organic Chemistry, covering reactions and syntheses of organic compounds and related biological functions; Physical Chemistry, which examines the relationship between the ordered structures of matter and its physical properties; Inorganic and Analytical Chemistry, probing the creating of functional materials and clarification of function; and Nanochemistry, which researches the creation and exceptional functions of nanoscale materials.

### Earth System Science (MS, PhD)

In the Earth System Science program, students investigate various phenomena occurring in the atmosphere, hydrosphere, lithosphere and biosphere of the earth, and explore their mechanisms and interactions from systematic and historical perspectives. Majors offered in this course include Physics of the Global Environment, Geophysical Fluid Dynamics, Hydrospheric Material Chemistry, Geodynamics, Structural Adaptation Biology and Functional Adaptation Biology. This interdisciplinary postgraduate program, which integrates physics, chemistry, biology and earth science, is unique among universities in western Japan.

# Graduate School of Engineering

The MS programs of the Graduate School of Engineering are designed to nurture experts active in the development of advanced technology, while in the PhD programs students learn to develop entirely new solutions and technical perspectives in response to diverse problems, thereby contributing to society.



### Mechanical Engineering (MS)

The Mechanical Engineering program includes five majors: Strength of Materials, Fluid Engineering, Thermal Engineering, Manufacturing Science, and System Dynamics and Control. In each major, two faculty members are in charge of education and research. Students gain far-reaching basic

knowledge in the field of mechanical engineering, which, coupled with research closely linking to advanced science and technology, provide them with comprehensive problem-solving ability and a broad perspective.

## Electrical Engineering (MS)

The Electrical Engineering program is comprised of the four majors of Basic Electrical Engineering, Power Electronics, Electrical Power Engineering and Applied Electrical Engineering. These courses embrace such fields as the environment, information and communications, functional materials, superconductivity, control systems, energy conversion, high voltage insulation and laser applications. Progress is rapid in all of these fields, and this program promotes an interdisciplinary approach designed to produce professionals able to answer the needs of society.

### Electronics and Computer Science (MS)

Composed of eight majors — Integrated Circuits, Communication Systems, Optoelectronics, Computing Systems, Information Architecture, Knowledge Engineering, Information Systems Development Engineering, and Media Engineering — the program offers courses and research in semiconductors, electronic circuits, digital communications technology, optoelectronics, computer engineering, robotics, natural speech processing, audio and video data processing, and system software engineering. The program is designed to produce professionals with high-level knowledge and research ability to drive technological innovation in the key fields of electronics, communications and information.

## Chemical Engineering (MS)

The Department's goal is to ensure that our students master high-level knowledge and advanced skills in chemical engineering and molecular engineering, and through educational and research programs gain proficiency as engineers capable of making a significant contribution to the advancement of the sustainable society. The teaching staff specializes in advanced fields including biofuels, supercritical fluids, functional catalysis technologies, surface analysis of catalysts, high-performance chemical plants, engineering of bio- and soft-interfaces, safety and environmental technology, self-organized function materials, and advanced recycling technologies, providing graduates with a broad perspective and sophisticated knowledge.

## Architecture and Civil Engineering (MS)

Construction technology, which creates the spaces and facilities supporting a wide range of social activity including living, working, playing and moving, faces a severe economic and financial climate, but must continue to ensure safety and environmentally aware products, making further advancement in the field essential. This program is intended to train researchers, engineers and designers capable of addressing and resolving these issues, offering seven majors: Structural Design, Aseismic Engineering, Construction Materials, Liquid Systems, Regional and Housing Design, Construction Environmental Planning, and Roadway and Foundation Environmental Planning. The program also offers courses fulfilling requirements for practical experience defined in the national qualification examination for Grade 1 architect.

## Recycling and Eco-Technology (MS)

In a world with limited natural resources and energy sources, this program was established in the 2002 academic year aiming to produce engineers necessary to realize a recycling-based society. The program consists of six majors: Sustainability of Resources, Control of Environmental Chemicals, Ecological Control, Regional Environment, Environmental Management, and Cultural Environment in East Asia. Established in the Graduate School of Engineering, the program welcomes not only new graduates but also members of the general population and students from overseas, regardless of their majors, aiming to integrate elements from both the engineering and humanities fields.

### Energy and Environment Systems (PhD)

The Energy and Environment Systems program is composed of six majors: Thermal Energy Engineering, Electrical Energy Engineering, Urban Environmental Engineering, Environmental Material Engineering, Environmental Process Engineering and Recycling System Engineering. Interdisciplinary studies are promoted through research on energy generation, conversion and transfer for solving energy problems, environment-friendly chemical systems approaches to overcoming environmental problems, technologies for waste treatment and recycling, and material development for the prevention or amelioration of environmental degradation.

## Information and Control Systems (PhD)

This program is composed of four majors: Computer Science, Information Transmission Engineering, Power Electronics and Mechatronics, and Solid State Electronics. Research covers a wide spectrum of specialty fields including intelligent information processing, natural language processing, information transmission including digital communications technology, power conversion using semiconductor devices, robot control, and the functional devices to support such systems.

# Graduate School of Medical Sciences

The Graduate School of Medical Sciences nurtures clinical physicians with a broad, deep knowledge of medical specialties, capable of researching and disseminating key results to society at large, and provided with outstanding clinical research proficiency that can contribute to regional and international society.

The MS program in Nursing deals primarily with issues in nursing practice, producing professional nurses equipped with practical abilities firmly based in scientific principles, committed to meeting the challenges of nursing through practical, creative solutions.



### Human Biology (PhD)

This program focuses on the basic structure and functions of the human body. The majors offered are Biological Morphology, Molecular and Cellular Biology, and Molecular and Cellular Physiology. Among the noteworthy studies currently underway are studies on cell structure, cell physiology and biochemical studies on cellular function, and research into systems computation.

### Regulatory Biology (PhD)

This program offers majors in Host Defence and Immunobiology, Regeneration and Transplantation, Pathophysiology of Respiratory Diseases, and Plastic and Reconstructive Surgery. Studies focus on microorganisms, eumycetes and parasites pathogenic to the human body and immune system.

### Pathomorphology (PhD)

This program conducts research focused mainly on the microscopic analysis of human body tissues and pathological changes induced in them by diseases and on the mechanism of the development of various diseases and their therapies. Majors offered include Morphologic Pathology, Geriatric Pathophysiology, Tumor Pathology, Anatomic Pathology, Central Nervous System Pathologic Physiology, Visual Medicine, Nephrourology, Gastroenterological Medical Science and Practice, Neuropathology, and Renal Immunology and Metabolism.

## Pathological Biodynamics (PhD)

Research in this program centers on the normal functions of the human body and the morbid changes induced by diseases. The majors offered are Cellular and Molecular Pharmacology, Neuro-Otology, Research of Locomotive Organs, Research of Locomotive Organs Function, Cardiovascular Surgery, Applied Radiology, Anesthesiology, Emergency and Critical Care Medicine, Functional Neurology, and Oral Pathobiology.

# Social Medicine and Environmental Health (PhD)

This program offers majors in Preventive Medicine and Public Health, Criminal Medicine, and Psychiatric Therapeutics. Major research themes include studies on diseases induced by the relationship between human beings and their social environment, prevention of occupational diseases and health control in the workplace, and social and environmental factors in the development of human diseases.

## Frontier Medical Sciences (PhD)

This program has the following majors: Biochemistry and Molecular Medicine, Cardiovascular Diseases and Physiochemistry, Molecular Reproductive Medicine, Clinical Laboratory Analysis, Pathophysiobiochemistry of Cardiovascular Deseases, Dermatologic Tumor Immunobiochemistry, Pathophysiology of Infectious Diseases, Pathophysiology of Endocrinology and Metabolism, Surgical Gastroenterology, Organ Reconstruction and Biopathological Surgery, Gastroenterology, Developmental Pediatrics, Medical Diagnostics, Medical Oncology, and Clinical and Applied Science. Ongoing research includes studies on the chemical mediators that affect the functions of the human body, their kinetic metabolism and the pathological changes they induce.

# Nursing (MS)

The nursing program was established in 2011 as a graduate school serving the local community, and the program and curriculum is continually revised and improved to ensure the acquisition of sophisticated, practical nursing skills. Plans call for the addition of courses in high-level practical nursing to existing thesis-based courses in adult lifestyle disease support, regional and mental health support, and nursing staff training and management, enhancing program content to a level appropriate to a core education institution for Kyushu.

# Graduate School of Pharmaceutical Sciences

The Graduate School of Pharmaceutical Sciences is involved in education and research into academic discussion and application in pharmacology, offering an MS in Pharmaceutical Health Science and a PhD in Pharmaceutical Science under its policy of contributing to medicine through pharmacology. The MS program in Pharmaceutical Health Science trains researchers and technical experts in the development of new pharmaceutics and health science, broadening and deepening student knowledge of the pharmacological field. The Pharmaceutical Science PhD program aims to produce pharmacology researchers and educators who can apply deep specialized knowledge and problem-solving ability, and pharmacists equipped with the knowledge and research skills to speedily and precisely resolve problems in the clinical field.



#### Pharmaceutical Health Science (MS)

Pharmaceutical Health Science is divided into two programs: Pharmaceutical Health Science and General Pharmaceutical Science. The Pharmaceutical Health Science program is designed primarily for students aiming for interdisciplinary health science careers in the fields of science, engineering, pharmaceutical science (the former 4-year Pharmaceutical Science course), sports science, agriculture, nutrition and similar scientific fields. The General Pharmaceutical Science program is mainly intended for on-the-spot pharmacists who can apply their advanced knowledge of the field to make significant community-based medical contributions.

### Pharmaceutical Science (PhD)

The Pharmaceutical Science course offers two programs: Medical Pharmacy and Pharmacological Research. The Medical Pharmacy program is intended for students seeking to apply advanced pharmacological expertise in personalized medical treatment, education, medical policy formulation, translational research and technology development, and research into regulatory science. The Pharmacological Research program is designed to produce medical pharmacology researchers in new drug development and pharmacological treatment optimization, basic pharmacology educators, researchers and policymakers in health science and environmental hygiene chemistry, and R&D researchers at pharmaceutical companies.

# Graduate School of Sports and Health Science

## Sports and Health Science (MS, PhD)

The Physical Education program aims at producing first-rate physical education specialists and leaders who can develop their professional abilities to meet the needs of society. To accomplish this, six majors are offered: Physical Education, Physical Fitness, Sports Medicine, Physical Education Teaching Methods, Coaching Methods, and Exercise and Health. Research and education extends beyond traditional school and university sports to include medical and municipal institutions, private organizations and commercial sports facilities.



# Institute for Legal Practice (Law School)

### Legal Practice (JD) (Professional degree programs)

We have a structured curriculum beginning with the fundamental subjects and progressing on to practical legal subjects, including all the things needed to acquire the necessary abilities to work as a lawyer, judge or public prosecutor. These two types of subjects are well linked to each other in the curriculum.

All of the basic subjects such as Constitutional Law, Civil Law and Criminal Law are directed towards first-year law students in the three-year course for students without undergraduate law degrees, on the assumption that they have no legal backgrounds. The goal is to provide them with a fundamental understanding of law based on practical application. practice, training students to apply the fundamentals mastered in the first year to resolve real-world issues. Mock trials are held, and students participate in law firms and similar organizations to gain practical knowledge and experience. The course includes a number of developmental subjects, backed up by legal practice. These classes are taught by former judges and prosecutors as well as college researchers with many years of university education experience. In addition to receiving their Law Doctorate, those who

complete this degree course also gain the qualification to take the National Bar Examination.

