



Kumamoto University

2017-2018



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## Message from the President

### HARADA Shinji

President of Kumamoto University

**W**elcome to Kumamoto University (KU). Kumamoto is located in the center of Kyushu Island in Japan and is rich in nature. We have the huge volcanic Aso mountain in the eastern part of Kumamoto Prefecture. On the west side, there is the picturesque Amakusa seashore with small islands connected by 5 bridges. KU is situated in Kumamoto City where historic Kumamoto castle is surrounded by many trees. So, the city is called FOREST CITY. We have a hill clad in fresh greenery behind the KU campus, giving us a tranquil atmosphere for studies. Kumamoto is also known for its high quality fresh water springs, which provide drinking water to the residents.

These are some reasons I feel confident that visitors and international students in Kumamoto can have an enjoyable and high quality life. KU is one of the oldest universities in Japan with seven faculties, eleven graduate schools and 23 research centers/institutes (as of August 2017) that support a wide spectrum of educational and research activities. Currently, the university is home to around 8,000 undergraduate students and 2,000 graduate students, including 507 international students from 49 countries (as of May 2017). For over 100 years our university has been at the forefront of culture, advancing science and technology, and contributing to the development of the Japanese educational system.

Recently, we have been selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) for the following 3 projects; the Program for Promoting the Enhancement of Research Universities, the Top Global University Project and the Center of Community Project. Consequently, KU will be seeing increased internationalization brought about by international academic and student exchange programs (as of September 1, 2017, we have partnered with 222 institutes from 44 countries and regions), global-collaboration research programs with the world's leading researchers, and other such international activities. The short-term international student exchange programs are conducted at both KU and our partner universities. Through these activities, KU has been contributing to local communities and to global society.

We seek to cultivate an open mind with a broad view, a creative imagination, the ability to solve problems, and the aptitude to communicate internationally. We believe this policy will ensure that many competent professionals and leaders of future societies will emanate from our university.

I hope this book helps you to learn more about Kumamoto University and its activities.

President of Kumamoto University

# 創造の森 挑戦の炎



“Forest of Creative Powers, Blaze of Challenging Spirits”

Kumamoto University (KU), a globally active research university with roots in local communities, has adopted a motto that symbolizes the university’s brand attributes and expresses its essential quality: “KU Spirit.”

## VISION

Kumamoto University aims to contribute to the community and global society by cultivating intelligent, moral, and skillful people, while working for the creation, inheritance, and development of knowledge, following the spirit of the Fundamental Law of Education and the School Education Law.

## GOALS

### Education

In order to cultivate unique, creative people, the university provides a comprehensive education based on a consistent philosophy followed by all our undergraduate departments and graduate schools.

Our undergraduate departments, with the help of a broad education, inculcate in students the abilities of international communication, adapting to the information age, and thinking and acting independently.

Our graduate schools cultivate highly specialized workers with comprehensive reasoning ability, technical knowledge, and internationally recognized skills, in addition to deep insight into human beings and nature, on the basis of the undergraduate education that the workers have received.

As an institution that is open to the public, the university offers a place where people can engage in lifelong learning.

### Research

The university strives to protect and develop humankind’s cultural heritage, while enhancing its capabilities to function as a center of advanced academic research and proactively promote cutting-edge, creative academic research.

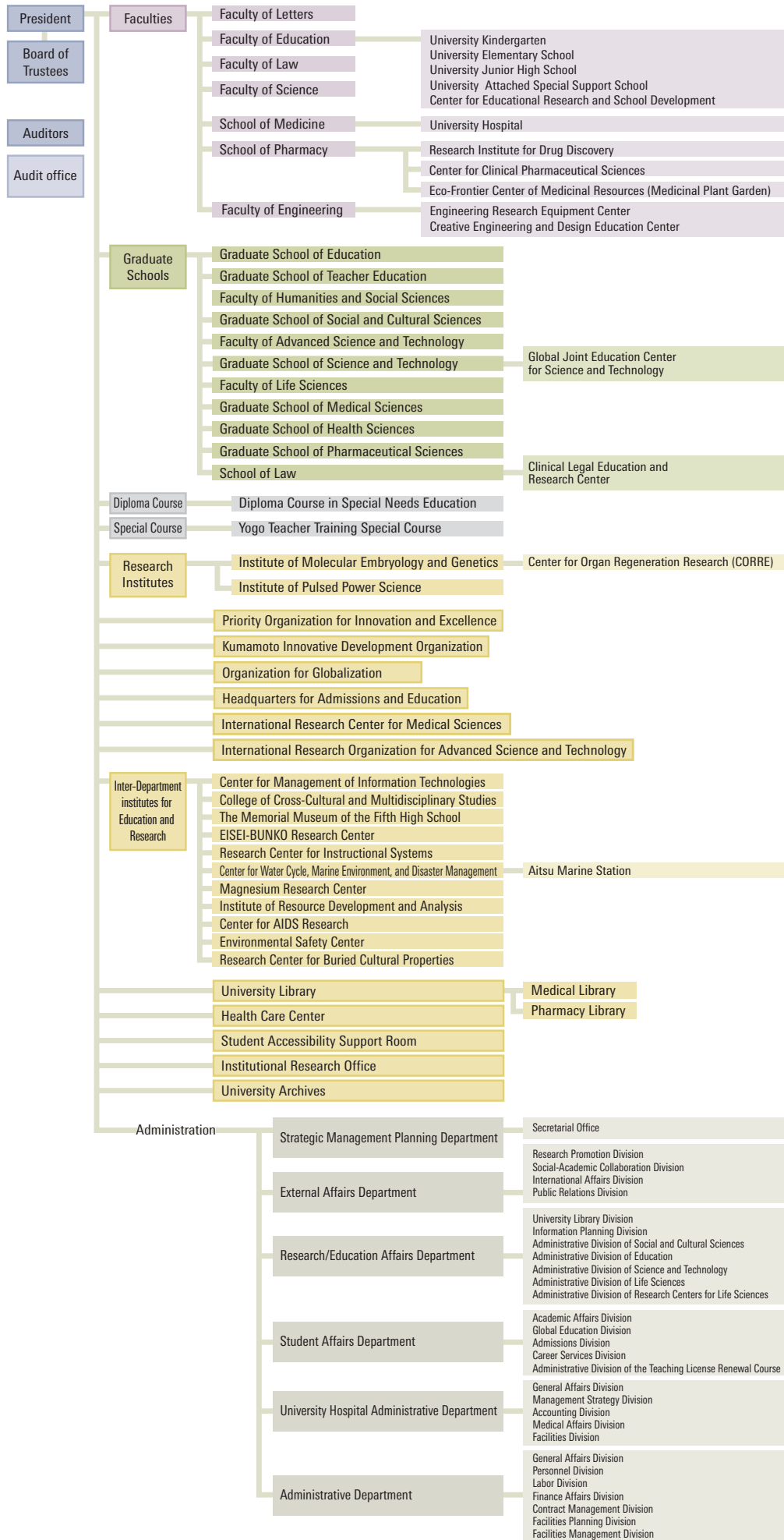
In addition, by making use of its unique features, comprehensively deepening knowledge in the fields of human science, social science, and natural science, as well as promoting interdisciplinary research, Kumamoto University is working to contribute to the harmonious coexistence of humans and the environment, as well as sustainable societal development.

### Contributions to local and global communities

As a university located in a regional hub city, the university will strengthen its cooperation with the local community and serve the functions of being a central research facility and cultivating leaders in the local community. By striving to convey our academic culture to the world, the university will contribute to the promotion of local industry and to advancing the provision of information about the culture.

In addition, the university strives to promote international intellectual exchange, educate international students, and train graduate students capable of producing a bilateral international exchange.

# ORGANIZATION





### Faculty of Letters

- **Department of Integrated Human Studies**  
Human Sciences, Socio-human Studies, Regional Science
- **Department of History**  
Japanese History and Archaeology, The Modern World System
- **Department of Literature**  
East-Asian Languages and Literature, Euro-American Languages and Literature, Transregional Studies of Language and Literature
- **Department of Communication and Information Studies**  
Communication and Information Studies

### Faculty of Letters

The Faculty of Letters was established in May 1949 as part of the new Faculty of Law and Letters. This faculty was then split into the Faculty of Law and the Faculty of Letters in 1979. The education and research framework of the Faculty of Letters consists of four educational departments, which are the Department of Integrated Human Studies, the Department of History, the Department of Literature, and the Department of Communications and Information Studies. The Faculty welcomes 170 new students each year. Approximately 70 faculty members are conducting academic research in a broad number of areas, including the humanities, social studies, and cultural studies.

To satisfy new and contemporary needs, three interdisciplinary courses that made use of an existent educational system for cross-disciplinary learning were established in 1997. In 2005, these courses were disbanded and the Department of Communication and Information Studies was established. The aim of its establishment is to help students acquire outstanding abilities in international communication using

English, as well as to teach them to excel at processing information. There are numerous international students across the Faculty, which is striving to develop people who can contribute to the international community through various researches.

The Faculty's research activities include aspects of the history and social problems specifically related to Kumamoto prefecture. The EISEI-BUNKO Research Center, an inter-department institute of Kumamoto University since 2017, was originally established as an affiliate institute of the Faculty of Letters in 2009. The purpose of the Center is to enable analysis of the scholarly values of historical materials in the Hosokawa clan's centuries-old collection, and to promote academic advances of its research. Currently, on-going projects by the Faculty such as archival studies of Minamata disease based on the aggregation of field research data, and literary studies of Meiji era writers who taught in Kumamoto are expected to be recognized as prioritized by the University.

URL: <http://www.let.kumamoto-u.ac.jp/en/>



Faculty of Law

■ Department of Law

Division of Legal Culture, Division of Civil Law, Division of Modern Legal Policy, Division of Public Policy

■ Faculty of Law

The origin of the Faculty of Law can be traced back to 1887 when the Fifth High School was founded in Kumamoto. Becoming the present Faculty of Law in 1979, the Faculty has been offering an extensive range of undergraduate programs of study leading to the degree of Bachelor of Laws. The Faculty has around 40 academic staff and 840 undergraduates. Students may take a course of lectures on Public Law, Private law and International Law. (The aforementioned courses are only exemplary.) Alongside the law courses, students enrolled in the Faculty of Law can also learn economics, political science and conflict resolution.

The educational goal of the Faculty is to develop students' abilities, give them a foundational knowledge of legal principles and teach them to think critically about legal and political issues in present-day society, leading them to be effective problem-solvers. To these ends, the Faculty of Law offers students a personalized education, including small seminar-style classes comprising of less than 20 students, one of which students are required to take each year.

URL: <http://www.law.kumamoto-u.ac.jp/en/>



### Graduate School of Social and Cultural Sciences

#### ■ Master's Course

Division of Public Policy Studies, Division of Jurisprudence, Division of Modern Social Human Studies, Division of Cultural Sciences, Division of Instructional Systems

#### ■ Doctoral Course

Division of Human and Social Sciences, Division of Cultural Sciences, Division of Instructional Systems

### ■ Graduate School of Social and Cultural Sciences

The Graduate School of Social and Cultural Sciences was established in April, 2002 as a three-year independent, interdisciplinary and comprehensive Doctoral Program based on specialized fields in the Faculty of Letters and the Faculty of Law. In April, 2006, the Division of Instructional Systems (master's program) which was designed to foster e-learning professionals, was founded. In April, 2008, the new Graduate School of Social and Cultural Sciences, which consists of the Master's Program and the Doctoral Program, was created by reorganizing and integrating the existing Graduate School of Social and Cultural Sciences, the Graduate School of Letters (master's program), the Graduate School of Law (master's program), and the Division of Instructional Systems.

In addition to the traditional academic courses (8 courses), the Master's Program offers 7 newly-founded professional courses, including Public Policy; The Legal Profession; Negotiation, Conflict Resolution, and Orga-

nizational Management; East Asian Business Communication; Cultural Administration and Curators; Japanese Teaching in senior High Schools; and English Language Teaching. These courses help to realize an education that responds to a wide range of social needs.

The Doctoral Program aims to cultivate highly-specialized professionals and researchers. It is comprised of three divisions. The Human and Social Sciences Division pursues development and policy studies of new social systems, and their theoretical groundings. The Cultural Sciences Division is concerned with research into various aspects of human culture and the formulation of cultural policies for contemporary society. And the third is the Instructional Systems Division. All the three doctoral divisions have been created to open the door for adult students and foreign students, in addition to those who proceed from the Master's Program.

URL: <http://ewww.kumamoto-u.ac.jp/dept/social/>





## School of Law

## ■ Legal Professional Course

## School of Law

The School of Law was established in April 2004 for the purpose of training students to become legal professionals who will be active in the 21st century, and who will have the ability to respond to the special legal needs of local communities and to solve various global legal problems. A total of 16 students (including a few students in the shortened two-year course) are accepted into the program each year. The full-time teaching staff of 18 people comprises 4 practitioner-teachers, including practicing lawyers. The School of Law emphasizes the fostering of legal professionals with a process that focuses on education of the law in association with the national bar examination and legal apprenticeships. Classes are separated into four broad categories, which are the fundamentals of theoretical law, fundamentals of practical law, classes adjoined with the funda-

mentals of the law, and developing and current subjects. The School of Law's program uses a simulated and systematic education that provides its students with a practical grounding that links together legal theory and legal practice – a distinctive education that can meet the needs of a new legal era.

Clinical Legal Education and Research Center (the Law Center) was established in September 2006 with the purpose of providing education and research that specializes in legal practice.

(Notice: the School of Law is not accepting applicants from the 2016 academic year.)

URL: <http://ewww.kumamoto-u.ac.jp/dept/lr/>

## FACULTY OF HUMANITIES AND SOCIAL SCIENCES ■ 人文社会科学研究部 ■

Following the establishment of the Faculty of Life Sciences and the Faculty of Advanced Science and Technology, which arose from the process of a stricter selection focusing on research fields in the graduate school, the Faculty of Humanities and Social Sciences was established on April 1, 2017 by reorganizing the Faculty of Letters, the Faculty of Law, the Graduate School of Social and Cultural Sciences, and the School of Law.

The establishment of the Faculty of Humanities and Social Sciences means that university teaching staff are effectively allocated among the three fields of life sciences, natural sciences and human/social sciences. This realignment makes it possible to work through the rapid population decline among youth and to meet the growing needs of globalization. It also makes it possible to readjust education programs more flexibly, thereby ensuring a quality academic education.

The Faculty of Humanities and Social Sciences aims to contribute

academically with practical relevance to community vitalization, to construct a research hub for human and social science studies in order to actively produce worldwide scholarly achievements, and to promote global level research through active collaboration among members of the human/social science and legal fields. In human science fields such as psychology, history and sociology in particular, the Faculty also intends to augment relationships and cooperation with overseas colleges and universities and bring about greater research achievements internationally, thereby shifting conventional academic culture studies to a more invigorating course infused with international cooperation.

The Faculty is also contributing to the field of conflict resolution by consolidating the research resources of humanities, law and policy in order to establish a solid foundation of international standards in research, and to develop practical areas of research that will be able to respond to the various demands of society.

FACULTY OF EDUCATION

GRADUATE SCHOOL OF EDUCATION

GRADUATE SCHOOL OF TEACHER EDUCATION

■ 教育学部 ■

■ 教育学研究科 ■

■ 教職大学院 ■



### Faculty of Education

#### ■ Curricula

Elementary School Teacher, Junior High School Teacher, Special Needs Education Teacher, School Health Teacher.

#### ■ Departments

Japanese, Social Studies, Mathematics, Natural Science, Music, Art, Health and Physical Education, Industrial Technology, Living Sciences, Foreign Languages (English), Special Education, School Health, Pedagogy, Psychology

### Graduate School of Education

Educational Practices Major, School Subject Methods and Practices Major

### Graduate School of Teacher Education

Teacher Training Practices and Development Major

## Faculty of Education

The Faculty of Education was established in May 1949 under the new Kumamoto University system. It originated from schools such as the Kumamoto Teacher's High School created in 1874.

The Faculty of Education currently has four courses. One course trains teachers for the elementary school and junior high school levels, while a second trains teachers for other types of schools.

In addition, at the Center for Educational Research and School Development, students can receive advice on matters related to educational practice, particularly what to do when problems occur on the job. The Center also engages in practical research.

### ■ Institution ■

#### Center for Educational Research and School Development

The Center analyzes and seeks practical solutions to the problems that arise in education. It also conducts research on what types of classes and curricula meet contemporary needs. To achieve these aims, it has established an Education Clinic Division, comprised of an Education Consultation Section and an Education Organization Section, and an Education Curriculum Division. It also develops comprehensive, practical activities in cooperation with related organizations.

### ■ Special Courses ■

#### Diploma Course in Special Needs Education

This course is geared toward incumbent teachers as well as current students from Kumamoto University and toward students with a BA degree or higher from other universities. Through specialized instruction in special needs education, the course helps students to fulfill the requirements for their Diploma and teaching certificate in Special Needs Education.

#### Yogo Teacher Training Special Course

This course is meant to produce highly-qualified Yogo teachers. It is designed for those who already have their nursing license, as well as those who are in the process of obtaining it. The curriculum consists of general education subjects, specialized subjects in Yogo teacher and specialized subjects in teaching.

## Graduate School of Education

The Graduate School of Education has offered a master's course program since April 1986. The department currently offers two majors based on the three organizational principles of practical application, interdisciplinary education and current practice: Educational Practices Major - school education (pedagogy and psychology), special needs education, and school health nursing education - and School Subject Methods and Practices Major - Language Education (Japanese and English), Science and Mathematics Education (science and mathematics), Social Science Education (social studies), Technology and Human Life Science (technology education and home economics education), and Arts and Sports Education (music, art, health and physical education). Since the aim of the department is to improve the quality and qualifications of teachers, in-service teachers are also admitted. The school provides instruction in and conducts research on educational practices.

Students who complete the Graduate School of Education course receive a Master of Education degree. Students can also work to receive their teaching certificate.

## Graduate School of Teacher Education

The Graduate School of Teacher Education was newly started in April of 2017, the only major being: Teacher Training Practices and Development.

The purpose of this major is to develop practical skills in teaching, guiding students, and in managing schools themselves, as well as developing the ability to conduct research on these topics.

This major is staffed with both researchers and practitioners.

### URL:

<https://www.educ.kumamoto-u.ac.jp/?lang=en>



### Faculty of Science

- Department  
Department of Science
- Courses  
Mathematics, Physics, Chemistry, Earth and Environmental Sciences, Biology

#### Faculty of Science

The Faculty of Science was established in May 1949 as one of the faculties under the new Kumamoto University system. It grew out of the science department of the Fifth High School, which was established in October 1887, and one part of Kumamoto Kogyo Senmon (Technical) High School. The Faculty of Science underwent some dramatic changes in 2004. The existing departments were merged into one department containing 5 courses. In addition, students are now able to decide what kind of educational program they want during their first two years after entering the university. Then, after accessing what course is right for their own needs, students choose a major in their junior year.

At the same time, the Faculty of Science provides detailed educational services that are targeted to individual students through the implementation of such things as a departmental staff tutoring system.

While conducting fundamental research, which is what

they specialize in, the Faculty of Science also actively conducts applied research in specific fields that meets the needs of communities and society. Although the path students take after they graduate usually involves obtaining employment in fields such as the government and other public offices, business, or the teaching profession, many students also choose to continue their education by entering a master's program.

URL:  
<http://www.sci.kumamoto-u.ac.jp/index.html>



## Faculty of Engineering

- **Department of Applied Chemistry and Biochemistry**  
Chemistry for Molecular Engineering, Chemistry for Materials Science, Biochemical Engineering, Bio-related Molecular Science
- **Department of Materials Science and Engineering**  
Eco-materials, Microstructure and Interface Control and Engineering, Material Physical Properties, Advanced Materials, Environmental Engineering Materials, Functional Materials Design
- **Department of Mechanical System Engineering**  
Intelligent Machine Design and Manufacturing, Intelligent System for Measurement and Control, Thermal and Fluid Engineering, High Pressure Engineering and Material Processing
- **Department of Civil and Environmental Engineering**  
Urban and Regional Design, Disaster Prevention, Infrastructural Development, Environmental Conservation
- **Department of Architecture and Building Engineering**  
Planning and Design, Environmental Engineering and Utilities, Structures and Construction, Building Production
- **Department of Computer Science and Electrical Engineering**  
Computer Science and Communication Engineering, Frontier Technology for Energy and Devices, Human and Environmental Informatics
- **Department of Mathematics and Engineering**  
Information Mathematics, Analysis of Complex Systems and Nonlinear Partial Differential Equations, Probability, Statistics

### Faculty of Engineering

The origin of the Faculty of Engineering was the Department of Engineering of the Fifth High School, which was established in 1897. Since then, the university has turned out more than 30,000 alumni who are working actively all around the world. Thanks to an existing alumni network, graduates have been able to find work with many quality companies. Many other students choose to continue their education in a master's program after they graduate. The goals of the Faculty of Engineering are two-fold. First, it aims to contribute to the well-being of humankind and the development of society by creating the technology to help society co-exist with the global environment. Its second aim is to foster people with a rich sense of humanity who can contribute to the global and local communities by looking at things from a global point of view.

### Institution

#### Engineering Research Equipment Center

Various measuring and testing instruments (LVP-SEM, XRD, ESCA, etc - about 20 models) are made available for advanced experiments and research by allowing their shared use.

#### Creative Engineering and Design Education Center

The center cultivates technologists with a rich sense of creativity and the ability to build innovations. It does this by developing and providing outstanding educational programs at the Faculty of Engineering.

URL:  
<http://www.eng.kumamoto-u.ac.jp/english/index.html>



### Faculty of Advanced Science and Technology

Keeping with the trend towards placing priority on graduate school education, and following the establishment of the Faculty of Life Sciences, the Graduate School of Science and Technology was reorganized in April 2016 and the Faculty of Advanced Science and Technology (the organization that the faculty members belong to) was established. Pursuant to this change, the Faculty is responsible for organizational management and the Graduate School is responsible for graduate school education.

The Faculty of Advanced Science and Technology consists of four divisions: Natural Science, Materials Science, Energy Science, and Environmental Science. There are a total of 36 departments under these 4 divisions. The Faculty aims to promote advanced natural sciences that will contribute to our coexistence with the global environment and to the sustainable development of society. The Faculty also aims to create an academic hub for advanced research in applied technologies. Through close

cooperation between scientific and engineering departments, we launched this new organization system to promote unique and advanced research and applied research that will respond to social needs. We will endeavor to deepen scientific technology in a comprehensive manner, create new scientific technologies, and promote individualization of the graduate school.



### Graduate School of Science and Technology

After restructuring in 2006, the Graduate School of Science and Technology (GSST) became a new research graduate school by integrating the teaching staff of the Faculty of Science and that of the Faculty of Engineering, to conduct post-graduate education with a strong focus on research. GSST now covers 9 research and educational fields in the Master's Course and 5 fields in the Doctoral Course. With rapid globalization in interna-

tional communities, it has become vitally important to promote international collaboration with overseas universities, both in research and education, as well as collaboration with graduate schools, industry and government institutions in Japan, to be able to provide an international and interdisciplinary environment for the students.

We are committed to fostering students who can approach problems arising out of a wide range of complex

issues with leadership and creativity, and to making GSST an international institution marked by the active creation of knowledge and the free exchange of ideas.

#### ■ Institution ■

#### Global Joint Education Center for Science and Technology (GJEC)

For the future of graduate education, we need to promote globalization and to foster individuals with greater innovation skills through science and technology. To achieve this goal, it is vital that students add depth to their basic skills in

their field of specialization and that their innovative skills are applied with a wider vision. The Global Joint Education Center for Science and Technology (GJEC) was established in GSST in April 2007, and allows students to take courses in different fields to develop innovation skills. In GJEC, we also provide Advanced General Education subjects. These subjects provide students with a broad knowledge of topics across the fields of science and technology, and enhance their application of future academic skills in society.

### Master's Course

#### ■ Science

Department of Physics  
Department of Chemistry  
Department of Earth and Environmental Sciences  
Department of Biological Sciences

#### ■ Mathematics

Department of Mathematics  
Department of Applied Mathematics

#### ■ New Frontier Sciences

Department of New Frontier Sciences

#### ■ Applied Chemistry and Biochemistry

Department of Applied Chemistry and Biochemistry

#### ■ Materials Science and Engineering

Department of Materials Science and Engineering

#### ■ Mechanical System Engineering

Department of Advanced Mechanical Systems  
Department of Intelligent Mechanical Systems

#### ■ Computer Science and Electrical Engineering

Department of Computer Science and Communication Engineering  
Department of Frontier Technology for Energy and Devices  
Department of Human and Environmental Informatics

#### ■ Civil and Environmental Engineering

Department of Environmental Conservation Engineering  
Department of Environmental Management and Planning

#### ■ Architecture

Department of Architecture and Environment Planning  
Department of Building Materials and Structures

### Doctoral Course

#### ■ Science

Department of Mathematics  
Department of Physics  
Department of Chemistry  
Department of Earth and Environmental Sciences  
Department of Biological Sciences

#### ■ New Frontier Sciences

Department of New Frontier Sciences

#### ■ Advanced Technology

Department of Applied Chemistry and Biochemistry  
Department of Materials Science and Engineering  
Department of Advanced Mechanical Systems  
Department of Intelligent Mechanical Systems

#### ■ Computer Science and Electrical Engineering

Department of Computer Science and Communication Engineering  
Department of Frontier Technology for Energy and Devices  
Department of Human and Environmental Informatics  
Department of Applied Mathematics

#### ■ Architectural and Civil Engineering

Department of Environmental Conservation Engineering  
Department of Environmental Management and Planning  
Department of Architecture and Environment Planning  
Department of Building Materials and Structures

SCHOOL OF **MEDICINE**

GRADUATE SCHOOL OF **MEDICAL SCIENCES**

GRADUATE SCHOOL OF **HEALTH SCIENCES**

■ 医学部 ■

■ 医学教育部 ■

■ 保健学教育部 ■



#### School of Medicine

##### ■ School of Medicine

**Subjects** → Molecular and Cellular Biology, Molecular Genetics, Anatomy and Histology, Physiology and Biochemistry, Microbiology and Immunology, Pathology and Pharmacology, Social and Environmental Medicine, Internal Medicine, Surgery, Developmental Medicine, Bioethics, Sensory and Motor Medicine, Clinical Neurology and Psychiatry, Integrated Medicine

##### ■ School of Health Sciences

**Courses** → Course of Nursing, Course of Radiological Sciences, Course of Medical Laboratory Sciences

#### Graduate School of Medical Sciences

##### ■ Master's Course

Medical Sciences

##### ■ Doctoral Course

Medical Sciences

#### Graduate School of Health Sciences

##### ■ Master's Course

Health Sciences, Nursing

##### ■ Doctoral Course

Health Sciences, Nursing



### School of Medicine

The School of Medicine comprises the two sub-schools: the six-year School of Medicine and four-year School of Health Sciences. Graduates from the former become medical physicians after passing the National Examination for Medical Practitioners, while graduates from the latter become nurses, radiological technicians, and clinical technologists after passing the national examination for their specialty.

The School of Medicine has produced over 10,000 graduates since it was established as the independent Kumamoto Medical School in 1896. Specialized instruction in the field of medicine is conducted by faculty members of Medical and Life Sciences. The medical school constructs a curriculum framework that mostly reflects actual medical research and medical care. The curriculum focuses on fostering medical doctors who acquire a high level of personal communication skills. A new medical education and library building was completed in 2008. The Center for Medical Education and Research was founded in October 2010 to promote a particular mission for education of medical professionals. This Education Center carries out the research on educational systems, the curriculum reform of medical school, and education of clinical medicine and practical techniques, etc.

The School of Health Sciences was established in October 2003 by integrating the University's former three-year College of Medical Science (which includes the special course of study in toxicology) with the University's Department of Nursing from the Faculty of Education. The school aims to provide a spiritually rich education based on respect for life and humanity, along with a high level of specialized knowledge, and is cultivating medical staff, researchers, and educators that are highly-qualified to be able to contribute to many facets of society as members of medical teams.

### Graduate School of Medical Sciences

The Graduate School of Medical Sciences was remodeled and established in April 2003 as a graduate school educational institution with the aim of cultivating medical researchers, educators, and advanced medical staff.

The graduate school consists of a four-year doctoral course and a two-year master's course that was established in 2002. The master's course (in Medical Sciences) was created in response to the upsurge in medical and biological research, as well as societal needs. The course is designed for graduates of 4-year undergraduate programs. Each academic year sees 20 students enrolled, for a total of 40 students. Graduates of the master's course are encouraged to continue their education by enrolling

in the doctoral course. The doctoral course (Medical Sciences specialty) contains 88 students per academic grade, for a total of 352 students. Personalized education with research guidance is supplemented by courses in experimental medicine and graduate school seminars. Students complete the course by publishing their original research results in an international academic journal and writing a comprehensive thesis.

The graduate school has many special courses and programs such as an educational course for researchers on translational research for eradication of AIDS, an educational course for research frontiers on AIDS, a course for researchers of developmental biology and regenerative medicine, a cancer professional training program, a program for experts of metabolism, circulation and related informatics, a HIGO program, Kumamoto University program for Leading Graduate School, and Shibasaburo program, a unique MD/PhD course. The school has concluded the academic exchange agreement including double degree program with many universities overseas.

All courses are taught by instructors who belong to approximately 90 diverse research areas and medical care fields from the following: the Faculty of Life Sciences, Kumamoto University Hospital, the Health Care Center, the Institute of Resource Development and Analysis, the Center for AIDS Research, the Institute of Molecular Embryology and Genetics, and the International Research Center for Medical Sciences.

URL:<http://www.medphas.kumamoto-u.ac.jp/en/medgrad/>

### Graduate School of Health Sciences

The Graduate School of Health Sciences was established in April 2008, and its doctoral program started in April 2010. The graduate school consists of the nursing course, the radiological sciences course and the medical laboratory sciences course. The school aims to foster specialists and produce researchers and educators who can incorporate a wide range of advanced medical knowledge to establish and develop the educational system of health sciences. Each department requires 2 years of study for the master's program and 3 years for the doctoral program.

Each academic year of the master's program has room for a total of 24 students. Students can obtain a master's degree in either Health Sciences or Nursing. Each academic year of the doctoral program is limited to 6 students. Conditions for completion of the doctoral program require a successful review of a doctoral thesis and a passing grade on the final examination. Students can obtain a doctor's degree in either Health Sciences or Nursing.



### School of Pharmacy

- **Department**  
School of Pharmacy, School of Pharmaceutical and Life Sciences
- **Subject**  
Molecular and Genomic Pharmacy, Medicinal Chemistry, Life and Environmental Sciences, Clinical Pharmacy, Biomedical Polymer Sciences, Drug Delivery Sciences

### Graduate School of Pharmaceutical Sciences

- **Master's Course**  
Pharmaceutical and Life Sciences → Drug Delivery, Bio-Pharma, Medicinal Chemistry, Life Science
- **Doctoral Course**  
Clinical Pharmacy → Pharmaceutical Health Care and Sciences, Clinical Pharmaceutical Sciences  
Pharmaceutical and Life Sciences → Drug Delivery, Bio-Pharma, Medicinal Chemistry, Life Science

### School of Pharmacy

The School of Pharmacy is based upon the principle that the pharmaceutical sciences are the integrated science contributing greatly to human health through medication. Students acquire a basic knowledge relating to the development, production and management of pharmaceutical products, environmental and health science as well as many other skills required for pharmacists. The school aims to cultivate creative graduates with high pharmaceutical scientific and ethical abilities based on life sciences. The school conducts basic practical and

clinical training together with modern lectures that focus on education, from the three perspectives of knowledge, technique, and bedside manner.

After graduating, students go on to work in various fields, as pharmacists in hospitals, pharmacies, pharmaceutical and chemical companies or in government and other public facilities. However, over half of the graduates continue their education at graduate level to become either pharmaceutical researchers or advanced pharmacists.

In 2006, the pharmaceutical sciences course was split

into the School of Pharmacy, a six-year course for the cultivation of pharmacists, and the School of Pharmaceutical and Life Sciences, a four-year course focusing on the training of researchers.

#### ■ Institutes ■

##### Research Institute for Drug Discovery

The Research Institute for Drug Discovery (RIDD) was created as a research facility and is staffed by members of the Pharmaceutical Sciences faculty at Kumamoto University. RIDD is made up of researchers from various fields connected with drug discovery and development, focusing on the development of novel clinical drugs and the education of outstanding researchers in this field. The first institute of its kind at a Japanese national university, the RIDD comprises four departments - Project Research Department, Private Enterprise Joint Development Department, Local Network Department and Research Support Department. The RIDD works to discover and develop therapeutically beneficial drugs that will bear the label, "Made by Kumamoto University."

##### Center for Clinical Pharmaceutical Sciences

The Center for Clinical Pharmaceutical Sciences (CCPS) was founded as a research and education institute for the Faculty of Pharmaceutical Sciences in April 2008. This facilitated the need for collaboration between the Drug Development Department and the Drugs Improvement Department in the pharmacy school. The CCPS performs this task by providing a Department of Education and a Department of Clinical Research, and is aiming to expand and promote education in the appropriate use of drugs. We welcome the involvement of our regional pharmacists and are committed to conducting research and educational activities that will advance the appropriate use of drugs.

##### Center for Medicinal Resources and Ecological Frontier (Medicinal Plant Garden)

Containing roughly 1,000 varieties of medicinal plants in the specimen and tree garden (3,100m<sup>2</sup>), the Medicinal Plant Garden contributes to education in Pharmaceutical Science studies. The garden is home to a host of medicinal plants for use in studies and also contains a seedling nursery in the cultivation farm (3,700m<sup>2</sup>). The lab is devoted to the continued research and study of

physiologically active materials taken from medicinal plants, genetic maintenance of medicinal plants, and acquisition of medicinal plants and the cultivation of medicinal plants. Seminars offered at the garden detail Kanpo Medicine and medicinal plants. These seminars are open to the general public and students alike.

#### ■ Graduate School of Pharmaceutical Sciences

The Graduate School of Pharmaceutical Sciences was established in April 2003 by partially integrating the faculties of the Institute of Molecular Embryology and Genetics and the Institute of Resource Development and Analysis. This was preceded by the creation of the Faculty of Medical and Pharmaceutical Sciences by the merging Medical Sciences and Pharmaceutical Sciences.

Graduate students at the Graduate School of Pharmaceutical Sciences are taught by teaching staff from the Faculty of Life Sciences (founded in January 2010 by reorganizing the Faculty of Medical and Pharmaceutical Sciences), the Institute of Molecular Embryology and Genetics, the Institute of Resource Development and Analysis and Kumamoto University Medical School Hospital. By taking advantage of the individual strengths of each faculty member, a great number of programs can be provided by faculty members from the pharmaceutical sciences and medical fields cooperating to give special lectures in Bioethics and Medical Oncology and Translational Research, as well as in bioethical and logical diagnostics. In the Graduate School of Pharmaceutical Sciences, education is based on the foundation of basic pharmaceutical knowledge acquired during undergraduate studies.

The school aims to cultivate pharmaceutical researchers and advanced pharmaceutical specialists that can act independently and provide skilled leadership in a wide variety of fields, including bioscience research, the creation of medicinal products, and clinical, environmental and public health administration.

URL:<http://www.pharm.kumamoto-u.ac.jp/en/>



## Faculty of Life Sciences

The explosive growth in life science research in recent years has caused the traditional boundaries between the fields of medical, health science and pharmaceutical research to be substantially disappeared. Due to that, and to the striking development of research in the area of interdisciplinary studies, we are now in an era where the integration of these fields has become essential. In order to respond to these developments, the former Graduate Schools of Medical Sciences, of Pharmacy and of Health Sciences were integrated. As a result, a graduate school with a new system that has a separate research department (faculty-only organization) and education department (educational organization) was established in April 2003. The faculty of Life Sciences is composed of 3 divisions, 15 major departments, and 76 departments of research, and is one of the largest research-oriented organizations with medical, pharmaceutical and health science university staffs in Japan. In the Division of Integrated Life Sciences, research is conducted with the aim of deepening the understanding of basic knowledge and theory in the fields of medicine, health science and pharmacy. In the Division of Advanced Biomedical Sciences, advanced research in the field of life sciences is conducted in such areas as transplantation therapy and new drug development. In the Division of Environmental and Sociomedical Sciences, along with scientific investigation of the link between both society and medicine/

pharmacy as well as between disease and the environment, leading research related to life theory is conducted. The mission of the Faculty of Life Sciences is to contribute to the health and well-being of mankind through research and education related to life sciences and medical care

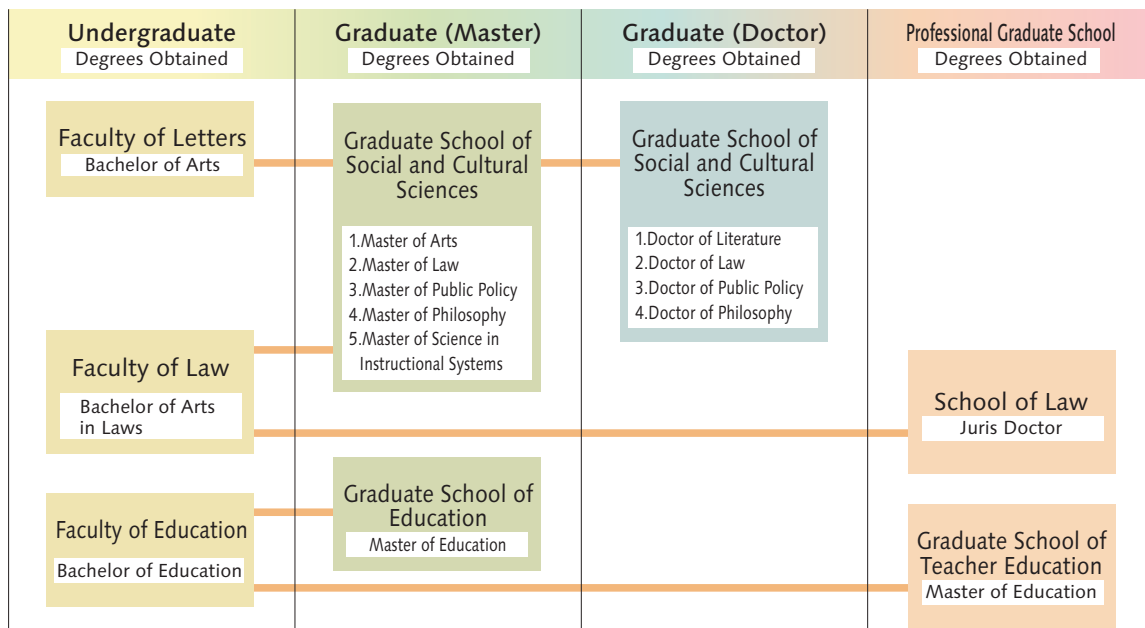
URL:

<http://www.medphas.kumamoto-u.ac.jp/en/faculty/index.html>



# UNDERGRADUATE AND GRADUATE COURSES

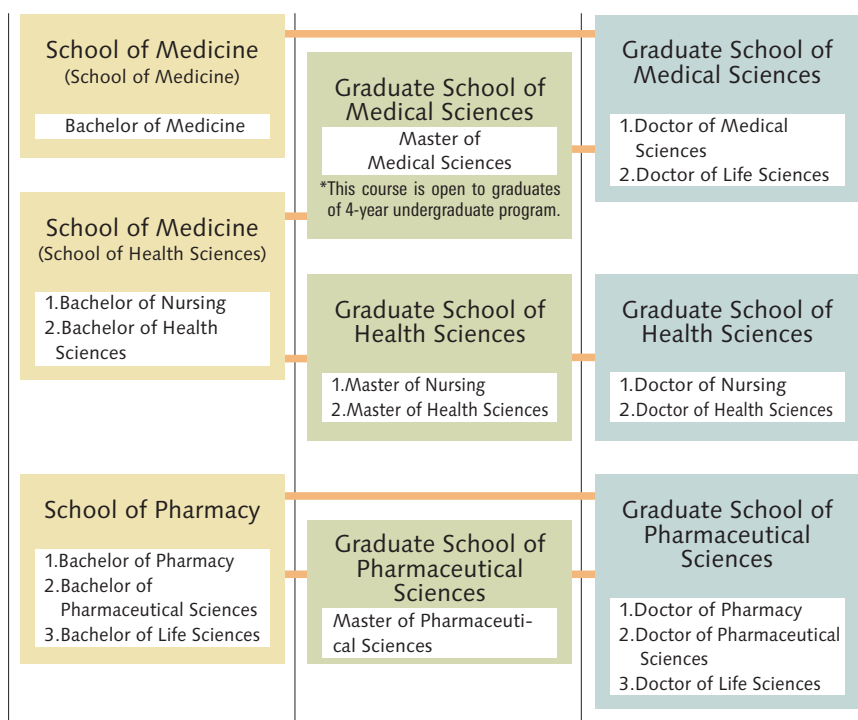
## ■ Humanities and Social Sciences ■



## ■ Science and Technology ■



## ■ Life Sciences ■



The above chart is an example of pursuing higher education between undergraduate and graduate courses, but is not limited to this chart.

## Centers and Institutes

### Institute of Molecular Embryology and Genetics

発生医学研究所



The Institute of Molecular Embryology and Genetics aims to contribute to the society by promoting the integration of life and medical sciences from the viewpoint of developmental biology. This institute was founded in 1992, and extensively reorganized in 2000 and 2009. It has three divisions (Developmental Regulation, Stem Cell Research, and Organogenesis) consisting of 12 laboratories. Our research interests include: epigenetics chromosome and protein regulation, DNA damage and repair, intercellular communications, ES and iPS cells, mesenchymal stem cells, hematopoietic differentiation, gametogenesis, brain morphogenesis, and kidney development. The 21st Century Center-of-Excellence (COE) Program (2002-2006), followed by the global COE Program (2007-2011) in the Institute, leads to the outstanding research and educational activities. The Center for Organ Regeneration Research started in 2012 to realize future regenerative medicine and scientific collaborations with the University Hospital. In addition, the Institute is one of the Joint Usage/Research Centers in Japan, and contributes to support the research community.

URL: <http://www.imeg.kumamoto-u.ac.jp/en/>

### Institute of Pulsed Power Science

パルスパワー科学研究所



Pulsed power is an instantaneous form of energy which, when temporally compressed, can exert a tremendous amount of electricity and power. In order to find solutions for various problems the international community is reaching for goals such as the realization of a society which is safe and secure, which fosters environmental protection and recycling, and which advances medicine and social welfare. We conduct development of pulsed power science and technology and work to resolve issues from the viewpoint of pulse power technology. In our international research environment, we produce global leaders with interdisciplinary skills. As a world-leading research center for pulsed power science and technology and related fields, and as an organization that will be at the global forefront in the creation of multidisciplinary human resources and innovation, we aim to grow as an institute that is a credit to Kumamoto, to Japan, and to the world.

URL: <http://www.ipps.kumamoto-u.ac.jp/>

### Priority Organization for Innovation and Excellence

大学院先導機構



The Priority Organization for Innovation and Excellence was established to contribute to the enhancement and development of educational research activities at Kumamoto University. It does so by enriching and improving the graduate schools, and by promoting the world's most advanced COE (Center of Excellence) Studies program, a highly evaluated program that encompasses life science, natural science, social and cultural sciences and interdisciplinary, multiple, or new disciplines base on organic cooperation between the fundamental sciences and the applied sciences. This has brought the creation of the new COE, a new research center and several new graduate courses (majors).

URL: <http://poie.kumamoto-u.ac.jp/>

## Organization for Globalization

グローバル推進機構

In 2014, Kumamoto University was chosen by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) as a member of the “Top Global University Project”, as a leading model to lead university reform in Japan, cultivate global human resources leadership, and actively promote globalization efforts at home and abroad.

The Organization for Globalization was established on March 1, 2015, to address university-wide globalization.

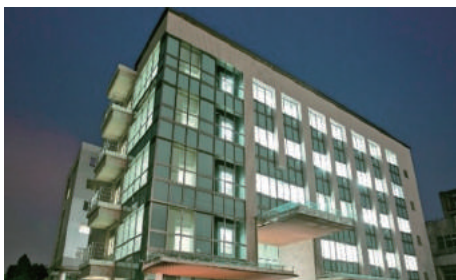
## Headquarters for Admissions and Education

大学教育統括管理運営機構

The Headquarters for Admissions and Education, serves as a high governance organization to supervise quality control of higher education in Kumamoto University. Dealing with a changing entrance examination system, and supporting students who are entering Kumamoto University during these changes, this organization constructs, supervises, and manages educational programs based on the analyses of enormous volume of educational data, and in accordance with the vision, policy and strategy of the university as a core organization.

## International Research Center for Medical Sciences (IRCMS)

国際先端医学研究機構



The International Research Center for Medical Sciences (IRCMS) was launched as the managing organization in April of 2015 to oversee Kumamoto University’s Center of Excellence for world-class research in the life sciences. The center partners with other life science institutes in Kumamoto University to promote collaborative international research with distinguished research institutes overseas, and scouts and trains young investigators who contribute to groundbreaking discoveries in the medical sciences.

The center aims for 50% foreign researcher population, including Ph.D. graduate students. To reach this goal, the research environment within the IRCMS is equivalent to world-class research institutes found in western countries, and makes provisions for smooth international research collaborations.

The center has designated English as the official language, and features an open lab layout with few walls and partitions between labs to facilitate communication among scientists. It is expected that this will promote fusion research between the various fields within the institute.

URL: <http://ircms.kumamoto-u.ac.jp/>

## International Research Organization for Advanced Science and Technology (IROAST)

国際先端科学技術研究機構



The International Research Organization for Advanced Science and Technology (IROAST), which launched in April of 2016, is a Center of Excellence in Kumamoto University and promotes world class, cutting-edge research in science and technology. It features a standardized international research environment with several established global collaborations, and has adopted a tenure-track based personnel system.

The aim of IROAST is to further international collaborations to expand our research network in specific areas. To achieve this goal, the organization is focused on creating strong researcher networks in four advanced areas: 1. Nano Material Science, 2. Green Energy, 3. Environmental Science, and 4. Advanced Green Bio. English is the official language of the center, which will promote an internationally collaborative environment among the various fields in the institute.

The ultimate goal of IROAST is to produce outstanding researchers who will be world leaders in their respective fields.

URL: <http://iroast.kumamoto-u.ac.jp/>

## Center for Management of Information Technologies

総合情報統括センター



This center, the Center for Management of Information Technologies, was established as the central organization to integrate the university computer systems and info-communication networks organically. Our mission is to develop education and research at Kumamoto University through information technology. To achieve the mission, we conduct research on information processing, support information-related research, and provide education on information literacy. We also provide, operate, and maintain computers and network equipment in our university.

URL: <http://www.cc.kumamoto-u.ac.jp/en/>

## College of Cross-Cultural and Multidisciplinary Studies

グローバル教育カレッジ



The College of Cross-Cultural and Multidisciplinary Studies, with the Deputy Director of the Organization for Globalization acting as the College Director, is the core organization of the Organization for Globalization.

The college consists of three centers: The “Center for Global Communications”, the “Center for Japanese Language and Culture”, and the “Center for Open Education”. The College of Cross-Cultural and Multidisciplinary Studies will foster and expand a variety of measures, such as the provision of global subjects, the enhancement of Japanese language and culture education, and providing cooperative learning between high schools and the university, in addition to connecting with the local community and local businesses.

URL: <http://www.c3.kumamoto-u.ac.jp/en/>

## Kumamoto Innovative Development Organization (KIDO)

熊本創成推進機構

The Kumamoto Innovative Development Organization (KIDO) was established on April 1, 2017 with the aim of contributing to the development of the Kumamoto region and the enhancement of its information transmission capacity, especially in the areas of industrial, human resource and local community development.

The organization consists of the Innovation and Collaboration Center (KUICC), the Center for Policy Studies and the Kumamoto Regional Industrial Development Center (KRIDC). It supplies the Kumamoto region with human and intellectual resources that respond to local needs and problems, and also drives the Japanese government’s Program for Promoting Regional Revitalization by Universities as Centers of Community (COC+).

URL: <http://www.kumamoto-u.ac.jp/syakairenkei/kumamotosouseisuishinkikou>

## Research Center for Instructional Systems

教授システム学研究センター

RCiS, the Research Center for Instructional Systems, consists of three research departments and one operations department. The research departments aim to make RCiS a world-leading research center for instructional systems. The operations department is leLD, the Institute for e-Learning Development. RCiS is distinctive in that it offers practical fields inside and outside Kumamoto University, and is developing research on both higher education and vocational education.

RCiS, as the first research center in Japan for Instructional Systems, manifests the belief, “When it comes to Instructional Systems or Instructional Design, there’s no institution like Kumamoto University.” RCiS works in close cooperation with research centers inside and outside Japan. It develops instructional systems and contributes to society through joint research with associate research institutions, which include corporations and higher education institutions, and with associate researchers consisting of graduates of the Graduate School of Instructional Systems in Kumamoto University and elsewhere.

URL: [http://www.rcis.kumamoto-u.ac.jp/en/home\\_en/](http://www.rcis.kumamoto-u.ac.jp/en/home_en/)



## Eisei-Bunko Research Center

永青文庫研究センター



The Eisei-Bunko Research Center was established by the Inter-Department Institutes for Education and Research in April 2017. Its purpose is to help us develop our research on the basis of the results of study and philanthropy. The Eisei-Bunko Research Center is attached to the Faculty of Letters, which was established in 2009.

Research is focused on documents related to the Kumamoto Domain, the Eisei-Bunko Collection. This collection is currently housed at Kumamoto University, and the documents are among the most detailed and extensive daimyo documents available, both in terms of quality and quantity. This is a priority area for research and philan-

thropy unique to Kumamoto University.

Through the general study of the Eisei-Bunko Collection and other documents, the Eisei-Bunko Research Center has organized a solid base for research. The Center also gives back results from its studies to the community through cooperation with cultural administrative organizations. At the same time, we help with the development of human resources who can contribute to the promotion of culture and research with a focus on the humanities and social sciences.

URL: <http://www.let.kumamoto-u.ac.jp/eisei/>

## Center for Water Cycle, Marine Environment, and Disaster Management (CWMD) くまもと水循環・減災研究教育センター

The Center for Water Cycle, Marine Environment, and Disaster Management (CWMD) was established in April 2017, with 4 laboratories, namely, the Water Resource Research Laboratory, Marine Science Laboratory, Disaster Mitigation Laboratory, and Urban and Regional Design Laboratory. The CWMD will lead in the research and management of groundwater resources in Kumamoto, the marine environment around the Ariake Sea and Yatsushiro Sea, disaster mitigation, and community design. The CWMD returns the results of its research to society.

- ◆ **The Water Resource Research Laboratory** is aimed at perpetuating healthy water cycles centering on groundwater resources through various academic efforts.
- ◆ **The Marine Science Laboratory** carries out the research on biodiversity and ecosystems, the preservation and sustainable development of marine resources, and the analysis of environmental changes in the seabed in coastal areas.
- ◆ **The Disaster Mitigation Laboratory** promotes a wide range of research and education focused on disaster prevention and mitigation activities, to help develop and sustain a society with reduced disaster risk.
- ◆ **The Urban and Regional Design Laboratory** works on designs and implementations aimed at realizing a resilient, livable and sustainable region focused on local public participation.

URL: <http://cwmd.kumamoto-u.ac.jp/>

## The Memorial Museum of the Fifth High School

熊本大学五高記念館



Photograph by Toru Sakamoto

※ It is currently closed because of Kumamoto earthquake in 2016

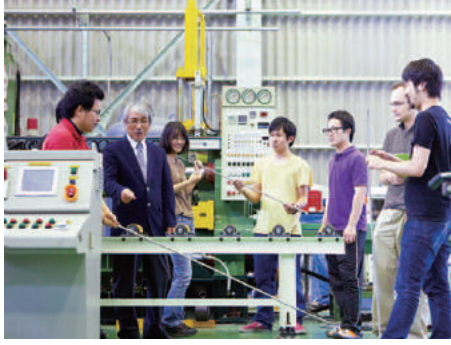
The Memorial Museum of the Fifth High School is composed of two historic buildings which have been designated as Important Cultural Properties, the main building of the Fifth High School and the Chemical Laboratory. It contains exhibits of historical documents relating to higher education and activities of the Fifth High School along with other relevant artifacts. In addition to these standing exhibits, the Memorial Museum of the Fifth High School offers lectures, lessons on cultural themes, experiential learning meetings, as well as concerts.

In addition, the museum serves as a training center for the museum curator training course at Kumamoto University, and also offers reference services. The support of lifelong learning and community activities are central to the mission of the Memorial Museum of the Fifth High School.

URL: <http://www.goko.kumamoto-u.ac.jp/en/>

## Magnesium Research Center

先進マグネシウム国際研究センター



Currently, there is a strong demand in the transportation industry for ways to reduce the weight of structural components, in order to reduce both energy consumption and CO<sub>2</sub> emissions. Magnesium is the lightest known structural metal and magnesium alloys are increasingly being used in a wide range of applications for both structural and functional benefits. The Magnesium Research Center at Kumamoto University ("MRC"), established in December 2011, has been engaged in and dedicated to a variety of magnesium-related research areas. They include alloy design, casting metal formation, mechanical properties, corrosion, surface treatment, and recycling. MRC has also developed an international magnesium research network, particularly involving countries in the East Asia region. MRC has three missions: 1) to provide state-of-the-art research and education, 2) to develop an international research network, and 3) to promote international joint research.

URL: <http://www.mrc.kumamoto-u.ac.jp/>

## Institute of Resource Development and Analysis

生命資源研究・支援センター



The Institute of Resource Development and Analysis (IRDA) was established for the purpose of promoting comprehensive education and research in various scientific areas by providing diverse research resources and information.

Two major objectives of the IRDA are: 1) Production, development, preservation, and supply of experimental animals, including genetically engineered animals, and construction and analysis of databases using advanced bioinformatics, and phenotype analysis. 2) Research, education, enlightenment, data management and technical support for experiments using animals, genetic materials and radioisotopes.

URL: <http://irda.kuma-u.jp/en/index.html>

## Center for AIDS Research

エイズ学研究センター

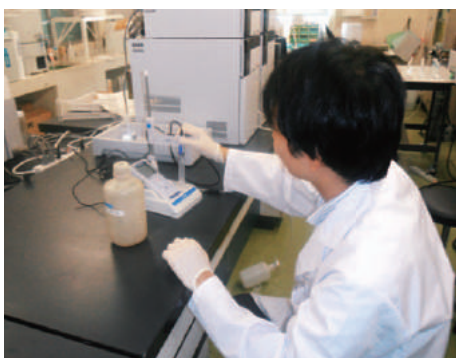


The Center for AIDS Research (CAIDS) conducts research on the pathogenesis, treatment, and prevention of AIDS. The center also promotes AIDS research by engaging in international and domestic collaborations. In 2008, our program "Global Education and Research Center Aiming at the Control of AIDS" was selected as one of the global Center of Excellence programs supported by the Ministry of Education, Culture, Sports, Science and Technology. CAIDS also promotes sciences at international level and education for the future global scientific leaders in the field of HIV/AIDS Research via this program.

URL: <http://www.caids.kumamoto-u.ac.jp/aidsnew/englishpage/index.html>

## Environmental Safety Center

環境安全センター



The Environmental Safety Center was established in 2001 to manage environment and safety issues at the university and its surroundings. The center aims to maintain a satisfactory setting for students studying at the university as well as ensure the safety of its staff and students, and in doing so, contribute to the overall promotion of education and research.

The main services of the center are : 1) Safety management and environmental conservation, including chemical management, for students studying at the university, as well as all related education and awareness services. 2) Services related to proper management and disposal of waste products. 3) Services related to environmental measurements such as water quality and atmospheric tests.

URL: <http://www.esc.kumamoto-u.ac.jp/en/>

## Research Center for Buried Cultural Properties

埋蔵文化財調査センター



Photo:  
Potteries excavated from the ruins of the campus(1600 years ago)

The eight campuses of this university are built on top of some of the most famous remains from the Jomon period down to modern times (Kurokamimachi, Honjo, Oe sites among others) in Kumamoto prefecture. Therefore, whenever it is inevitable to dig into the ground for maintenance of the facilities of the campuses (construction or repair of buildings, infrastructure), archaeological excavations are carried out in order to save the remains. This center emerged as one of the Inter-Department Institutes for Education and Research in October 2011 from the Research Office for Buried Cultural Properties, which undertook excavations since 1994. The center's objectives are documentation, preservation and practical use of the excavated cultural properties (sites and finds). Excavation results are presented to the public in annual and other reports, and visitors are always welcome to study the original finds.

URL: <http://ewww.kumamoto-u.ac.jp/dept/maibun/>

## Health Care Center

保健センター



The Health Care Center is located on the Kurokami North Campus. Three physicians, one clinical psychotherapist and three nurses are available during normal school hours for consultation and treatment. Health Care Center provides help in resolving the various troubles, concerns, worries, and illness that can occur during college life. The service is free to all members of the university community.

URL: <http://hcc.kumamoto-u.ac.jp/en/>

## Student Accessibility Support Room

障がい学生支援室

The Student Accessibility Support Room was established on November 1, 2015 to enhance the support system for students with disabilities and to contribute to their unimpeded education along with the enactment of the Act on the Elimination of Disability Discrimination of April 2016. The room receives consultations from students with disabilities and provides the necessary consideration and support for them.

URL: <https://sien.kumamoto-u.ac.jp/>

## University Archives

文書館

The University Archives were established on April 1, 2016 to enable the acquisition of documents, to preserve and provide archival materials and to manage official documents related to historical collections and materials at the university. The Archives have mainly been used for the preparation of inventory to collect data for the compilation of Sixty Years of History, the management of official documents, and for Kumamoto University History (Modern Higher Education History).

## University Hospital

医学部附属病院



### University Hospital

#### ■ Division of Internal Medicine

Respiratory Medicine, Gastroenterology and Hepatology, Hematology, Rheumatology and Clinical Immunology, Nephrology and Hypertension, Diabetes, Metabolism and Endocrinology, Cardiovascular Medicine, Neurological Medicine

#### ■ Division of Surgery

Cardiovascular Surgery, Thoracic Surgery, Gastroenterological Surgery, Breast and Endocrine Surgery, Pediatric Surgery, Transplantation, Urology, Gynecology

#### ■ Division of Child Health and Development

Pediatrics, Obstetrics

#### ■ Division of Sensory and Motor Organs

Orthopaedic Surgery, Dermatology, Plastic and Reconstructive Surgery, Ophthalmology, Otolaryngology-Head and Neck Surgery, Oral and Maxillofacial surgery

#### ■ Division of Radiology

Diagnostic Imaging and Interventional Radiology, Radiation Oncology

#### ■ Division of Anesthesia, Neurosurgery and Psychiatry

Neuropsychiatry, Neurosurgery, Anesthesia

#### ■ Departments

Laboratory Medicine, Surgical Center, Central Radiology, Intensive Care Unit, Central Medical Supply, Rehabilitation, Surgical Pathology, Transfusion Medicine and Cell Therapy, Emergency and General Medicine, Infectious Diseases, Dialysis Center, Endoscopic Diagnostics and Therapeutics, Department of General Clinical Investigation, Department of Medical Informatics and Administrative Planning, Pharmacy, Nursing, Medical Technology, Department of Clinical Nutrition, Department of Medical Quality and Safety Management, Department of Infection Prevention and Control, Administration

#### ■ Centers

Comprehensive Clinical Education, Training and Development Center, Innovation Center for Translational Research, Medical Liaison Center, Perinatal Medical Center, Cancer Center, Medical Engineering Center, Regional Medical Support Center, Transplantation Center

Kumamoto University Hospital comprises medical examination departments, a pharmaceutical department, a nursing department, and central consultation facilities, among other features. The hospital has 848 beds and over 1,300 outpatients per day.

The hospital is currently advancing redevelopment plans such as the opening of a new Outpatient Building in September 2014, with the aim of constructing a university hospital that will be able to handle the medical science and medical care needs of the 21st century. Through this, the hospital is promoting the establishment of a comprehensive medical care system that combines advanced medical treatment and comprehensive holistic medical treatment. As a part of this, the divisions of medical treatment shifted to an overall medical care system categorized by each internal organ and body system starting in January 2004. Additionally, the hospital was designated as a Center of Prefectural Cancer Treatment and Center of Liver Disorder Treatment.

As the only Advanced Treatment Hospital in Kumamoto prefecture, the hospital is now focusing on improving the standards of healthcare for the local community.

#### Mission

Kumamoto University Hospital is dedicated to excellence in patient care, developing improved methods of healthcare, and developing health professionals and students. Members of the staff also contribute communities for their welfare and health.

#### Vision

- ◆ **Patient First:** We dedicate to excellence in patient care for respecting patient's wishes, anticipations and requests.
- ◆ **Excellence:** We provide high-quality health care in a safe and reliable manner.
- ◆ **Teamwork:** We develop a positive role for health professionals.
- ◆ **Innovation:** We develop and improve the method of healthcare.

#### Patient Rights

- ◆ Right to medical care of good quality
- ◆ Right to information
- ◆ Right to self-determination
- ◆ Right to confidentiality

#### Patient Responsibilities

- ◆ To provide accurate and complete information about your health
- ◆ To follow any of hospital rules
- ◆ Not to disturb hospital peace

URL: <http://www.kuh.kumamoto-u.ac.jp/en/index.html>



The University Library is composed of the Central Library, the Medical Library and the Pharmacy Library. It provides information resources and services to support the University's educational and research activities.

The Central Library is open from 8:40 a.m. to 10:00 p.m. Monday to Friday, and 12:00 p.m. to 6:00 p.m. Saturday and Sunday.



**Library Holdings (As of March 31st, 2017)**

	Books	Periodicals
Central Library	1,042,065	14,889
Medical Library	175,093	5,287
Pharmacy Library	39,312	1,029
Total	1,256,470	21,205

**Special Collections of Books and Manuscripts**

**1. The Aso Manuscript Collection**

This impressive collection of historical documents, formerly kept at Aso Shrine, contains a wealth of information relating to the Nanbokucho and Kamakura Periods. Of the 1,047 items of this collection, 34 volumes of 304 letters and 36 manuscripts have been designated as Important Cultural Properties.

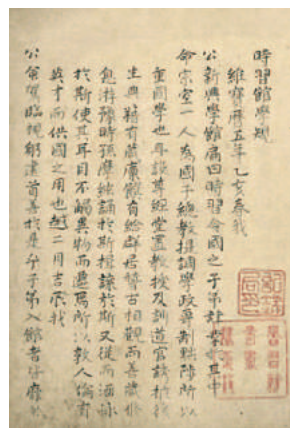
**2. The Hosokawa Manuscript Collection**

This is the largest collection of primary source materials on the administration of the Hosokawa government (Hosokawa Han), ranging from the Nanbokucho Period to the early Meiji Period.

**3. The Lafcadio Hearn Collection**

This is an extensive collection of various editions of the works of Lafcadio Hearn and fundamental research materials about Hearn, chiefly in English. It contains his English translations of Anatole France, Gustave Flaubert, and Theophile Gautier.

URL: <http://www.lib.kumamoto-u.ac.jp/>



The Hosokawa Manuscript Collections

# DOMESTIC AND OVERSEAS OFFICES

## Domestic Offices

### Kumamoto University Tokyo Office

東京オフィス

Established: April 2004

- Scope:
1. Provides support for university-industry collaborations
  2. Offers information regarding the educational research activities of KU to businesses, the government, and other public offices and organizations
  3. Offers information regarding entrance exams to prospective students, and provides support to KU students who are seeking jobs
  4. Collaborates with alumni associations
  5. Conducts seminars and organizes various gatherings

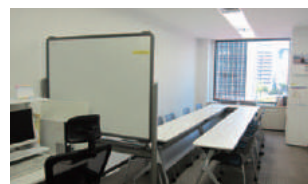


### Kumamoto University Kansai Office

関西オフィス

Established: December 2011

- Scope:
1. Provides support for university-industry collaborations
  2. Offers information regarding the educational research activities of KU to businesses, the government, and other public offices and organizations
  3. Offers information regarding entrance exams to prospective students, and provides support to KU students who are seeking jobs
  4. Collaborates with alumni associations
  5. Conducts seminars and organizes various gatherings



### Kumamoto University Kansai Liaison Office

関西リエゾンオフィス

Established: October 16, 2009

- Scope:
1. Promotes collaboration with industry and government offices in the Kansai region, and promotes technology transfers
  2. Provides technical consultation, and conducts meetings and collaborative research gatherings
  3. Exhibits research processes and engages in public relations activities
  4. Distributes pamphlets and provides information about the entrance exams of KU, and assists students in finding jobs
  5. Collaborates with alumni associations
  6. Conducts seminars and other gatherings

Address: South Facility #2203, Creation Core Higashi Osaka 1-4-1 Aramoto Kita, Higashi Osaka City, Osaka 577-0011, Japan  
E-mail: kansai@kumamoto-u.ac.jp



## Overseas Offices

### Kumamoto University Liaison Office at KAIST

韓国 KAIST オフィス

Established: September 2008

- Scope:
1. Promotes research collaboration
  2. Supports the joint symposiums of KU and KAIST
  3. Provides information about KU and its entrance exams, and assists with public relations activities

Address: KAIST Biomedical Research Center 291 Daehak-ro (373-1 Guseong-dong), Yuseong-gu, Daejeon 305-701, Korea



### Global Academic-Industry Collaboration Satellite Office in Shandong University 山东大学オフィス(中国)

Kumamoto University and Shandong University (Jinan City, Shandong Province, China) signed a memorandum on March 22, 2010 to mark the establishment of satellite offices to promote personnel exchanges and mutual friendship between the two universities in the field of academic-industry collaboration. Based on this agreement, a KU satellite office was opened in the Department of Academic Research of Shandong University, and a Shandong University satellite office was set up in the Kumamoto University Innovation and Collaboration Center (KUICC).

Established: March 2010

- Scope:
1. Promotes the collaboration of university, industry and government
  2. Promotes academic exchange
  3. Provides information about KU
  4. Functions as a center for KU activities in China



### Kumamoto University Liaison Office at ITS

インドネシア ITS オフィス

Established: April 2010

- Scope:
1. Promotes academic and student exchanges with partner institutions
  2. Cultivates Indonesian students who are interested in studying at KU, and assists students who are preparing to come to KU to study
  3. Promotes international collaboration of the university, industry and government
  4. Provides information about KU and its entrance exams, and assists with public relations activities
  5. Supports alumni activities

Address: ITS International Office Gedung Rektorat Lantai 1 Kampus ITS Keputih-Sukolilo Surabaya Jawa Timur, 60111, Indonesia  
TEL: +62-31-596-6985 E-mail: mia.hernawati.sby@gmail.com



## Kumamoto University Dalian Office

大連オフィス

**Established:** March 2011

**Scope:**

1. Provides information regarding Japan and KU to students and the faculty of Dalian University of Technology and partner institutions in northern China
2. Builds networks of alumni and other relevant people in northern China
3. Strengthens the relationship with other partner institutions in northern China
4. Promotes KU's various activities in northern China

**Address:** Room 106, Bldg. B, No. 80 Software Park Rd, Dalian 116024, China  
TEL: +86-411-8470-2983



## Kumamoto University Sudan Office

スーダンオフィス

**Established:** June 2016

**Scope:**

1. Service as a base of research and educational exchange in Africa
2. The dissemination of information on Japan and Kumamoto University to students and academic staff of exchange partner universities in Africa
3. The establishment of a network of alumni and similar groups and persons in Africa
4. Service as a base of Kumamoto University's activities in Africa

**Address:** Faculty of Pharmacy, University of Khartoum. P.O. Box: 1996, Al-Qasr street, Khartoum 11111, Sudan



## Six National Universities Network (SUN) Changchun Joint Office 国立六大学長春共同事務所

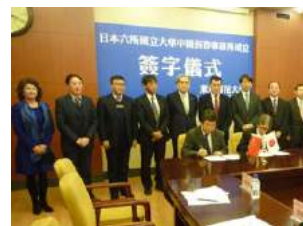
As a first joint office of Six National Universities Network (SUN) which consists of Chiba University, Niigata University, Kanazawa University, Okayama University, Nagasaki University and Kumamoto University.

**Established:** November 2014

**Scope:**

1. Provides information regarding Japan and SUN to students and the faculty of partner institutions in northeastern China
2. Builds networks of alumni and other relevant people in northeastern China
3. Strengthens the relationship with other partner institutions in northeastern China
4. Promotes SUN's various activities in northeastern China

**Address:** Jingyue Campus of Northeast Normal University, Changchun, Jilin, China  
TEL: +86-431-8451-6278



## Six National Universities Network (SUN) European Platform of SixERS

国立六大学欧州事務所

Established as a joint office of six national universities (Chiba Univ., Niigata Univ., Kanazawa Univ., Okayama Univ., Nagasaki Univ. and Kumamoto Univ.)

**Established:** August 2016

**Scope:**

1. The dissemination of information on academic and cultural ties between Japan and the Netherlands
2. The promotion of partnerships with inter-university networks and international joint educational platforms in the Netherlands and EU
3. The collection of information on local universities
4. The dissemination of information on Japan and the six national universities to students and academic staff of local universities
5. The implementation and operation of six national university joint programs

**Address:** SieboldHuis 5<sup>th</sup> floor, Rapenburg 19, 2311 GE Leiden, The Netherlands



## Six National Universities Network (SUN) Bangkok Office of AP-Six ERS

国立六大学バンコク事務所

Established as the joint office of six national universities (Chiba Univ., Niigata Univ., Kanazawa Univ., Okayama Univ., Nagasaki Univ. and Kumamoto Univ.)

**Established:** July 2017

**Scope:**

1. Joint implementation of student exchange programs in Thailand and other ASEAN countries
2. Dissemination of information on Japan and the six universities to students and academic staff in Thailand and other ASEAN countries
3. Promotion of international industry-academia-government collaborative programs in Thailand and other ASEAN countries
4. Promotion of exchanges with ASEAN University Network (AUN) member universities

**Address:** KMUTT Knowledge Exchange for Innovation Center (KX) 12F  
110/1 Krung Thonburi Road, Banglamphung,  
Khlongsan, Bangkok 10600, Thailand



## A Leading University Cultivating Global Leaders from Kumamoto

Kumamoto University has been selected by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) for the 2014 Top Global University Project. Our slogan is “A Leading University Cultivating Global Leaders from Kumamoto,” and, accordingly, we aim to refine our education to shape ourselves into a truly global university. We plan to act as a driving force for globalization in Kumamoto and strive to take our place in the world as a center for research that also contributes to the community.



## The Future of Kumamoto University as a Global University

### 1. An education system highly conducive to internationalism

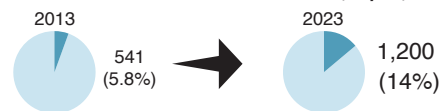
We are introducing a new education system that is compatible with the academic year of other countries and allows graduate students to enroll early or study abroad, and offers flexible credit transfers. This system accelerates an increase of international students and Japanese students who study abroad.

#### Target Figure

Number of international students (all year)



Number of students who have studied abroad (all year)



### 2. Global atmosphere for the inclusion of international students

We want to enhance our high quality curriculum to students learning about Japanese culture to promote enrollment of international exchange students. Additionally, we will offer a variety of services, including support and advice for exchange students and promotion of international networking events. New building for the College of Cross-Cultural and Multidisciplinary Studies was completed in spring 2016.



### 3. Strengthened and globalized graduate education to support cutting-edge research

We are beginning a global education program that applies to both undergraduate and graduate-level studies with the aim of educating elite graduates going on to be active throughout the world. We send students to partner universities in the US and Europe to offer double degrees and support collaborative research.

#### Double Degree Program Partners (Graduate School)

- Institut Teknologi Sepuluh Nopember (ITS), Indonesia
- Institut Teknologi Bandung, Indonesia
- National Kaohsiung First University of Science and Technology, Taiwan
- Southern Taiwan University of Science and Technology, Taiwan
- AGH University of Science and Technology, Poland
- Paichai University, Korea
- University of Bordeaux, France
- Blaise Pascal University, France
- University of Lorraine, France
- De La Salle University, Philippines
- Mahidol University, Thailand
- Khon Kaen University, Thailand

### 4. Global campus as a driving force for internationalization in the local community

We provide opportunities for local youth to receive an early global education and assist study abroad programs.





## The Project for Planning and Promoting Local Community Oriented Education

The purpose of The Project for Planning and Promoting Local Community Oriented Education (also called "COC") is to produce individuals who study in the community to find ways to address various problems with creativity, and to contribute to progress in society from a global perspective. This involves the nurturing of talented people who are brimming with the "Spirit of Kumamoto University." Major changes in global society, such as depopulation, have brought deeply-interconnected problems to the local communities of Kumamoto Prefecture as well.

- Local community oriented education in Kumamoto University shall move forward as follows:
- Step 1: Find motivation for learning by understanding the local history, culture and current situation.
  - Step 2: Identity specific local issues through the lectures of business people and KU instructors (class lectures).
  - Step 3: Join with the community in dealing with actual issues.

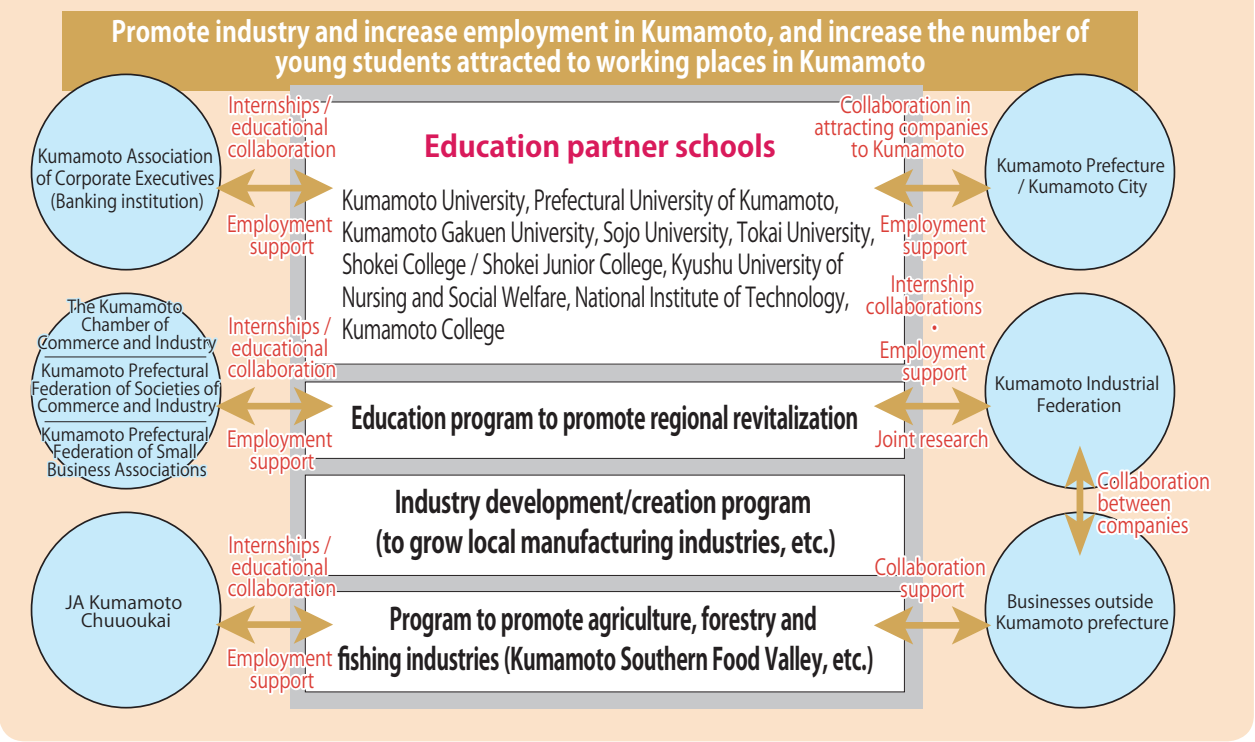
Kumamoto University will incorporate these community issues and solutions into its education through the Center of Community Project, and make every effort to reform the university organization and curricula to produce talented individuals who proactively learn from the community, think effectively while using their special knowledge, and seize the initiative.

# PROGRAM FOR PROMOTING REGIONAL REVITALIZATION BY UNIVERSITIES AS CENTERS OF COMMUNITY (COC+)

## Education Program to expand industry and employment in Kumamoto under "All Kumamoto" united efforts

In order to control the outflow of younger population from Kumamoto Prefecture and to attract the young talents, it is essential to provide them with the industry-oriented education system which nurtures the students for local industries and community. The Program for Promoting Regional Revitalization by Universities as Centers of Community (COC+) aims to promote the representative industries of Kumamoto, in the area of manufacturing, agriculture, forestry and fishing. It also aims to produce skilled individuals who can implement the measures needed for "revitalization" process and job creation.

Kumamoto University is holding a leadership role in industry development mainly in the manufacturing industry of the central and northern areas of Kumamoto Prefecture. In this program, universities, business organizations and other business-related associations in Kumamoto, as well as in Kumamoto Prefectural Government, will closely cooperate with each other for human resource development under "All Kumamoto" united efforts.



Since being selected for the “Program for Promoting the Enhancement of Research Universities” by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in 2013, we have established international collaborative research groups for life sciences, natural sciences, and humanities and social sciences in order to globalize and strengthen our research activities. Under the management of top professors in each research group, we invite researchers from abroad, recruit talented young researchers, regularly hold international seminars, establish overseas joint laboratories, and do much more.

### Institutions Collaborating with Kumamoto University(2007-2017)

Kumamoto University is currently working with 1,696 international institutions and we actively promote new collaborations to deliver quality research.

79 countries  
1,696 institutional collaborations



### Top 10 Institutional Collaborations by Number of Publications

No	University / Institution	Number of Publications	Country
1	National Institutes of Health (NIH)	162	USA
2	Chulalongkorn University	106	THAILAND
3	Mahidol University	98	THAILAND
4	NIH National Cancer Institute (NCI)	97	USA
5	Harvard University	94	USA
6	University of California System	87	USA
7	Chest Disease Research Institute	81	THAILAND
8	Centre National de la Recherche Scientifique (CNRS)	78	FRANCE
9	Chinese Academy of Sciences	56	CHINA
10	VA Boston Healthcare System	54	USA

Thomson Reuters InCites BA

## ■ Group for Globally-advanced Research ■

**KATSUKI Sunao,**  
Institute of Pulsed  
Power Science



### Pulsed Power Science and Application

Pulsed power is an instantaneous form of energy, whether electrical energy, chemical energy, mechanical energy, or optical energy, that can exert a tremendous amount of power. The magnitude of pulsed power can be equivalent to the total of all electrical power consumption at an instant in Kyushu, in Japan, or even in the world. Pulsed power is capable of generating unusually extreme fields, such as ultra-high-pressure fields, ultra-high electromagnetic fields, super-gravity fields and a variety of plasmas. This group furthers studies of pulsed-power produced in extremely reactive fields, and explores applications in material processing, environmental protection, biotechnology, medical treatment, food processing, and more, as well as further developing pulsed power technology. Our facilities and equipment are among the most advanced in the world, and include a comprehensive explosion experiment facility, the world's first super-gravity generation device, a comprehensive bioelectrics experiment facility, and pulsed power infrastructure equipment of great variety in terms of time range (down to sub-nanoseconds) and power range (up to 10 GW). The facilities and equipment are used not only for our own research but also for researchers from disparate fields associated with both companies and other universities, and, as such, are widely deployed in the related fields of pulsed power science and technology.

We are seeking solutions to various problems that the international community is facing, and working to contribute to the realization of a safe and secure society by using pulsed power science and technology. Furthermore, we seek to encourage young researchers to be international leaders by providing them with international and interdisciplinary research environments.

**NISHINAKAMURA Ryuichi,**  
Institute of Molecular  
Embryology and Genetics



### Stem Cell-Based Tissue Regeneration Research and Education Unit

This group was established by Kumamoto University in 2013 for the purpose of consistently promoting the scientific activities of the Global COE Program, funded by the Ministry of Education, Culture, Sports, Science and Technology from 2007 to 2011. We aim to establish an education and research unit that will foster creative researchers who focus on stem cell-based developmental medicine.

Stem cell research is one of the most attractive fields in biomedical science, and the expectations for regenerative medicine are rising, as the derivation of human iPS cells has opened the door to the regeneration of organs and tissues. To achieve this goal, however, a deeper understanding of broad areas of science including developmental biology is crucial. We have recruited leading researchers with various backgrounds, including those from the fields of medicine, pharmacology, and developmental biology. Our research topics include the molecular mechanisms of stem cell maintenance, lineage specification of early-stage embryos, the establishment of iPS cells from patients, the development and regeneration of the pancreas, kidneys, eyes, and neurons, as well as epigenetics and metabolisms in diseased states. We expect that these research activities will synergistically contribute to a better understanding of organogenesis and to strategies to treat diseases. We have seen seminal achievements during the recent several years. They include the induction of three-dimensional kidney tissue from human iPS cells, the derivation of insulin-producing pancreatic cells from ES/iPS cells, a method of eliminating the undifferentiated cells during tissue differentiation, a drug development using the patient-derived iPS cells, and epigenetic control of energy expenditures and cancers.

This group also seeks to encourage young scientists in research fields related to stem cells and organogenesis. We support these young scientists by providing in-house grants, travel expenses, and many other benefits. We hope that young researchers training in this program will interact and motivate each other to build a global next-generation network in developmental medicine. We are confident that this environment will help young postdocs and students become globally oriented independent scientists.

**TAKIGUCHI Masafumi,**  
Center for AIDS Research



### International Research Center Aiming at the Control of AIDS

More than 30 million people are living with HIV-1 worldwide, and roughly two million people die of AIDS-related illnesses each year. Among developed countries, Japan has been experiencing increased incidences of HIV infection. Thus, HIV/AIDS remains a substantial threat to the global health, and developing an HIV vaccine and therapies to cure HIV/AIDS have been the ultimate goal. New program "International Research Center Aiming at the control of AIDS" will establish an enhanced international research and education core based on the framework of the successfully implemented global COE "Global Education and Research Center Aiming at the Control of AIDS" Program over the five years. To further expand international collaborations, research effort will be

reorganized and place a renewed emphasis on studies leading to the development of 1) new therapies to cure HIV/AIDS and 2) an HIV/AIDS vaccine. This program will also enhance educational opportunities for Ph.D. students and assume its role as a top-level international graduate school. The current internationally open educational system in the AIDS course provides overseas research experience. The new program will increase the number of students who will perform research at the Overseas Liaison Laboratories (OLL) and enhance the quality of education.

**KAWAMURA Yoshihito,**  
Magnesium Research Center



### International Research Core for Advanced Magnesium Alloys

One current global environmental strategy to reduce CO<sub>2</sub> gas emission is to achieve total weight reduction in transportation especially relating to automotive, railway, and aerospace applications. Magnesium alloys have a light weight among structural metals, and are therefore very attractive materials for the weight-savings initiative. New magnesium alloys possessing excellent mechanical properties and non-flammability have been developed at Kumamoto University and are called "KUMADAI magnesium alloys." This project aims to progress the research and development on these alloys for their practical application and to establish international research networks with universities, institutes, and industries, for advanced magnesium alloy science and technology.

## ■ Cultural and Social Sciences ■

**ISHIHARA Akiko,**  
Faculty of Humanities and  
Social Sciences



### Grand Design for Healthy Communication with Dementia Sufferers as a New Mode of Interaction Leveraging Conflict Transformation Theories

The vision of this project is to establish grand theories for communication between people with dementia and those without it, using a knowledge of conflict transformation. Many BPSD (Behavioral and Psychological Symptoms of Dementia) can be eliminated if communication with dementia sufferers is done properly, and if conflicts between people with dementia and those around them are properly transformed. In 30 years, it is estimated that about 10% of the Japanese population may suffer some level of dementia symptoms. This research project is aimed at contributing to a society in which people with dementia and those without dementia can live together in harmony.

## ■ Natural Sciences ■

**OHIRA Shinichi,**  
Faculty of Advanced Science  
and Technology



### Separation, purification and recovery of rare metals by means of electro-dialytic ion transfer device

Rare earth elements are defined not only by the trace amounts found in the earth but also by the difficulty of purification and recovery. The need to recycle elements will dramatically grow in the coming decade because of shortened product lifetimes. In this project, the recovery of elements from used Li-batteries is studied. The electro-dialytic ion transfer device, which can transfer ions quantitatively between solution phases, is applied for purification, especially for the separation of cobalt and nickel. The study is aimed at developing a highly effective and clean recovery method that is free of toxic chemicals.

**TAKANO Hiroyoshi,**  
Faculty of Advanced Science  
and Technology



### Are moss chloroplasts surrounded by a wall?

It is now widely accepted that an endosymbiotic cyanobacterium evolved into the plastids of green plants. Although free-living bacteria typically have peptidoglycan in their cell wall, it is believed that the plastids of green plants lost endosymbiotic peptidoglycan during evolution. We isolated a homolog of the bacterial peptidoglycan-synthetic gene encoding D-alanine (D-Ala):D-Ala ligase from the moss *Physcomitrella patens*. Generated knockout transformants showed disrupted chloroplast division and giant chloroplasts, and the phenotype was recovered by the addition of DA-DA. Using a metabolic labeling method for peptidoglycan with a DA-DA dipeptide probe and click chemistry, we visualized plastid peptidoglycan fully surrounding the chloroplasts of the moss. Our findings suggest that the plastids of basal land plants have a peptidoglycan wall.

**NAKANISHI Yoshitaka,**  
Faculty of Advanced Science  
and Technology



### Processing technology for creation of bio-inspired surface to various materials

The biomechanisms of the lotus leaf and moth eye have been explored. In particular, the relationship between their structures and their water-repellency effect and reflection suppression have been elucidated. These studies have contributed to the development of innovative industrial products. The microscopic structure seen on a natural surface is generally created by a nanoimprint method based on semiconductor manufacturing technology, so some limitations must be considered in terms of product size, shape, and material. This study aims to explore surface micromachining, a mechanical material removal process that serves as an alternative to a nanoimprinting, in creating a bio-inspired surface on artificial materials.

**HINOKUMA Satoshi,**  
Faculty of Advanced Science  
and Technology



### Material design of ammonia combustion catalysts based on mullite type crystal structure

This study focuses on the material design of novel catalysts for the combustion of ammonia, which has potential as a renewable and carbon-free energy source. The target catalyst is based on a mullite-type crystal structure with high thermal stability, and enables the low-temperature light-off of ammonia and negligible emissions of nitrogen oxide to realize environmentally friendly catalytic combustors for ammonia fuel. The use of ammonia as potential substitute for fossil fuel resources can be advanced by knowledge gained from this study.

**MATSUDA Mitsuhiro,**  
Faculty of Advanced Science  
and Technology



#### Development of Zr- and Hf-based high temperature shape memory alloys by the addition of B and rare earth elements

Martensitic transformation behavior and microstructure in shape memory alloys and B2-type intermetallic compounds, such as zirconium- and hafnium-based alloys, have been investigated using transmission electron microscopy (TEM) and X-ray diffractometry. We have clarified the microstructural features using synchrotron radiation and TEM analysis in Ti-Pd, Ti-Pt and ZrCo-based alloys subjected to high pressure torsion. Their functional properties are based on a martensitic phase transformation that can be strongly affected by disordering, and are grain-size at nanoscale.

**YOKOI Hiroyuki,**  
Faculty of Advanced Science  
and Technology



#### Science and Engineering of Carbon Nanopot

The carbon nanopot (CNPot) is a novel pot-shaped nanomaterial, recently invented using our original submarine-style chemical vapor deposition technique. It is produced in series to form long fibers from which each nanopot is easily separable. Our study has also suggested that CNPot is amphiphilic. These features make CNPot a promising tool for application in drug delivery systems, gas or bio-sensors, functional hybrid materials, electrode materials for high-performance batteries, and more. We also expect that the unique nanostructure of CNPot may offer yet undiscovered novel physical properties. Experimental and theoretical studies of this distinctive nanomaterial are intensively under way.

**KOSUMI Daisuke,**  
Institute of Pulsed Power  
Science

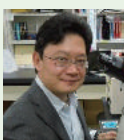


#### Elucidation of physical properties of optical functional materials in an extremely spatiotemporal reaction field

A timescale of femtoseconds ( $10^{-15}$  s) is comparable with the oscillation periods of nuclear motions, such as molecular vibrations and lattice vibrations. Ultrafast spectroscopy enables us to observe the non-equilibrium dynamics of materials that take place at an extremely fast timescale. This project is aimed at elucidating the energy movement of optical functional materials under an extreme reaction field, by combining graphene plasmonics and ultrafast spectroscopic measurements.

## Life Sciences

**OHTSUBO Kazuaki,**  
Faculty of Life Sciences



#### Development of antimetastatic drugs targeting cancer-associated sugar chains

The sialyl-Tn antigen is a glycan tumor marker molecule that facilitates tumor invasion and metastasis. Its presence is associated with a poor prognosis for cancer patients. Using chemical screening, we have obtained chemical compounds bearing an ST6GalNAc-I inhibitory activity, thereby suppressing the sialyl-Tn antigen-induced tumor invasion. We are working on developing antimetastatic drugs by focusing on molecular modifications of ST6GalNAc-I inhibitor compounds for structural optimization, based on X-ray crystallography of the enzyme-compound complexes. Next generation drugs targeting cancer-associated glycans must provide a new concept for drug discovery, and must contribute to improved outcomes for current multimodal cancer treatments and quality of life for patients.

**KOJIMA Sunao,**  
Faculty of Life Sciences



#### Impact of Asian dust and PM2.5 in patients with acute myocardial infarction / out-of-hospital cardiac arrest and identification of susceptible group

Epidemiological studies have demonstrated the potential association of Asian dust and PM2.5 with adverse health effects. Asian dust contains harmful chemical agents such as sulphur and nitrogen oxides, by-products formed from combusted coal and other fossil fuels, and microbiological materials that have been suggested as causing an increase in the incidence of respiratory events caused by inflammation. Particular air pollutants may enhance atherothrombotic processes via the generation of pulmonary inflammation or by direct translocation into systemic circulation, where smaller particles may increase the risk of cardiovascular disease. We planned a project to elucidate the association between air pollutants and the incidence of AMI and OHCA during a definite period in a population of patients from a well-defined geographical region known to have greater than average susceptibility to AMI and OHCA.

**SAWA Tomohiro,**  
Faculty of Life Sciences



#### Development of novel antibiotics targeting bacterial amino acid synthase and their application to clinical use

This research project is aimed at discovering novel antibiotics that target the inhibition of specific bacterial amino acid synthase. The antibiotics will be examined to determine their therapeutic efficacy in fighting life-threatening bacterial infections, and particularly drug resistant bacteria. The antibiotics will also be examined to see whether they can enhance the chemotherapeutic potential of existing drugs. The current study is being conducted to establish a novel chemotherapeutic approach to controlling infectious diseases caused by emerging, re-emerging, and drug resistant bacteria.

**HASEGAWA Yu,**  
Faculty of Life Sciences



### Does periodontal infection increase nursing care in Alzheimer's disease?

Inflammatory responses brought on by periodontal disease (PD) are known to induce cardiovascular injuries, including stroke. Recent evidence suggests that PD correlates with the pathogenesis of Alzheimer's disease (AD), though it is unclear how PD-induced brain inflammation modifies cognitive impairment and systemic organ dysfunction in AD patients.

This project is aimed at clarifying whether brain inflammation caused by PD is significant in AD prognosis and the burden of care. To pursue these answers, we employ AD model mice, which undergo intracerebroventricular injection of lipopolysaccharides derived from PD, and evaluate the cognitive function and extracerebral organ injuries, especially sarcopenia.

**MASUDA Takeshi,**  
Faculty of Life Sciences



### Culture systems for expansion of hematopoietic stem and progenitor cells

Hematopoietic stem cells (HSC) demonstrate both self-renewal and differentiation abilities. Currently, an HSC transplant is the only therapy available for the treatment of hematologic cancer and hemoglobinopathies. However, approximately 40% of all patients cannot receive this therapy because of human leukocyte antigen compatibility issues and treatment costs. If HSCs were expandable, many more patients would have the chance to receive HSC transplants. Yet, there is no gold standard culture system for immature HSCs. In this project, the applicant intends to develop an *in vivo* mimic culture system for immature HSCs, and will unveil the regulating mechanisms of HSC self-renewal by using original proteomic techniques.

**YAMAGUCHI Tomoya,**  
Priority Organization for  
Innovation and Excellence /  
Faculty of Life Sciences



### Role of ROR1 in cell membrane organization and dynamics in cancer

We previously identified the receptor tyrosine kinase-like orphan receptor 1 (ROR1) as a target for transcriptional activation via the lineage-survival oncogene TTF-1 in lung adenocarcinoma. ROR1 facilitates the interaction of CAVIN1 and CAV1 at the plasma membrane in a kinase activity-independent manner, which in turn sustains caveolae formation and pro-survival signaling towards AKT through multiple RTKs such as EGFR, MET and IGF-IR, via its scaffold function for CAVIN1 and CAV1 in lung cancer. In this project, we focus on the role of ROR1 as a caveolae-regulating molecule for cell membrane organization and dynamics in cancer. The goal of this project is to understand the molecular pathogenesis of human solid tumor, hard-to-cure cancers, especially lung cancer, and then to translate our findings in order to develop novel strategies for better diagnosis, treatment and prevention.

**YONEDA Tetsuya,**  
Faculty of Life Sciences



### R&D of myelin quantification for detecting preclinical neurodegenerative disorders on clinical MRI

Myelin, found in white matter in the brain, plays an important role in neuronal activity and signal transmission. The aim of this research is to develop a high-accuracy quantification protocol using magnetic resonance imaging (MRI). We use the phase of the MRI signal to quantitate myelin because it is known to be a physical variable sensitive to the magnetic susceptibility of biological tissue. Phase information of white matter simultaneously contains various elements, including myelin. Our research factorizes them to drive the myelin fraction in the phase. We expect our research to be utilized in the image diagnosis of various neurodegenerative disorders, such as Parkinson's disease, in which the myelin fraction of white matter is causally decreased.

**HATAKEYAMA Jun,**  
Institute of Molecular  
Embryology and Genetics



### Mechanisms of cerebral cortex expansion in primates

Expansion of the cerebral cortex is one of the main factors related to advanced cognitive and sensorimotor skills. Primates, including human beings, have a particularly expanded cerebral cortex. However, it is still unclear how species-specific cerebral cortex size is determined and what mechanisms underlie the massive enlargement of the human cerebral cortex. I aim to elucidate the regulation mechanism that controls brain size in various mammalian species, including primates and rodents, to gain insights into cerebral cortex expansion.

**NOGUCHI Ryo,**  
University Hospital



### Development of novel technology for fabricating scaffold-free functional vascular tissue

The aim of this project is to develop a unique technology that can provide completely scaffold-free, cell-based, three-dimensional vascular graft engineering utilizing the phenomenon of cell aggregation (spheroid formation) and self-assembling tissue spheroids. In our developing system, vascular component cells such as endothelial cells, smooth muscle cells and fibroblasts are fused to form a vascular tissue spheroid. Next, we managed to form three-dimensional vascular tissue using a simple tissue engineering process. Finally, we elucidated tissue to fabricate cell-based scaffold-free vascular tissue. Aiming at applications in clinical vascular surgery, further development is ongoing in our laboratory.

# INTERNATIONAL EXCHANGE AGREEMENTS

Kumamoto University has formed cooperative relationships with foreign academic institutions by concluding academic exchange agreements. As of September 1, 2017 we have 222 partner institutions in 44 countries and regions.

## chart 1 LISTS OF UNIVERSITY-LEVEL EXCHANGE AGREEMENTS

105 partner institutions (32 countries and regions)

(As of September 1, 2017)

Country	University / Institute	Since	Country	University / Institute	Since
Australia	The University of Newcastle	1986	Korea	University of Seoul	2011
Australia	Queensland University of Technology	2014	Korea	Ajou University	2011
Australia	University of Technology Sydney	2017	Korea	Chungbuk National University	2012
Bangladesh	University of Dhaka	2000	Korea	Pusan National University	2012
Burkina Faso	University Ouaga I Professor Joseph KI-ZERBO	2016	Korea	Chonbuk National University	2012
Cambodia	Royal University of Phnom Penh	2016	Korea	Hannam University	2016
Canada	University of Alberta	2001	Laos	National University of Laos	2011
Canada	McGill University	2016	Malaysia	University Sains Malaysia	2012
China	Guangxi Normal University	2005	Myanmar	Yangon Technological University	2015
China	Tongji University	2005	Myanmar	Patheingyi University	2016
China	Dalian University of Technology	2006	Nepal	Pokhara University	2010
China	Nanchang University	2006	New Zealand	Massey University	1996
China	Shanghai Normal University	2008	Philippines	University of the Philippines, Diliman	2002
China	Harbin Institute of Technology	2009	Philippines	University of the Philippines, Los Baños	2015
China	Jilin University	2009	Philippines	Ateneo de Manila University	2016
China	Nankai University	2009	Poland	University of Warsaw	2009
China	Shandong University	2009	Poland	Lublin University of Technology	2015
China	Sichuan University	2009	Romania	University of Bucharest	2015
China	Northeastern University	2010	Rwanda	University of Rwanda	2014
China	Beijing University of Technology	2011	Slovenia	University of Maribor	2016
China	Shenzhen University	2011	Spain	University of Valencia	2014
China	The University of Macau	2011	Taiwan	Southern Taiwan University of Science and Technology	2008
China	East China University of Political Science and Law	2011	Taiwan	National Tsing Hua University	2015
China	Jilin Institute of Chemical Technology	2013	Taiwan	National University of Kaohsiung	2016
China	Northeast Normal University	2014	Taiwan	Chang Jung Christian University	2016
China	Chongqing University	2014	Tanzania	Muhimbili University of Health and Allied Sciences	2015
China	Nanjing Normal University	2015	Thailand	Kasetsart University	1994
China	Guilin University of Technology	2015	Thailand	Khon Kaen University	2004
China	Anhui University	2015	Thailand	Mahidol University	2013
China	Wuhan University of Technology	2016	Thailand	Burapha University	2017
D.R Congo	University of Mbuji-Mayi	2015	Turkey	Ege University	2000
Djibouti	Djibouti University	2013	Turkey	Canakkale Onsekiz Mart University	2015
Egypt	Suez Canal University	2006	UK	Durham University	1993
Egypt	Fayoum University	2008	UK	University of Birmingham	1993
France	Bordeaux Institute of Technology	2006	UK	University of Leeds	2006
France	University of Bordeaux	2007	USA	The University of Montana	1987
France	Aix-Marseille University	2016	USA	Montana State University	1987
France	University Bordeaux Montaigne	2017	USA	Virginia Commonwealth University	1989
Germany	Saarland University	2001	USA	University of North Carolina at Charlotte	1990
Germany	Heinrich Heine University Düsseldorf	2017	USA	Texas Tech University	1994
Hungary	Pázmány Péter Catholic University	2015	USA	The University of Texas at San Antonio	2010
Indonesia	The Consortium of Institut Teknologi Sepuluh Nopember, Indonesia (Institut Teknologi Sepuluh Nopember, Universitas Sam Ratulangi, Universitas Mataram, Universitas Cenderawasih, Universitas Nusa Cendana)	2008	USA	University of California, Los Angeles	2014
Indonesia	Institut Teknologi Bandung	2011	USA	University of Massachusetts Boston	2016
Indonesia	Gadjah Mada University	2013	USA	The University of Georgia	2017
Indonesia	Airlangga University	2013	USA	Wright State University	2017
Indonesia	Udayana University	2015	Vietnam	VNU University of Science	2007
Indonesia	University of Indonesia	2016	Vietnam	Ho Chi Minh City University of Technology	2010
Indonesia	University of Brawijaya	2016	Vietnam	Hue University	2010
Korea	Pai Chai University	1999	Vietnam	National University of Civil Engineering	2010
Korea	Dong-A University	2005	Vietnam	University of Social Sciences and Humanities, Vietnam National University, Hanoi	2016
Korea	Korea Advanced Institute of Science and Technology	2006	Vietnam	University of Languages and International Studies, VNU	2016
Korea	Chosun University	2009	Vietnam	Foreign Trade University	2016
Korea	Pukyong National University	2011			

# INTERNATIONAL EXCHANGE AGREEMENTS

chart 2

## LISTS OF DEPARTMENT-LEVEL EXCHANGE AGREEMENTS

117 partner institutions (31 countries and regions)

(As of September 1, 2017)

Country	University / Institute	Counterpart	Since
Australia	Griffith School of Engineering, Griffith University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2012
Australia	Division of Materials Engineering, The University of Queensland	Magnesium Research Center	2013
Australia	Australian Phenomics Facility, The Australian National University	Institute of Resource Development and Analysis	2014
Austria	Faculty of Philological and Cultural Studies, University of Vienna	Center for Policy Studies	2016
Brazil	University of Campinas	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2009
Brazil	Technological Institute of Aeronautics	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2017
Canada	Faculty of Engineering, University of Waterloo	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2013
Canada	Queen's University at Kingston	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2014
Canada	University of Calgary, Schulich School of Engineering	Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2016
China	Chinese Academy of Medical Sciences	School of Medicine	1983
China	Institute of Mechanics, Chinese Academy of Medical Sciences	Faculty of Engineering, Faculty of Advanced Science and Technology	1993
China	Harbin Medical University	School of Medicine, Faculty of Medical and Pharmaceutical Sciences, Graduate School of Medical Sciences, Graduate School of Pharmaceutical Sciences	1999
China	Shanghai Laboratory Animal Center, Chinese Academy of Science	Institute of Resource Development and Analysis	2004
China	Guangxi Medical University	Faculty of Medical and Pharmaceutical Sciences	2007
China	College of Civil Engineering & Architecture, School of Chemistry & Chemical Engineering, Guangxi University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2007
China	College of Engineering, Peking University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2008
China	Wenzhou Medical University	Faculty of Medical and Pharmaceutical Sciences	2008
China	School of International Relations and Public Affairs, Fudan University	Graduate School of Social and Cultural Sciences	2009
China	School of Foreign Languages, Hangzhou Normal University	Faculty of Letters, Graduate School of Social and Cultural Sciences	2010
China	Civil Engineering College, Municipal and Environmental Engineering College, Transportation Engineering College, Graduate School, Shenyang Jianzhu University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2010
China	Institute for Biomedical Research / Medical College, Xiamen University	School of Medicine, Faculty of Life Sciences, Graduate School of Medical Sciences	2010
China	School of Medicine, Zhejiang University	School of Medicine, Faculty of Life Sciences, Graduate School of Medical Sciences	2010
China	School of Energy and Civil Engineering, Harbin University of Commerce	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2012
China	National Institutes for Food and Drug Control	Institute of Resource Development and Analysis	2012
China	School of Geography and Planning, Sun Yat-sen University	Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2013
China	Shanghai Jiao Tong University	Center for Policy Studies	2013
China	School of Tourism and City Administration, Zhejiang Gongshang University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Czech	Technical University of Ostrava and Institute of Geonics of the Academy of Sciences of the Czech Republic	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2009
Czech	University of Chemistry and Technology, Prague	Graduate School of Science and Technology	2010
Czech	University of Pardubice	Faculty of Science, Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Czech	Institute of Physics, Academy of Sciences of Czech Republic	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
France	University of Clermont Auvergne	Faculty of Science, Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2010
France	Université Joseph Fourier - Grenoble I	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2011
France	École nationale supérieure des mines de Saint-Étienne	Faculty of Science, Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2012
France	CRM2 Laboratory, University of Lorraine	Faculty of Science, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2014
France	Institut Pasteur	Institute of Resource Development and Analysis	2015
Germany	Faculty of Arts, University of Bonn	Faculty of Letters	1997
Germany	Leibniz Institute for Applied Geophysics	Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2013
Germany	Department of Civil and Environmental Engineering, Ruhr-University Bochum	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2014
Germany	Faculty of Georesources and Materials Engineering, Institute of Physical Metallurgy and Metal Physics, RWTH Aachen University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Germany	Institute of Physics of Faculty of Mathematics and Natural Sciences, University of Rostock	Faculty of Science, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2017
India	Faculty of Engineering & Technology, Annamalai University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2006
India	Manipal University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2009
India	National Institute of Technology Karnataka	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2009
India	Alva's Institute of Engineering & Technology	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2017
Indonesia	Electrical Engineering School, Graduate School, Telkom University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2014
Indonesia	Faculty of Engineering, Hasanuddin University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Indonesia	Faculty of Industrial Technology, Islamic University of Indonesia	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2017
Kenya	School of Humanities and Social Sciences, Pwani University	Faculty of Letters, Graduate School of Social and Cultural Sciences	2015
Korea	College of Education, Kangnam University	Faculty of Education	2002
Korea	Advanced Process and Materials R&BD Group, Korea Institute of Industrial Technology	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2003
Korea	Nano Materials & Products Regional Innovation Center, Hoseo University	Shock Waves and Condensed Matter Research Center	2004
Korea	College of Engineering, Hoseo University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2007
Korea	College of Health Science, Korea University / Department of Bio-convergence engineering, Korea University Graduate School	School of Medicine, Faculty of Life Sciences, Graduate School of Health Sciences	2007
Korea	Law School, Yeungnam University	School of Law	2010
Korea	College of Engineering, Graduate School of Engineering, Regional Innovation Center for Environmental Technology of Thermal Plasma, Inha University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2011
Korea	College of Engineering, Korea Maritime and Ocean University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2011



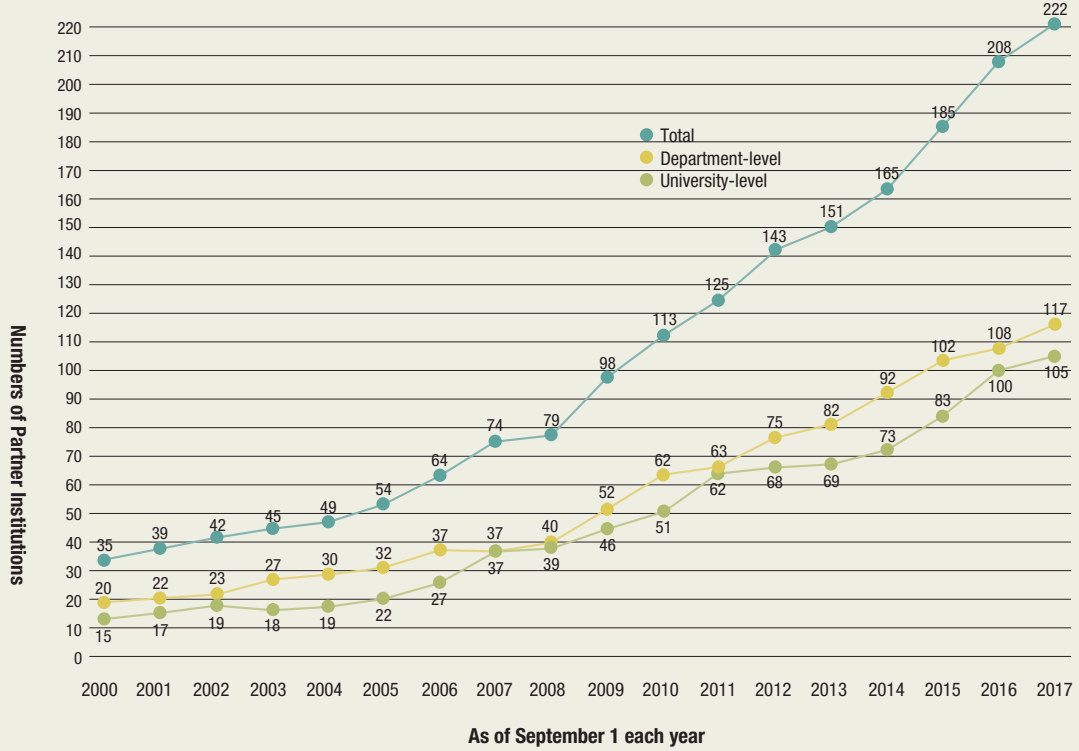
Country	University / Institute	Counterpart	Since
Korea	Graduate School of Kosin University and College of Natural Science, Kosin University	Faculty of Science, Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2011
Korea	National Institute of Food and Drug Safety Evaluation (NIFDS), Korea Food and Drug Administration (KFDA)	Institute of Resource Development and Analysis	2012
Korea	College of Engineering, Yonsei University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2013
Korea	Laboratory Animal Resource Center, Korea Research Institute of Bioscience and Biotechnology	Institute of Resource Development and Analysis	2013
Korea	Light Metal Division, Korea Institute of Materials Science	Magnesium Research Center	2014
Korea	College of Natural Sciences, Teachers' College, Kyungpook National University	Faculty of Science, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2014
Korea	Magnesium Technology Innovation Center, Seoul National University	Magnesium Research Center	2015
Kyrgyz	Institute of Chemistry and Chemical Technology of National Academy of Science of the Kyrgyz Republic	Institute of Pulsed Power Science	2014
Kyrgyz	Faculty of Engineering, Faculty of Science, Institute of Natural and Applied Sciences, Kyrgyz-Turkish Manas University	Faculty of Science, Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2016
Laos	Faculty of Nursing Sciences, University of Health Sciences	Faculty of Life Science	2014
Malaysia	Universiti Teknologi PETRONAS	Faculty of Science, Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2012
Mexico	Faculty of Mechanical and Electrical Engineering, Autonomous University of Nuevo León	Faculty of Science, Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology, Institute of Pulsed Power Science	2015
Mongol	School of Mathematics and Computer Science, National University of Mongolia	Faculty of Science, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2013
Mongol	School of Economics and Business, Mongolian University of Life Sciences	Faculty of Science, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2013
Mongol	Mongolian University of Science and Technology	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2016
Myanmar	Mandalay Technological University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Netherlands	Faculty of Engineering Technology, University of Twente	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Philippines	College of Engineering, De La Salle University-Manila	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2011
Poland	Faculty of Materials Science and Ceramics, AGH University of Science and Technology	Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2010
Russia	Aircraft and Mechanical Engineering Faculties, Novosibirsk State Technical University	Shock Wave and Condensed Matter Research Center	2008
Russia	Institute of Advanced Technologies, Togliatti State University	Magnesium Research Center	2015
Spain	The Spanish National Research Council	Institute of Resource Development and Analysis	2012
Sri Lanka	Gampaha Wickramarachchi Ayurveda Institute, University of Kelaniya	Faculty of Life Science, Graduate School of Pharmaceutical Sciences, School of Pharmacy	2014
Sudan	Medicinal and Aromatic Plants Research Institute	Faculty of Life Science, Graduate School of Pharmaceutical Sciences, School of Pharmacy	2012
Sudan	Faculty of Pharmacy, University of Khartoum	School of Pharmacy, Graduate School of Pharmaceutical Sciences	2016
Taiwan	Nan Jeon University of Science and Technology	Faculty of Education	2005
Taiwan	College of Engineering, College of Electrical Engineering and Computer Science, National Kaohsiung First University of Science and Technology	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2009
Taiwan	National Laboratory Animal Center	Institute of Resource Development and Analysis	2010
Taiwan	College of Humanities and Social Sciences, Chang Jung Christian University	Faculty of Letters, Graduate School of Social and Cultural Sciences	2011
Taiwan	College of Foreign Languages and Literatures, Tamkang University	Faculty of Letters, Graduate School of Social and Cultural Sciences	2013
Taiwan	National Cheng Kung University Hospital	University Hospital, Faculty of Life Science	2014
Taiwan	College of Mechanical and Electrical Engineering, National Taipei University of Technology	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2014
Taiwan	Mariculture Research Center, Fisheries Research Institute, Council of Agriculture	Center for Marine Environment Studies	2014
Taiwan	Tatung University, College of Electrical Engineering and Computer Science	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2017
Taiwan	School of Law, Soochow University	Faculty of Law, Graduate School of Social and Cultural Sciences, School of Law	2017
Thailand	Faculty of Engineering, Chulalongkorn University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2011
Thailand	Faculty of Engineering, King Mongkut's Institute of Technology Ladkrabang	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2014
Thailand	Faculty of Allied Health Sciences, Naresuan University	Faculty of Life Sciences, Graduate School of Health Sciences	2016
Thailand	King Mongkut's University of Technology Thonburi, The Joint Graduate School of Energy and Environment	Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2016
Thailand	School of Medicine, Mae Fah Luang University	Faculty of Life Sciences, Graduate School of Medical Sciences, AIDS Research Center	2016
Turkey	Institute of Environmental Sciences, Bogazici University	Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2008
Turkey	Engineering Faculty, Cankiri Karatekin University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Turkey	Faculty of Engineering, Graduate School of Natural and Applied Science, Gazi University	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Turkey	Kilis 7 Aralik University	School of Pharmacy, Graduate School of Pharmaceutical Sciences	2017
UK	Mary Lyon Centre, MRC Harwell	Institute of Resource Development and Analysis	2011
UK	The School of Engineering, University of Glasgow	Institute of Pulsed Power Science	2014
USA	College of Engineering, Georgia Institute of Technology	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	1996
USA	The Jackson Laboratory	Institute of Resource Development and Analysis	2004
USA	School of Nursing, University of California, San Francisco	Faculty of Sciences, Graduate School of Science of Health and Technology, Faculty of Advanced Science and Technology	2011
USA	School of Nursing and Health Professions, University of San Francisco	Faculty of Sciences, Graduate School of Science of Health and Technology, Faculty of Advanced Science and Technology	2012
USA	College of Pharmacy and Allied Health Professions, St. John's University	Faculty of Life Sciences, Graduate School of Pharmaceutical Sciences, School of Pharmacy	2012
USA	Mouse Biology Program, University of California, Davis	Institute of Resource Development and Analysis	2013
USA	Center for Inflammation, Immunity & Infection, Georgia State University	Faculty of Life Science, Graduate School of Pharmaceutical Sciences, School of Pharmacy	2013
USA	Geophysical Laboratory, Carnegie Institution of Washington	Institute of Pulsed Power Science, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Vietnam	Vietnam Institute of Geosciences and Mineral Resources, Ministry of National Resources and Environment	Faculty of Science, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2007
Vietnam	Danang University of Technology	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2008
Vietnam	Ho Chi Minh City University of Architecture	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2008
Vietnam	Vietnam National Museum of Nature, Vietnam Academy of Science and Technology	Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2012
Vietnam	Hanoi University of Mining and Geology	Faculty of Engineering, Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2015
Vietnam	Institute of Marine Geology and Geophysics, Vietnam Academy of Science and Technology	Graduate School of Science and Technology, Faculty of Advanced Science and Technology	2017

The department names above are written as they existed when the agreements were concluded / renewed.

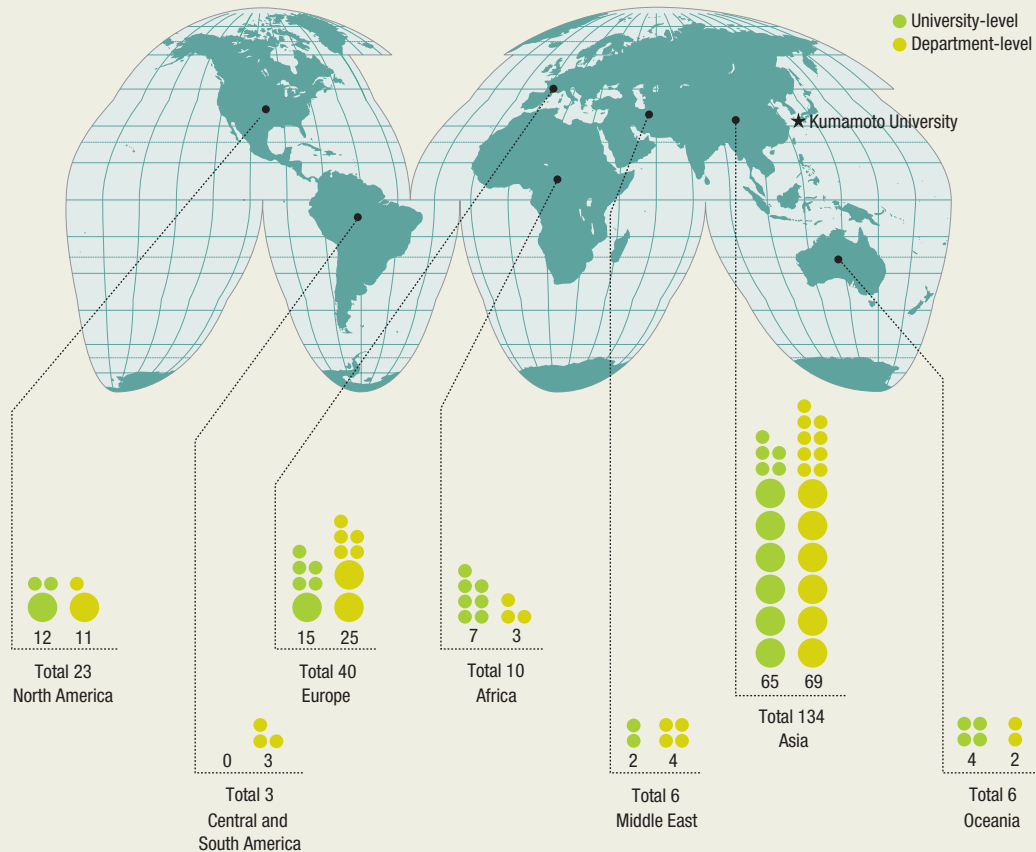
# INTERNATIONAL EXCHANGE AGREEMENTS

## chart 3 CHANGES IN NUMBERS OF PARTNER INSTITUTIONS

(As of September 1, 2017)



## chart 4 WORLD MAP WITH THE NUMBERS OF PARTNER INSTITUTIONS



# RESEARCHERS AND SCHOLARS EXCHANGES (April 2016- March 2017)

Region	Country	Funding Source	University Staff Sent Abroad						Visiting Foreign Researchers																	
			Ministry of Education (MEXT)	Japan Society for the Promotion of Science (JSPS)	Japan International Cooperation Agency (JICA)	Other Domestic Funds	Foreign Governments/Institutes	Private-Funded	Sub-total	Ministry of Education (MEXT)	Japan Society for the Promotion of Science (JSPS)	Japan International Cooperation Agency (JICA)	Other Domestic Funds	Foreign Governments/Institutes	Private-Funded	Sub-total										
Asia	Bangladesh			2													2	1	4			8	1	3	17	
	Bhutan						1											1								0
	Cambodia		1				5											6								0
	China		3	5			86		12	4								110	8	7			6	13	14	48
	India				2			7										7					4		2	11
	Indonesia		4			1	4		3	1								13					8	14		25
	Korea		1	8				117		16	7							149	5	2			7	2	1	17
	Laos		1	1				1										3								0
	Malaysia				2													11					8			9
	Mongol							6										6	1			1	1	3		6
	Myanmar		1	4	3			11		7								26				5				5
	Nepal							3										5								0
	Philippines		1	2				4										7	1				2			3
	Singapore							25		2								29					1			1
	Taiwan		8	2				44		7	5							66	1					7	6	14
	Thailand				1	3		30		3	1							38	1			7	20	1	2	31
Vietnam			4				23		1	1							29				1	5			6	
Sub-total			24	33	7	378	51	22									515	27	13	14	70	41	28		193	
Middle East	Iran																0	1								1
	Israel						1											1	1			1				2
	Pakistan																	0				1				1
	Saudi Arabia																	1								0
	Syria																	0	1							1
	Turkey		1	3				2										6	1	1		1				3
	UAE							1										1								0
	Sub-total			1	3	0	4	1	0									9	4	1	0	3	0	0	0	8
Africa	Algeria																0	1								1
	Benin																	0						1		1
	Cameroon																	0		2						2
	Egypt																	0			3	2	1	2		8
	Ethiopia								1									1			1					1
	Kenya						1											1								0
	Mauritius			1			1											2								0
	Morocco						1											1								0
	Nigeria																	0					1			1
	South Africa						3											3				1				1
	Sudan																	0						1		1
	Tanzania							4										4			1		2			3
	Uganda																	0					3			3
Sub-total			0	1	0	10	1	0									12	1	3	4	5	5	4		22	
Oceania	Australia			1			32			3								36		2		1		1	4	
	New Caledonia						2											2								0
	New Zealand						5		1									6				3				3
	Samoa									1								1								0
	Sub-total			0	1	0	39	1	4									45	0	2	0	4	0	1		7
North America	Canada						17											19					3			3
	USA		6	18			235		7	11							277	18	2			12	4	22		58
	Sub-total		6	20	0	252	7	11									296	18	2	0	12	7	22			61
South-Middle America	Argentina						2										2	1								1
	Brazil						2											2								0
	Mexico						2		1									3								0
	Suriname																	0			2					2
	Sub-total			0	0	0	6	1	0									7	1	0	2	0	0	0	0	3
Europe	Austria			6			17		1	2							26			1		4				5
	Azerbaijan						2											2				1				1
	Belgium						5											5		1						1
	Czech		1	2			4											7			2		1			3
	Denmark			1			5											6								0
	Estonia						1			1								2								0
	Finland						6											6								0
	France		2	3				38		1	2							46	4			5	6	1		16
	Germany		1	1				53		8	1							64	3	4		5	8			20
	Greece							4										4								0
	Hungary																	0					1			1
	Ireland							5										5								0
	Italy							23			3							26	1							1
	Kazakhstan									1								1					1			1
	Luxembourg							1										1								0
	Netherlands		4	1				1		1								7								0
	Norway							1										1								0
	Poland							4		2								6								0
	Portugal			1				12										13								0
	Romania							1										1								0
	Russia			2				4										6	2	2		5		1		10
	Slovakia			1				2										3	1	1						2
	Slovenia									1								1								0
	Spain		1	2				18										21				1				1
	Sweden							18		1								19			1					1
	Switzerland				1			5		1																

## INTERNATIONAL STUDENTS

(As of May 1, 2017)

Region	Country	Status	Faculties					Graduate Schools					Japanese Language Trainees	Total
			Undergraduates	Research Students	Auditors	Special Auditors	Sub-total	Graduates	Research Students	Special Auditors	Special Research Students	Sub-total		
Asia	Bangladesh						0	33				33		33
	Cambodia						0		1			1		1
	China	31	1		56	88	99	12	3	7	121			209
	India					0	3				3			3
	Indonesia	2			9	11	44				44			55
	Korea	8			20	28	6	1			7			35
	Lao				2	2					0			2
	Malaysia	12			2	14	3			1	4			18
	Mongol				2	2	2	1			3			5
	Myanmar					0	23	1			24			24
	Nepal					0	2				2			2
	Philippines				1	1	3				3			4
	Taiwan				16	16	8		4	1	13			29
	Thailand				3	3	2			6	8			11
	Vietnam				2	2	6				6			8
Sub-total		53	1	0	113	167	234	16	7	15	272	0	439	
Middle East	Afghanistan					0	8				8		8	
	Iran					0	1				1		1	
	Iraq					0	1				1		1	
	Oman					0	1				1		1	
	Turkey				1	1					0		1	
	Sub-total	0	0	0	0	1	11	0	0	0	11	0	12	
North America	USA					0	1				1		1	
	Sub-total	0	0	0	0	0	1	0	0	0	1	0	1	
South-Middle America	Dominican Republic	1				1					0		1	
	Guatemala					0	1				1		1	
	Mexico				1	1	1				1		2	
	Sub-total	1	0	0	1	2	2	0	0	0	2	0	4	
Oceania	Australia				1	1					0		1	
	Papua New Guinea					0	2				2		2	
	Samoa					0	2				2		2	
	Solomon					0	1				1		1	
	Sub-total	0	0	0	1	1	5	0	0	0	5	0	6	
Africa	Benin					0	1				1		1	
	Cabo Verde					0	1				1		1	
	Democratic Republic of the Congo					0	1				1		1	
	Egypt					0	3				3		3	
	Ghana					0	3				3	1	4	
	Kenya					0	4				4		4	
	Morocco					0	1			1	2		2	
	Nigeria					0	3				3		3	
	South Africa					0	1				1		1	
	Sudan					0	3				3		3	
	Tanzania					0	4				4		4	
	Uganda	1				1					0		1	
	Zimbabwe					0	1				1		1	
Sub-total	1	0	0	0	1	26	0	0	1	27	1	29		
Europe	Armenia					0	1				1		1	
	Austria					0		1			1		1	
	Bulgaria					0	1				1		1	
	France				1	1			1	4	5		6	
	Germany				2	2				0			2	
	Slovenia					0				1	1		1	
	UK				2	2	1				1		3	
	Uzbekistan					0		1			1		1	
	Sub-total	0	0	0	5	5	3	2	1	5	11	0	16	
Total (From 49 countries)		55	1	0	120	177	282	18	8	21	329	1	507	

## JAPANESE STUDENTS STUDY ABROAD

The table below shows the number of students who have studied abroad at overseas universities with which Kumamoto University has concluded a student exchange agreement, or have otherwise mutually agreed on a student exchange. (The period of study abroad is not indicated)

Country	Partner University	Number of Students
Australia	The University of Newcastle	8
Cambodia	Royal University of Phnom Penh	14
Canada	University of Alberta	1
Canada	University of Calgary	1
China	Tongji University	2
China	Shenzhen University	1
Czech	Academy of Sciences of the Czech Republic	1
France	Ecole nationale superieure des mines de Saint-Etienne	1
France	Bordeaux Montaigne University	3
France	Bordeaux Institute of University	2
France	Universite Blaise Pascal - Clermont Ferrand-II	1
Germany	Leibniz Institute for Applied Geophysics	1
Germany	Saarland University	3
Germany	The University of Wurzburg	1
Germany	University of Freiburg	4
Germany	University of Giessen	6
Indonesia	Airlangga Unviersity	1
Korea	Ajou University	3
Korea	Dong-A University	7
Korea	Korea University	7
New Zealand	Massey University	9
Poland	Warsaw University	1
Philippines	Ateneo de Manila University	20
Slovenia	University of Maribor	3
Spain	Valladolid University	2
Taiwan	Southern Taiwan University of Science and Technology	3
Thailand	Chulalongkorn University	1
Thailand	Khon Kaen University	3
UK	Durham University	4
UK	University of Leeds	13
USA	Montana State University	8
USA	Old Dominion University	1
USA	The City University of New York	1
Total (April 2016- March 2017)		137

## INTERNATIONAL HOUSE

Kumamoto University International House Residence A was constructed in 1985 to provide accommodation for international students and foreign researchers. To respond to the increase in the number of foreign students and researchers, Residence B was built in 1995, followed by Residences C, D and E in November 2009. As of May 2017, international students and researchers from about 29 countries are residing in all 232 rooms. The I-House office in Residence A is available to respond to questions from residents and to provide consultation and assistance.

(Address)

7-763 Kurokami, Chuo-ku, Kumamoto City, Kumamoto 860-0862

(Location)

About 1.5 km east of the Kurokami Campus



Residence	Room Type				Total
	Family	Couple	Single	Shared (quad)	
A	3	3	49		55
B	4	3	50		57
C				36	36
D				36	36
E			48		48
<b>Total number of rooms</b>	<b>7</b>	<b>6</b>	<b>147</b>	<b>72</b>	<b>232</b>

### Common Facilities

Lounge	2
Conference room	1
Japanese-style room	1
Public Lobby	1
Multipurpose room	1
Laundry room	10

## INTERNATIONAL PROGRAMS

### Kumamoto University Short-Term Exchange Program

The Kumamoto University Short-Term Exchange Program is designed for full-time undergraduate students who are from universities that have a student exchange agreement with Kumamoto University, and have foreign citizenship. The program offers undergraduate international students, who are interested in the Japanese language, Japanese and Asian society and culture, advanced science and technology, and interactions with international students, the chance to study for up to a year in Japan while still retaining their full-time status at their home universities. The university also hopes that the program will promote exchange between university students from foreign countries and Japanese university students.

#### • E Course (Program in English)

As a general rule, this course is intended for third year undergraduate students who are currently at their home universities. Students in this course mainly take Short-Term Exchange Program classes taught in English. Also, they can take Japanese Language and Japanese Studies classes. The students can take specialized subjects for undergraduate students of each faculty and General Education classes which are not included in program completion requirements as well.

(Note: Most specialized subjects and General Education classes are taught in Japanese.)

#### • J Course (Program in Japanese)

Students in this course mainly take classes in specialized subjects for undergraduate students of each faculty, as well as classes in the Japanese Language and Japanese Studies. Also, they can take General Education classes and Short-Term Exchange Program classes taught in English.



### Kumamoto University Japanese Studies Program

The Kumamoto University Japanese Studies program is a one-year program intended for undergraduate international students who are majoring in fields related to Japanese language and culture. The aim of the program is to improve Japanese proficiency, to impart the knowledge and skills required to conduct Japanese studies, and to help students acquire a practical knowledge of Japanese language and culture for use in society.



## JAPANESE LANGUAGE CLASSES

The College of Cross-Cultural and Multidisciplinary Studies offers the following classes related to the Japanese language and Japanese studies for international students and researchers at Kumamoto University.

- Japanese Language and Japanese Studies classes (General Education classes)
- Japanese classes for the “Kumamoto University Short-Term Exchange Program” and “Intensive Japanese course for Japanese Government Scholarship students”, “Teacher-Training students”, and “undergraduate students in the Japan - Korea Joint Exchange Program in Science and Engineering”

Undergraduate students, students in the Short-Term Exchange Program and students in the Japanese Studies Program may enroll in most of these classes for academic credits.

Various levels of classes are offered so that students can choose classes according to their Japanese proficiency and their interests. Japanese Studies classes are also offered to provide students with a broad knowledge and understanding of Japanese culture and society.



## KUMAMOTO UNIVERSITY SPRING PROGRAM 2017

At Kumamoto University, we offer two short-term study programs in Kumamoto for undergraduate students from our partner universities – the Summer Program, held in late July and early August; and the Spring Program, held in February and March.

Due to the damage from the large earthquake that occurred in Kumamoto on April 16, 2016, we were unfortunately unable to carry out the Summer Program due to safety concerns. As a result, we increased the amount of participants in our Spring Program to make up for some of the missed opportunity in the summer.

This program was designed to provide an opportunity for undergraduate students from overseas partner universities to enjoy a short stay in Kumamoto while deepening their interest and understanding of life in Japan, as well as the natural and scientific aspects of Kumamoto and Kumamoto University.

Over the course of the 10-day program, participants enjoyed lectures from professors at Kumamoto University, educational excursions to Yamaga, Mt. Aso, and Kumamoto Castle, first-hand cultural experiences, and an international exchange event with local high school students.

All participating students gave positive reviews of their experiences, with many expressing their gratitude at being given the opportunity to come to Japan, and an interest in returning to Kumamoto University to study in the future.



## The Global Leader Course was established as an initiative in human resource development at Kumamoto University, to connect the university to the world.

Kumamoto University is home to many international students and academic members from a wide range of countries around the world. Its campuses are full of opportunities to develop international sensibilities even while still in Kumamoto. This distinctive quality of the university has made it possible to establish the Global Leader Course (GLC), which aims to foster talented individuals who will be able to play active roles in the global society of the 21<sup>st</sup> century.

The GLC offers an original educational curriculum called the GOKOH School Program, which carries on the spirit of the former Fifth High School, summed up by “Goki Bokutotsu” (strength of character and rugged honesty). After their entrance, GLC students will cultivate the general skills required of future global leaders and basic expertise for two years. Then, they will select a department and course in the third year to acquire advanced and specialized skills. This course aims to nurture individuals who are not only equipped with knowledge, education and expertise, but who have the confidence to positively engage with people from home and abroad, and who will thrive and serve in active roles in global society.

One of the most distinctive features of the course is the Global Study Program. This program offers multidisci-



Members of the inaugural class of the Global Leader Course

plinary studies conducted in English where students can simulate studying abroad. Students can build a flexible and logical way of thinking, analytical skills and English communication abilities by studying in a diverse environment with international students and working people.



Class scene

## U.S. – Japan Relations Seminar Held at Kumamoto University with Mansfield Foundation

On June 15, 2017, scholars visiting Kumamoto as part of the Maureen and Mike Mansfield Foundation’s U.S. – Japan Network for the Future program held a panel discussion at the Faculty of Engineering 100 Year Memorial Hall with attendance by approximately 150 participants, including local high school students, university students and staff, the U.S. – Japan Relations Association of Kumamoto, as well as the general public of Kumamoto.

The discussion focused on the current context, as well as the potential future course, of U.S. – Japan relations. The conversation was joined by three scholars from the Mansfield Foundation; Dr. Gerald Curtis (Columbia University, Mansfield Foundation Board of Directors), Dr. Leonard Schoppa (University of Virginia), and Dr. Sheila Smith (Council on Foreign Relations), and was moder-

ated by Mr. Benjamin Self (Vice-President of the Mansfield Foundation).

The seminar was a meaningful opportunity to promote understanding and a more global perspective among the citizens of Kumamoto. At the Center for Open Education, we hope to continue strengthening our important relationship with the Mansfield Foundation, as well as to continue offering similar opportunities for academic growth in the future.



The panel discussion at the Faculty of Engineering 100 Year Memorial Hall



## A double degree agreement was concluded with Khon Kaen University's Faculty of Medicine on November 3<sup>rd</sup>, 2016.

With the aim of promoting student and research exchanges with the Faculty of Medicine of Khon Kaen University, a double-degree agreement for a doctoral course with the Graduate School of Medical Sciences of Kumamoto University was concluded, and the signing ceremony was held at Khon Kaen University on Thursday, November 3<sup>rd</sup>, 2016. It was the first double-degree agreement concluded for the Graduate School of Medical Sciences.

Four representatives from Kumamoto University, including Professor Kazuhito Tomizawa, Education Committee Chairman of the Graduate School of Medical Sciences, attended the ceremony. The signing ceremony was followed by a courtesy visit by the Vice President in Charge of Research, and an introduction to Kumamoto University by Professor Tomizawa. On November 4<sup>th</sup>, a research seminar was held where Professor Kazuhito



Signing ceremony at Khon Kaen University

Tomizawa, Professor Song Wen-Jie and Professor Seiji Okada presented research summaries and introductions to the School of Medicine and the Graduate School of Medical Sciences of Kumamoto University, which led to deepened mutual understanding and further exchanges in the future.

Khon Kaen University is one of nine National Research Universities in Thailand. It is a comprehensive university that leads in research and education in the northeastern part of the country. Since the conclusion of the exchange agreement in 2004, Khon Kaen University has been actively promoting student and researcher exchanges with Kumamoto University.

## The Opening Ceremony of AP-SixERS Takes Place in Bangkok, Thailand

On August 21, Kanazawa University and SUN/SixERS (Six National Universities International Education and Research System) hosted the Opening Ceremony for SixERS ASEAN Platform (AP-SixERS) in Bangkok, Thailand. The ceremony was attended by Mr. Shigeki Kobayashi, Head of the Cultural Public Relations Department at the Embassy of Japan in Thailand, Dr. Choltit Dhirathiti, Executive Director of ASEAN University Network, and approximately 100 participants from government agencies, partner institutions in Thailand, and Japanese businesses located in Bangkok, and they celebrated the opening of the new office.

This office is the third joint office established by SUN/SixERS, a consortium of six national universities, Chiba University, Niigata University, Kanazawa University, Okayama University, Nagasaki University and Kumamoto University, after the Asian Platform (Changchun, China) established in November 2014 and European Platform (Leiden, Netherland) established in August 2016. The purpose of the joint offices is to promote exchanges with excellent universities on the globe, particularly with those in the regions of strategic importance.

This office was established after changing the location of the Bangkok Office, which Kanazawa University set up on the campus of King Mongkut's University of Technology Thonburi, and putting it into joint use for SUN/SixERS (Six National Universities International Education and Research System). The office aims to promote alliances in the ASEAN region and to develop global human talent in partnership with industry. The Graduate School of Science and Technology and the Faculty of



Opening Ceremony group photo

Advanced Science and Technology of Kumamoto University concluded a department-level exchange agreement with the Joint Graduate School of Energy and Environment of King Mongkut's University of Technology Thonburi on October 5, 2016. This has brought about various achievements, including the acceptance of special research students and joint research projects through JST. The office will direct its energies to further promoting such exchange programs. In addition, as Kumamoto University is a member of the ASEAN+3 University Network, which includes 30 universities in ASEAN member nations and 18 universities in Japan, China and Korea (including six national universities in Japan), this office is expected to serve as an important liaison and coordination base for the six national universities, and will offer diverse advantages of scale. Furthermore, the KX building (established by King Mongkut's University of Technology Thonburi for the purpose of improving innovation capabilities in Thailand) has tenant space available for companies, which will help enable industry-university cooperation with local and Japanese companies.



Front of the KX building

# ADMINISTRATIVE OFFICERS

(As of April 1, 2017)

<b>President</b>		HARADA Shinji, M.D., D.M.Sc.
<b>Trustees</b>	Vice-Presidents	FURUSHIMA Mikio, D.Sc.
		MATSUMOTO Yasumichi, D.Eng.
		YAMAZAKI Kodo, LL.D.
		TAKEYA Motohiro, M.D., Ph.D.
		NISHIKAWA Izumi
		SHIOTANI Yoshiko
<b>Vice-Presidents</b>		TAKASHIMA Kazuki, D.Eng.
		MIZUTA Hiroshi, M.D., Ph.D.
<b>Auditors</b>		ASAI Yutaka
		TSURUTA Tetsuzo
<b>Faculty of Letters</b>	Dean	MIZUMOTO Toyofumi, M.Lit.
<b>Faculty of Education</b>	Dean	YAHATA Hideyuki, Ph.D.
Kindergarten Attached to the Faculty of Education	Principal	OGATA Nobuyuki, M.ed.,M.F.A.
Elementary School Attached to the Faculty of Education	Principal	SHIMADA Hideaki, Ph.D.
Junior High School Attached to the Faculty of Education	Principal	SHIMATANI Hiroshi, M.A.
Special Support School Attached to the Faculty of Education	Principal	SAKASHITA Reiko, Ph.D.
Center for Educational Research and School Development	Director	HOSHIKAWA Takashi, Ph.D.
<b>Faculty of Law</b>	Dean	FUKAMACHI Kiminobu, LL.M.
<b>Faculty of Science</b>	Dean	ICHIKAWA Fusao, D. Sc.
<b>School of Medicine</b>	Dean	ANDO Yukio, M.D., Ph.D.
<b>School of Pharmacy</b>	Dean	KAI Hirofumi, Ph.D.
Research Institute for Drug Discovery	Director	SUGIMOTO Yukihiro, Ph.D.
Center for Clinical Pharmaceutical Sciences	Director	HIRATA Sumio, Ph.D.
Eco-Frontier Medicinal Resources	Director	WATANABE Takashi, Ph.D.
<b>Faculty of Engineering</b>	Dean	USAGAWA Tsuyoshi, D.Eng.
Engineering Research Equipment Center	Director	MACHIDA Masato, D.Eng.
Creative Engineering and Design Education Center	Director	TOMIMURA Toshio, D.Eng.
<b>Graduate School of Education</b>	Dean	YAHATA Hideyuki, Ph.D.
<b>Faculty of Humanities and Social Sciences</b>	Dean	MIZUMOTO Toyofumi, M.Lit.
<b>Graduate School of Social and Cultural Sciences</b>	Dean	TANAKA Tomohiro, Ph.D.
<b>Graduate School of Science and Technology</b>	Dean	USAGAWA Tsuyoshi, D.Eng.
Global Joint Education Center for Science and Technology	Director	USAGAWA Tsuyoshi, D.Eng.
<b>Faculty of Life Sciences</b>	Dean	ANDO Yukio, M.D., Ph.D.
<b>Graduate School of Medical Sciences</b>	Dean	ANDO Yukio, M.D., Ph.D.
<b>Graduate School of Pharmaceutical Sciences</b>	Dean	KAI Hirofumi, Ph.D.
<b>Graduate School of Health Sciences</b>	Dean	YOSHINAGA Kazuya, D.V.M., Ph.D.
<b>Graduate School of Teacher Education</b>	Dean	YAHATA Hideyuki, Ph.D.
<b>School of Law</b>	Dean	MATSUBARA Hironobu, LL.M.
Clinical Legal Education and Research Center	Director	MATSUBARA Hironobu, LL.M.
<b>University Hospital</b>	Director	MIZUTA Hiroshi, M.D., Ph.D.
<b>University Library</b>	Director	YAMAOKA Toshitaka, D.Eng.
<b>Center for Management of Information Technologies</b>	Director	SUGITANI Kenichi, D.Eng.
<b>College of Cross-Cultural and Multidisciplinary Studies</b>	Director	TAKASHIMA Kazuki, D.Eng.
<b>Memorial Museum of the Fifth High School</b>	Director	ITO Juko, D.Eng.
<b>EISEI-BUNKO Research Center</b>	Director	INABA Tsuguharu, D.Lit.
<b>Research Center for Instructional Systems</b>	Director	SUZUKI Katsuaki, Ph.D.
Center for Water Cycle, Marine Environment, and Disaster Management	Director	KAKIMOTO Ryuji, Ph.D.
<b>Magnesium Research Center</b>	Director	KAWAMURA Yoshihito, Ph.D.
<b>Institute of Pulsed Power Science</b>	Director	KATSUKI Sunao, D.Eng.
<b>Institute of Resource Development and Analysis</b>	Director	OIKE Yuichi, M.D., Ph.D.
<b>Center for AIDS Research</b>	Director	MATSUSHITA Shuzo, M.D., Ph.D.
<b>Institute of Molecular Embryology and Genetics</b>	Director	NISHINAKAMURA Ryuichi, M.D., Ph.D.
<b>Priority Organization for Innovation and Excellence</b>	Director	HARADA Shinji, M.D., D.M.Sc.
<b>Kumamoto Innovative Development Organization</b>	Director	HARADA Shinji, M.D., D.M.Sc.
<b>Headquarters for Admissions and Education</b>	Director	FURUSHIMA Mikio, D.Sc.
<b>International Research Center for Medical Sciences</b>	Director	SUDA Toshio, M.D., Ph.D.
<b>Health Care Center</b>	Director	FUJISE Noboru, M.D., Ph.D.
<b>Environmental Safety Center</b>	Director	TOGAWA Kenichi, D.Ecs.
<b>Research Center for Buried Cultural Properties</b>	Director	ITO Masahiko, D. Lit.
<b>Institute for e-Learning Development</b>	Director	FURUSHIMA Mikio, D.Sc.

# FACULTY AND STAFF SIZE

(As of May 1, 2017)

Classification	Professors	Associate Professors	Lecturers (Full-time)	Assistant Professors	Research Assistant	Teachers (Attached School)	Sub-total	Administrative and Technical Staff	Total
Faculty of Education	50	44	3			82	179	3	182
Faculty of Science							0	3	3
School of Pharmacy	3	2		1	1		7	5	12
Faculty of Engineering							0	45	45
Graduate School of Education		2					2		2
Faculty of Humanities and Social Sciences	56	58	7		1		122		122
Faculty of Advanced Science and Technology	78	82	2	34			196		196
Faculty of Life Sciences	72	45	18	105			240	9	249
Institute of Molecular Embryology and Genetics	8	4	1	9			22	9	31
Institute of Pulsed Power Science	7	5		2			14	1	15
Priority Organization for Innovation and Excellence		8		5			13		13
Kumamoto Innovative Development Organization	2	4					6		6
Headquarters for Admissions and Education	1	2					3		3
Center for Management of Information Technologies	4	1		1			6	3	9
College of Cross-Cultural and Multidisciplinary Studies	1	1	3				5		5
The Memorial Museum of the Fifth High School		1					1		1
Eisei-Bunko Research Center	1	1					2		2
Research Center for Instructional Systems	3	4					7		7
Center for Water Cycle, Marine Environment and Disaster Management	4	6		1			11	1	12
Magnesium Research Center	2	1		1			4		4
Institute of Resource Development and Analysis	3	2	2	5			12	7	19
Center for AIDS Research	4	2		2			8		8
Environmental Safety Center		1					1		1
Research Center for Buried Cultural Properties				2			2		2
Health Care Center	1	1		1			3	3	6
University Hospital	4	7	33	65			109	1113	1222
Administration Bureau							0	421	421
<b>Total</b>	<b>304</b>	<b>284</b>	<b>69</b>	<b>234</b>	<b>2</b>	<b>82</b>	<b>975</b>	<b>1623</b>	<b>2598</b>

## STUDENT ENROLLMENT

(The 2017 School Year)

### ■ Undergraduate Students ■

Faculty and School	Number	
Letters	775	544
Education	1,217	676
Law	900	421
Science	806	204
Medicine	1,332	694
Pharmacy	505	244
Engineering	2,387	400
<b>Total</b>	<b>7,922</b>	<b>3,183</b>

### ■ Diploma Course ■

Faculty and School	Number	
Diploma Course in Special Needs Education	18	10

### ■ Special Course ■

Faculty and School	Number	
Yogo Teacher Training	42	41

\*Colored figures indicate the number of females included in the figures.

### ■ Graduate Students ■

Faculty and School	Master	Master of Ed.	Doctor	Juris Doctor
Education	82 41	13 6	—	—
Social and Cultural Sciences	164 101	—	76 35	—
Science and Technology	905 127	—	201 43	—
Medical Sciences	25 13	—	346 104	—
Health Sciences	52 32	—	43 20	—
Pharmaceutical Sciences	69 24	—	74 28	—
School of Law		—		13 4
<b>Total</b>	<b>1,297 338</b>	<b>13 6</b>	<b>740 230</b>	<b>13 4</b>

### ■ Attached Schools ■

Classification	Number	
Elementary School	643	322
Junior High School	476	237
Special Support School	61	19
Kindergarten	139	68
<b>Total</b>	<b>1,319</b>	<b>646</b>

## STUDENT FINANCIAL AID

### ■ Japanese Students ■

(As of March 1, 2017)

Classification	Number of Students	Japanese Government Scholarship	Other Scholarships	Total	
				Number	Rate
Undergraduate Students	7,936	4,160	120	4,280	53.9%
Graduate Students	Master	1,326	636	647	48.8%
	Doctor	728	67	68	9.3%
	Juris Doctor	17	13	13	76.5%
<b>Total</b>	<b>10,007</b>	<b>4,876</b>	<b>132</b>	<b>5,008</b>	<b>50.0%</b>

### ■ International Students ■

(As of May 1, 2017)

Classification	Number of Students	Japanese Government Scholarship	Other Scholarships	Total	
				Number	Rate
Undergraduate Students	177	6	18	24	13.6%
Graduate Students	329	69	113	182	55.3%
Japanese Language Trainees	1	1	0	1	100.0%
<b>Total</b>	<b>507</b>	<b>76</b>	<b>131</b>	<b>207</b>	<b>40.8%</b>

## STUDENT ADMISSION

(The 2017 School Year)

### ■ Undergraduate Students ■

Faculty and School	Applicants	Newly Enrolled Students	Rate of Enrollment
Letters	709	179	25.2%
Education	696	250	35.9%
Law	729	214	29.4%
Science	707	203	28.7%
Medicine	599	116	19.4%
Health Sciences	556	147	26.4%
Pharmacy	416	92	22.1%
Engineering	1,200	532	44.3%
<b>Total</b>	<b>5,612</b>	<b>1,733</b>	<b>30.9%</b>

### ■ Graduate Students ■

Faculty and School		Applicants	Newly Enrolled Students	Rate of Enrollment
Education	Master	36	33	91.7%
	Master of Ed.	14	13	92.9%
Social and Cultural Sciences	Master	81	66	81.5%
	Doctor	17	11	64.7%
Science and Technology	Master	510	411	80.6%
	Doctor	32	31	96.9%
Medical Sciences	Master	14	10	71.4%
	Doctor	78	73	93.6%
Health Sciences	Master	26	23	88.5%
	Doctor	9	7	77.8%
Pharmaceutical Sciences	Master	33	31	93.9%
	Doctor	17	17	100.0%
<b>Total</b>		<b>867</b>	<b>726</b>	<b>83.7%</b>

### ■ Diploma Course ■

	Applicants	Newly Enrolled Students	Rate of Enrollment
Diploma Course in Special Needs Education	20	18	90%

### ■ Special Course ■

	Applicants	Newly Enrolled Students	Rate of Enrollment
Special Course in School Health	66	42	63.6%

## STUDENT COSTS

(As of May 1, 2017 / Unit: yen)

	Entrance exam fee	Admission fee	Tuition fees
Undergraduate Students	17,000	282,000	535,800/ year
Graduate Students	30,000	282,000	535,800/ year
Graduate Students (School of Law)	30,000	282,000	804,000/ year
Research Students	9,800	84,600	29,700/ month
Auditing students*	9,800	28,200	14,800/ credit

\* Includes non-degree course students

## DEGREES AWARDED

(As of March 31, 2017)

### ■ Master's Degree ■

Classification	New System	
	2016.4-2017.3	Total
Master of Arts	26	1,043
Master of Education	42	1,179
Master of Law	5	464
Master of Public Policy	4	92
Master of Medical Sciences	10	294
Master of Health Sciences	16	89
Master of Nursing	9	64
Master of Pharmaceutical Sciences	24	1,757
Master of Clinical Pharmacy	—	76
Master of Health Life Science	8	23
Master of Science	81	2,341
Master of Engineering	354	9,256
Master of Philosophy	13	107
Master of Science in Instructional Systems	12	118
<b>Total</b>	<b>604</b>	<b>16,903</b>

### ■ Doctoral Degree ■

Classification	Old System	New System			
		Course Completion		Thesis Submission	
		2016.4-2017.3	Total	2016.4-2017.3	Total
Doctor of Literature	—	4	70	1	19
Doctor of Public Policy	—	—	22	—	3
Doctor of Laws	—	—	8	—	—
Doctor of Science	—	10	207	—	30
Doctor of Engineering	—	20	665	—	110
Doctor of Philosophy	—	16	337	—	20
Doctor of Medical Sciences	1,663	51	2,120	13	999
Doctor of Health Sciences	—	1	7	—	—
Doctor of Nursing	—	—	2	—	—
Doctor of Pharmaceutical Sciences	—	18	298	4	160
Doctor of Clinical Pharmacy	—	—	7	—	—
Doctor of Life Sciences	—	1	24	—	5
Juris Doctor	—	4	176	—	—
<b>Total</b>	<b>1,663</b>	<b>125</b>	<b>3,943</b>	<b>18</b>	<b>1,346</b>

## AFTER GRADUATION

(The 2017 School Year)

### ■ Undergraduate Students ■

Faculty and School	Number of Graduates	Number of Continuing Higher Education		Number of Employed		Others	
			Rate		Rate		Rate
Letters	178	13	7.3%	128	71.9%	37	20.8%
Education	303	41	13.5%	222	73.3%	40	13.2%
Law	204	11	5.4%	154	75.5%	39	19.1%
Science	187	99	52.9%	70	37.4%	18	9.6%
Medicine	257	23	8.9%	103	40.1%	131	51.0%
Pharmacy	87	36	41.4%	45	51.7%	6	6.9%
Engineering	527	317	60.2%	184	34.9%	26	4.9%
<b>Total</b>	<b>1,743</b>	<b>540</b>	<b>31.0%</b>	<b>906</b>	<b>52.0%</b>	<b>297</b>	<b>17.0%</b>

### ■ Graduate Students ■

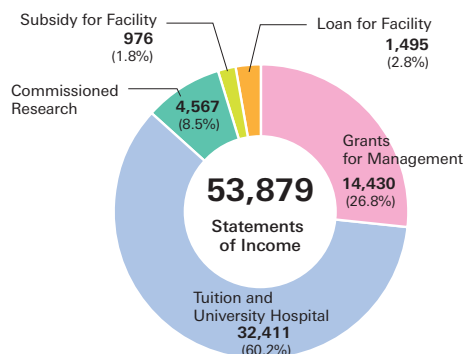
Faculty and School		Number of Graduates	Number of Continuing Higher Education		Number of Employed		Others	
				Rate		Rate		Rate
Education	Master	42	1	2.4%	36	85.7%	5	11.9%
Social and Cultural Sciences	Master	57	2	3.5%	27	47.4%	28	49.1%
	Doctor	5	0	0.0%	3	60.0%	2	40.0%
Science and Technology	Master	438	29	6.6%	380	86.8%	29	6.6%
	Doctor	49	0	0.0%	31	63.3%	18	36.7%
Medical Sciences	Master	12	4	33.3%	7	58.3%	1	8.3%
	Doctor	66	0	0.0%	53	80.3%	13	19.7%
Health Sciences	Master	25	3	12.0%	20	80.0%	2	8.0%
	Doctor	1	0	0.0%	1	100.0%	0	0.0%
Pharmaceutical Sciences	Master	30	11	36.7%	19	63.3%	0	0.0%
	Doctor	21	0	0.0%	18	85.7%	3	14.3%
Law	Juris Doctor	4	0	0.0%	0	0.0%	4	100.0%
<b>Total</b>		<b>750</b>	<b>50</b>	<b>6.7%</b>	<b>595</b>	<b>79.3%</b>	<b>105</b>	<b>14.0%</b>

## BUDGET BREAKDOWN

### ■ Statements of Income (FY2017) ■

Unit: million yen

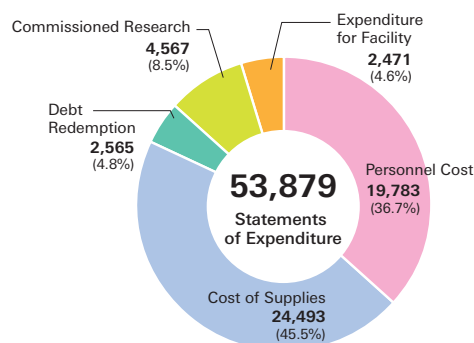
Grants for Management	14,430
Tuition and University Hospital	32,411
Commissioned Research	4,567
Subsidy for Facility	976
Loan for Facility	1,495
<b>Total</b>	<b>53,879</b>



### ■ Statements of Expenditure (FY2017) ■

Unit: million yen

Personnel Cost	19,783
Cost of Supplies	24,493
Debt Redemption	2,565
Commissioned Research	4,567
Expenditure for Facility	2,471
<b>Total</b>	<b>53,879</b>



### ■ Funds from Other Sources (FY2016) ■

Categories	Proposals Selected	Research Expense
Grants-in-Aid for Scientific Research	660	1,827,391
Grants & Endowment	1,512	1,831,884
Commissioned Research	299	2,392,851
Cooperative Research with Private Sector	313	500,262
<b>Total</b>	<b>2,784</b>	<b>6,552,388</b>

Unit: thousand yen

### ■ Grants-in-Aid for Scientific Research (FY2016) ■

Categories	Proposals Selected	*Research Expense
Grant-in-Aid for Scientific Research on Innovative Areas	24	193,570
Scientific Research (S)	3	150,800
Scientific Research (A)	12	153,140
Scientific Research (B)	75	373,100
Scientific Research (C)	311	468,246
Challenging Exploratory Research	68	111,150
Grant-in-Aid for Young Scientists (A)	12	69,940
Grant-in-Aid for Young Scientists (B)	135	201,053
Grant-in-Aid for Research Activity Start-up	10	14,560
Grant-in-Aid for Publication of Scientific Research Results	2	2,500
Fund for the Promotion of Joint International Research (Fostering Joint International Research)	3	34,320
Grant-in-Aid for JSPS Fellows	32	31,870
<b>Total</b>	<b>687</b>	<b>1,804,249</b>

\* Includes overhead costs/ Unit: thousand yen

## KUROKAMI NORTH CAMPUS



### Kurokami North Campus

- ① Kurokami North N1  
(Faculty of Letters) (Faculty of Law)
- ② Kurokami North N2  
(Faculty of Letters) (Faculty of Law)
- ③ Kurokami North N3 (School of Law)
- ④ Kurokami North N4  
(Faculty of Letters) (Faculty of Law)
- ⑤ Kurokami North N5  
(Graduate School of Social and Cultural Sciences)
- ⑥ Kurokami North N6  
(Faculty of Letters) (Faculty of Law)
- ⑦ Kurokami North N7 (Faculty of Education)
- ⑧ Kurokami North N8 (Faculty of Education)
- ⑨ Kurokami North N9 (Faculty of Education)
- ⑩ Kurokami North N10 (Faculty of Education)
- ⑪ Kurokami North N11 (Faculty of Education)
- ⑫ University Archives

- ⑬ 'Ai Work' Job Café
- ⑭ Chimeido Hall
- ⑮ Kusunoki Hall
- ⑯ Kurokami North Facility and Administration Building
- ⑰ Kurokami North C1  
(Academic Commons Kurokami Bldg. 5)
- ⑱ The Memorial Museum of the Fifth High School ※
- ⑲ University Library
- ⑳ University Library (South Building)/  
The Open University of Japan Kumamoto Study Center
- ㉑ Health Care Center
- ㉒ North Student Hall Bldg. A  
(Cafeteria, Bookstore and Shops)
- ㉓ North Student Hall Bldg. B
- ㉔ Guard Station
- ㉕ The Front Gate (The Red Gate) ※
- ㉖ Kurokami North E1 (General Education Building)
- ㉗ Kurokami North E2  
(Academic Commons Kurokami Bldg. 6)
- ㉘ Kurokami North E3  
(Academic Commons Kurokami Bldg. 6)

- ㉙ The Chemical Laboratory of the Fifth High School ※
- ㉚ Environmental Safety Center
- ㉛ College of Cross-Cultural and Multidisciplinary Studies
- ㉜ Club Rooms 1
- ㉝ Kurokami Gymnasium
- ㉞ Club Rooms 2
- ㉟ Club Rooms 3
- ㊱ Athletic Field (Bufugen)
- ㊲ Swimming Pool

### University Attached Special Support School

- ㉛ Kurokami North E8 (Faculty of Education)
- ㉜ Kurokami North E9 (Special Support School Bldg. A)
- ㉝ Kurokami North E10 (Special Support School Bldg. B)
- ㉞ Kurokami North E11 (Special Support School Bldg. C)
- ㉟ Kurokami North E12 (Special Support School Gymnasium)
- ㊱ Kurokami North E13 ('Suzukake-no-ie' ADL Training House)
- ㊲ Swimming Pool
- ㊳ Athletic Field



Kurokami Campus (311, 478m<sup>2</sup>)



# KUROKAMI SOUTH CAMPUS



**Kurokami South Campus**

- 46 Kurokami South W1 (Mathematics and Engineering)
- 47 Kurokami South W2 (Computer Science and Electrical Engineering)
- 48 Kurokami South W3 (Academic Commons Kurokami Bldg. 1)
- 49 Kurokami South W4 (Applied Chemistry and Biochemistry)
- 50 Kurokami South W5 (Engineering Research Laboratories)
- 51 Kurokami South W6 (Machine Shop A)
- 52 Kurokami South W7 (Machine Shop B)
- 53 Kurokami South W8 (Creative Engineering and Design Education Laboratory 1)
- 54 Kurokami South W9 (Creative Engineering and Design Education Laboratory 2)
- 55 100th Anniversary Hall
- 56 Kurokami South C1 (Academic Commons Kurokami Bldg. 7)
- 57 Kurokami South C2 (Architecture and Building Engineering) (Civil and Environmental Engineering)  
\*The new building is under construction.
- 58 Kurokami South C3 (Mechanical System Engineering) (Materials Science and Engineering)
- 59 Kurokami South C4 (Academic Commons Kurokami Bldg. 2)
- 60 Kurokami South C5 (Laboratory for Nanostructure Characterization)

- 61 Kurokami South C6 (Acoustic Laboratory)
- 62 Kurokami South C7 (Academic Commons Kurokami Bldg. 3)
- 63 Kurokami South C8 (Engineering Lecture Hall)
- 64 Kurokami South C9 (Center for Management of Information Technologies)
- 65 University Archives
- 66 University Hall (Administrative Offices)
- 67 Museum of the Engineering Faculty ※
- 68 Guard Station
- 69 Kurokami South E1 (Faculty of Science Bldg. 1&2)
- 70 Kurokami South E2 (Faculty of Science) (Graduate School of Science and Technology)
- 71 Kurokami South E3 (Faculty of Science Bldg. 3)
- 72 Kurokami South E4 (Faculty of Science Bldg. 4)
- 73 Kurokami South E5 (Research Building for Science and Technology)
- 74 Kurokami South E6 (Experimental Building for Science and Technology)
- 75 Kurokami South E7 (Acoustic Analysis Laboratory for Underwater Environments)
- 76 Kurokami South E8 (Low Temperature and He Gas Recovery Station)
- 77 South Student Hall
- 78 FORICO (Cafeteria and Convenience Store)
- 79 Kurokami South S1 (Hydraulic Laboratory)
- 80 Kurokami South S2 (Instrumental Analysis Center for Engineering Research)

- 81 Kurokami South S3 (Disaster Prevention Laboratory)
- 82 Kurokami South S4 (Kurokami Radioisotope Laboratory)
- 83 Kurokami South S5 (Research Center for Buried Cultural Properties)
- 84 Kurokami South S6 (Venture Laboratory) (Shock Wave and Condensed Matter Research Building)
- 85 Kurokami South S7 (Incubation Center)
- 86 Kurokami South S8 (Shock Wave Laboratory)
- 87 Kurokami South S9 (Engineering Experimental Laboratories)
- 88 Kurokami South S10 (MRC Casting Laboratory) (Magnesium Research Center(MRC))
- 89 Kurokami South S11 (MRC Forming and Machining Laboratory)
- 90 Kurokami South S12 (International Research Center for Advanced Science and Technology)
- 91 Kurokami South W11 Building A (Faculty of Engineering Temporary School Building)
- 92 Kurokami South W12 Building B (Faculty of Engineering Temporary School Building)
- 93 Kurokami South W13 Building C (Faculty of Engineering Temporary School Building)
- 94 Kurokami South W14 Building D (Faculty of Engineering Temporary School Building)

# HONJO NORTH, CENTRAL, SOUTH CAMPUS



## Honjo North Campus

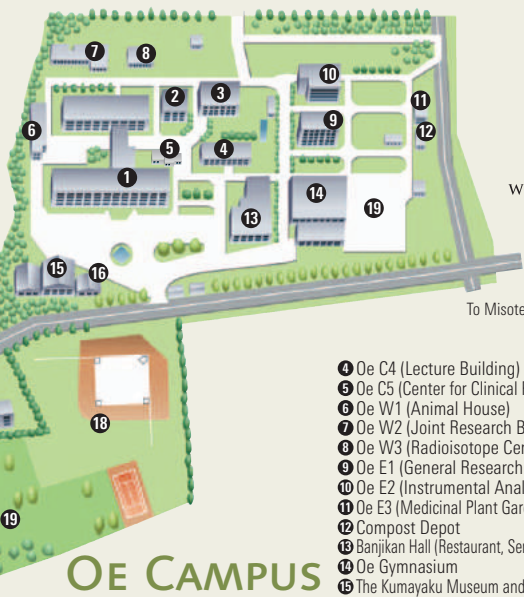
- 1 West Tower
- 2 East Tower
- 3 Central Examination Building
- 4 Outpatient Building
- 5 Administration Building
- 6 Old Outpatient Examination and Clinical Research Building
- 7 Location of Old Administration Building
- 8 Yamasaki Hall ■
- 9 Welfare Facilities
- 10 Facilities Management Building
- 11 Honjo North1 (Clinical Medicine Research Building)
- 12 Honjo North2 (Medical Education & Library Building)
- 13 Honjo North3 (General Medical Research Building)
- 14 Honjo North4 (Basic Research Building)
- 15 Honjo North5 (The Center for Medical Education and Research)
- 16 Old Clinical Research Building
- 17 Multistory Parking Garage 1
- 18 Multistory Parking Garage 2

## Honjo Central Campus

- 19 Honjo Central1 (Institute of Resource Development and Analysis (Center for Animal Resources and Development))
- 20 Honjo Central2 (Center for AIDS Research, Center for Animal Resources and Development)
- 21 Honjo Central3 (International Research Center for Medical Sciences (IRCMS))
- 22 Honjo Central4 (Lecture Building)
- 23 Honjo Central5 (Institute of Molecular Embryology and Genetics)
- 24 Honjo Central6 (Institute of Resource Development and Analysis (Gene Technology Center / Radioisotope Center))
- 25 Honjo Central7 (Academic Commons Honjo-1)
- 26 Club Room 1
- 27 Club Room 2
- 28 Club Room 3
- 29 Higo Iku Monument Hall

## Honjo South Campus

- 30 Student Union "Kaiju"
- 31 Gymnasium
- 32 Honjo South1 (School of Health Sciences Bldg. A, B, C)
- 33 Honjo South2 (Academic Commons Honjo-2)
- 34 Honjo South3 (School of Health Sciences Bldg. E)
- 35 Club Room
- 36 Kobato Nursery



# Oe Campus

## Oe Campus

- 1 Oe C1 (Main Building A, B, C)
- 2 Oe C2 (Main Building D)
- 3 Oe C3 (Main Building E (Library, Research Institute for Drug Discovery))

- 4 Oe C4 (Lecture Building)
- 5 Oe C5 (Center for Clinical Pharmaceutical Sciences)
- 6 Oe W1 (Animal House)
- 7 Oe W2 (Joint Research Building)
- 8 Oe W3 (Radioisotope Center)
- 9 Oe E1 (General Research Building)
- 10 Oe E2 (Instrumental Analysis Center)
- 11 Oe E3 (Medicinal Plant Garden Administration House)
- 12 Compost Depot
- 13 Banjikan Hall (Restaurant, Seminar Room, Liaison Office)
- 14 Oe Gymnasium
- 15 The Kumayaku Museum and Miyamoto Memorial Hall
- 16 School of Pharmacy Resource Center
- 17 Staff Residence
- 18 Athletic Field
- 19 Eco-Frontier Center of Medicinal Resources (Medicinal Plant Garden)



Honjo North, Central, South Campus (133, 312m<sup>2</sup>)



Oe Campus (51, 264m<sup>2</sup>)

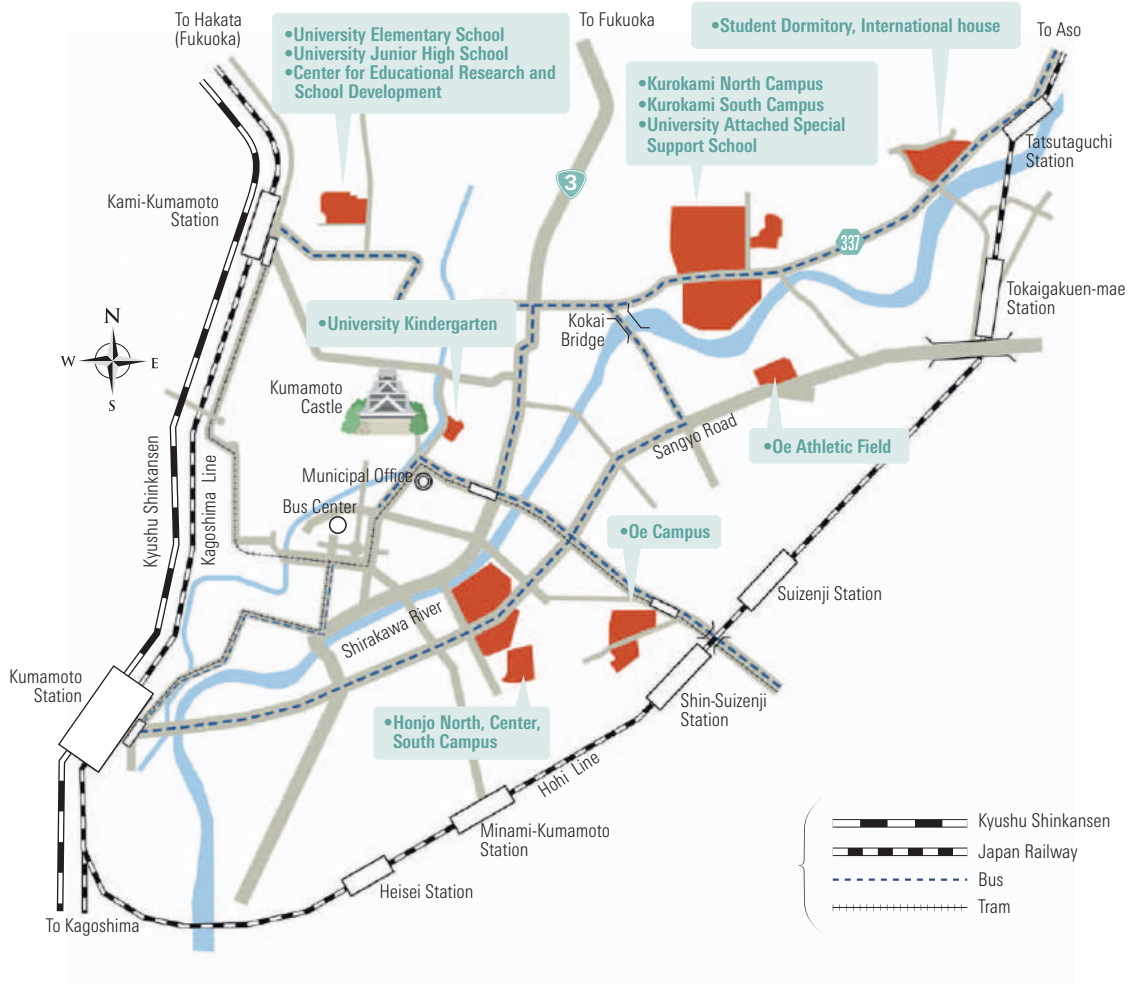
# LOCATION



## KYUSHU Island



## KUMAMOTO City



# HISTORY

**1756 Saishunkan established (Origin of School of Medicine and University Hospital)**

**1874 Kumamoto Teachers College established**

**1885 Kumamoto Pharmaceutical College established**

**1887 The Fifth High School established**

**1896 Kumamoto Medical College established**

**1897 Kumamoto Technical College established**

There were five institutions of higher education in Kumamoto during the Meiji Era which eventually united to form Kumamoto University. Among these institutions was The Fifth High School, which was a center for higher learning in western Japan, and provided students with preparatory education to enter the Japanese Imperial Universities. A number of foreign teachers joined the school to offer western culture and knowledge to the students.

These young men, aged from their teens to late twenties, resided in a dormitory, and built a tradition of student community as well as lasting friendships.

**1949 Kumamoto University established**

Kumamoto University was established under the National School Establishment Law that reformed the preceding Japanese educational system. The new university incorporated the older institutions described above.

At its establishment, The Fifth High School comprised six departments, with an enrollment of approximately 1,100 students.

Discussion of the school's curriculum began soon after the founding of the school. After the Graduate School of Medicine was established in 1955, other graduate schools were subsequently established within the university.

The establishment of research and education institutions within the university was started early on. In the 1950s, both Kumamoto University Hospital and the University Library were completed. In addition, a number of research centers that conduct the highest level of scholarly research have been consecutively established over the past 20 years.

**2004 Kumamoto University enters the 21st Century**

The acceptance of government-sponsored international exchange students started around 1960, but records indicate that several international exchange students studied in the Faculty of Medicine as early as the 1950s. Since the 1960s, though, the number of international students has been steadily increasing. There were approximately 50 international students at the university in 1984, and that number increased to over 300 twenty years later in 2004.

Since Kumamoto University became a National University Corporation in 2004, the university has been ushering in an era of change. Nevertheless, the university will still continue to strive for further advancements in education, research, and medical care based on the knowledge and experience it has gained since it was first established, in order to contribute to society in the 21st century.



## HISTORY OF THE UNIVERSITY HOSPITAL

The history of Kumamoto University Hospital goes back to the opening of the Hosokawa Clan Hospital in 1870. After being reorganized and relocated several times, the hospital was moved to its current location in 1901.

In 1949, after Kumamoto Medical College was absorbed into Kumamoto University, the name of the hospital was changed to Kumamoto University Hospital. It started with a system of eleven medical departments.

In the past several decades, in order to respond to the segmentation and advancement of medical services, the hospital established central consultation facilities as well as new medical departments with the aim of increasing efficiency, among other improvements.

Kumamoto University Hospital has grown to become a general hospital with technologically advanced medical facilities and a comprehensive medical system. It is still continuing to make advancements in its aim to become a university hospital that can continue to provide quality medical care in the 21st century.



## HISTORICAL FIGURES



**Lafcadio Hearn**  
(1850-1904)

Though he was of Irish extraction, he was born in Greece. He came to Japan in 1890. In 1891, he took up his new post at The Fifth High School. His work "Ghost Stories" (*Kaidan*) introduces Japan's mysterious traditions in English, and is widely known.



**Natsume, Soseki**  
(1867-1916)

In 1896, he came to Kumamoto to take up his new post as a lecturer at The Fifth High School. He was residing in Kumamoto during the time he went on the trip that appears in his famous novel *Kusamakura*.



**Ikeda, Hayato**  
(1899-1965)

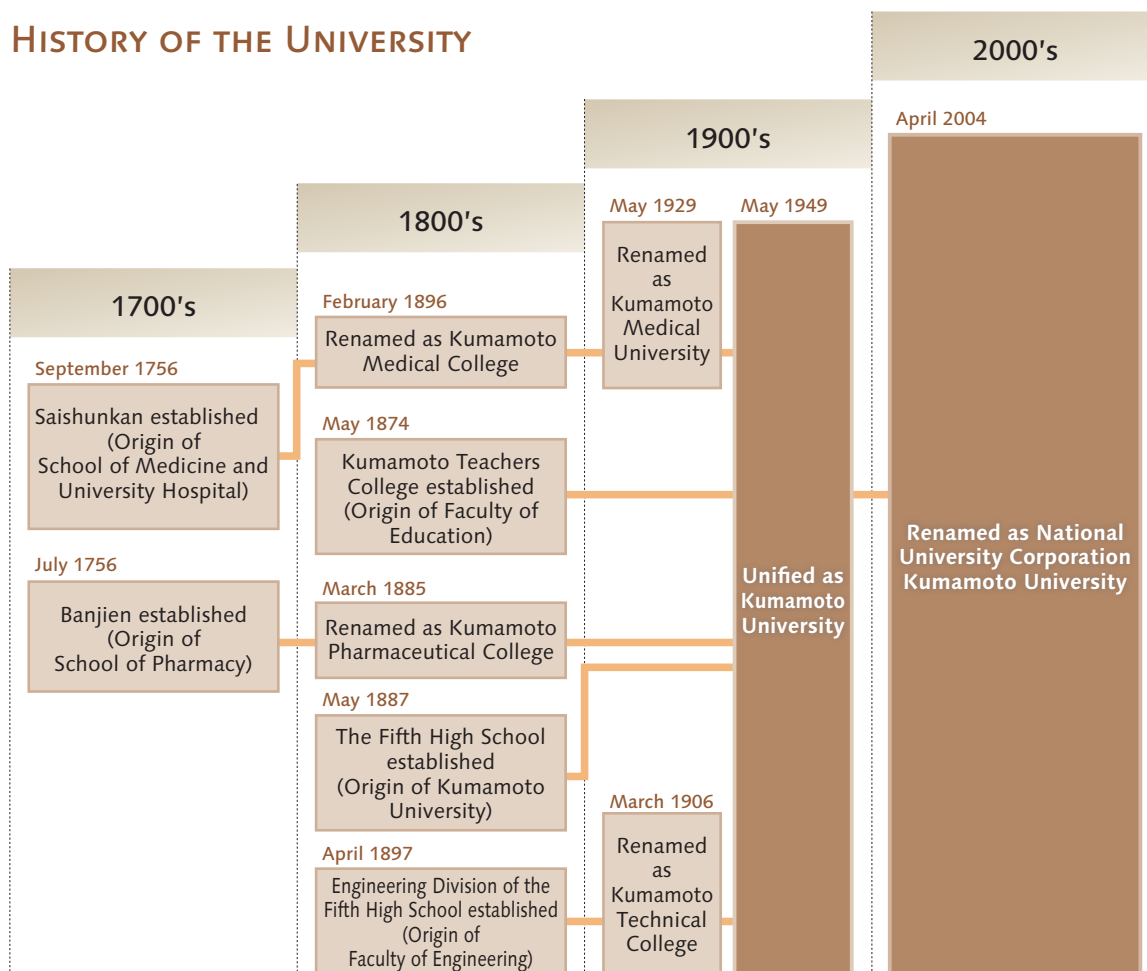
Hayato Ikeda was a politician who was born in Hiroshima prefecture and studied at The Fifth High School. He became the Prime Minister of Japan in 1960, and his administration led Japan for a prolonged time during its era of high economic growth.



**Sato, Eisaku**  
(1901-1975)

Eisaku Sato was a politician who was born in Yamaguchi prefecture and studied at The Fifth High School. He became the Prime Minister of Japan in 1964, and played a key role in the return of Okinawa to Japanese rule and the creation of Japan's "Three Non-Nuclear Principles." He received the Nobel Peace Prize in 1974.

## HISTORY OF THE UNIVERSITY



## KUMAMOTO UNIVERSITY MUSEUMS

The main building of the former Fifth High School, now the Memorial Museum, is the symbol of Kumamoto University. The building has been designated as a National Cultural Property, along with the Chemical Laboratory, the main gate, and the Museum of the Engineering Faculty. We also preserve the tangible cultural properties of the Yamazaki Memorial Hall on the Honjo campus and the Kumayaku Museum on the Oe campus. We are planning to create the “Kumamoto University Museum,” which will consist of these buildings and artifacts. As the first step in this process, the university initiated the renewal of the Memorial Museum of the Fifth High School in 2006, and is now gathering historical documents and materials. An exhibit is currently open to the public.

### 五高記念館



<http://www.goko.kumamoto-u.ac.jp/en/>

※ It is currently closed because of Kumamoto earthquake in 2016

### The Memorial Museum of the Fifth High School (National Cultural Property)

The Fifth High school was established for young boys as the most prominent educational institution in Kyushu in 1887. Jigoro Kano, Yakumo Koizumi (Lafcadio Hearn) as well as Soseki Natsume were among the more celebrated professors who taught here. Even after 120 years, the original Fifth High School building is still well-maintained and very much appreciated by the public.

Hours	10:00 – 16:00 (Entrance allowed up to 15:30)
Days Closed	Every Tuesday, August Obon holidays Year-end and New Year's holidays National holidays between December and February only
Admission	Free

### 正門 (赤門)



### The Front Gate (The Red Gate) (National Cultural Property)

The front gate of the Fifth High School is popularly known as the Red Gate (AKAMON) and is still the dignified main gate of the north campus of Kumamoto University.

### 化学実験場



### The Chemical Laboratory of the Fifth High School (National Cultural Property)

This building was used as the lab for chemical experiments. There is a row of labs as well as a tiered lecture hall with a corridor situated on the west side.

※ It is currently closed.

### 工学部研究資料館



### Museum of the Engineering Faculty (National Cultural Property)

This building was constructed in 1908 as a machine shop for students of the former Kumamoto Junior College of Technology. The exhibits include various machines and tools still in working condition. The public is welcome to visit the museum during Open Campus Days, the University Festival and of course the following Days.

Days Opened	The third Friday of the month (13:00–16:00)
Admission	Free

※ It is currently closed because of Kumamoto earthquake in 2016



## The Kumamoto Area

Kumamoto University is located in the city of Kumamoto in Kyushu, the southern-most main island of Japan. Kumamoto City is the third biggest city in Kyushu. It has a population of approximately 740,000, which is equivalent to about 41% of the total population of the prefecture. By air it takes 90 minutes from Tokyo and 60 minutes from Osaka; by Kyushu Shinkansen it takes 40 minutes from Fukuoka City.

The weather is generally mild, though there is a rainy season from early June to mid-July, followed by a sub-tropically hot summer season. Autumn and spring offer the most comfortable weather. Warm clothing is necessary in January and February. It seldom snows even in midwinter, and never more than a few centimeters.

Known for its abundance of trees and greenery, Kumamoto is one of Japan's oldest cities. While offering the latest in modern facilities, Kumamoto has managed to retain a purity and simplicity of old Japanese customs, flavor, and spirit which make it an interesting place to visit and a delightful place to live.

Local attractions include Kumamoto Castle, one of the oldest and grandest medieval castles in Japan; Kumamoto downtown area, located 10-15 minutes away from Kumamoto University by bicycle and known for a lot of office building and shopping streets; the Amakusa Islands, a chain of 120 islands known for their exciting Christian

history and plenty of rich nature; and Aso National Park, crowned by the active volcano Mt. Aso, with the largest caldera volcano in the world. Because of its proximity to Mt. Aso, the Kumamoto area also has an abundance of natural hot springs. Kumamoto is also well-known in Japan for its delicious drinking water. Because the rainfall that soaks into the ground in the mountains of the Aso region takes many years to come out, one can always be able to drink delicious water.



創造  
する森  
挑戦  
する炎



## Kumamoto University

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<http://ewww.kumamoto-u.ac.jp/>

“Forest of Creative Powers, Blaze  
of Challenging Spirits”

Kumamoto University (KU), a globally active research university with roots in local communities, has adopted a motto that symbolizes the university's brand attributes and expresses its essential quality: "KU Spirit."

Calligraphy by Mr. Takehiko Inoue, a manga artist known for SLAM DUNK, Vagabond and many more. He is a former student of the Faculty of Letters of Kumamoto University.