

# **Summary**

# 2024



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The Graduate School of Science and the Faculty of Science at Kyoto University originated in the year following the establishment of Kyoto Imperial University in 1897, when the departments of mathematics, physics, and chemistry were established within the School of Science and Engineering. In 1919, the Faculty of Science was established, and departments of astrophysics, geophysics, zoology, botany, and geology and mineralogy were added. Therefore, the Faculty of Science has a history of over 100 years. After World War II, a new graduate school was established in 1953 and began offering doctoral education, and from 1994 to 1995, the Faculty of Science was reorganized into one department, the Department of Science, and the graduate school was



divided into five specialized divisions: mathematics and mathematical analysis, physics and astrophysics, earth and planetary sciences, chemistry, and biological sciences. This organizational structure remains in place to this day.

Our science aims to search for truth of natural phenomena and to reveal the truth in a reasonable manner with free-minded and bold thinking. Most of the scientific discoveries that have had huge impacts on the world have come out of scientists' pure curiosity to understand the principles of natural phenomena. We have promoted highly original research that is not bound by current trends, respecting research based on the free ideas of each individual researcher. All of the faculty staff members feel impermanent joy and happiness in finding the true nature and essence of things. This curious, unique, versatile, and diverse faculty is what we at the Graduate School and Faculty of Science of Kyoto University are most proud of. We believe that it is because of this spirit that we have produced many researchers who have been awarded major prizes such as the Nobel Prize and the Fields Medal in our over 100 years history. We have also made significant contributions to education in the field of science in Japan. Our graduates are not limited to academia, but are active in a wide variety of fields in Japan, including business.

Research and education at the Graduate School of Science and Faculty of Science can also play a significant role in addressing various issues that exist in society. Japan today faces a variety of problems, including low birthrate, aging population, regional disparities, economic stagnation, climate change, and potential natural disaster risks. Similarly, the world faces many challenges as well. While science may not a discipline that directly contributes to solving these problems, it is arguably effective in fostering human resources with the advanced research skills needed to solve them. Students who study science acquire the ability to explore nature with completely new ideas, enabling them to generate deep insights and make bold conceptual shifts necessary for problem-solving. Additionally, science provides methods for information analysis, conceptual innovation, the introduction of novel technologies, and the presentation of entirely new ways of thinking, all of which are fundamental to problem-solving during the research process. In fact, it is a well-known fact that discoveries and inventions that significantly change society often emerge from directly unrelated fields. In this way, the Graduate School of Science and the Faculty of Science are organizations that can make a broad contribution to society, and we intend to continue to promote research and education without losing sight of this stance. As part of this effort, we established the Center for Science Adventure and Collaborative Research Advancement (SACRA) within the Graduate School of Science, and has promoted education in interdisciplinary fields represented by the 'Science Education Program to Promote the Spontaneous Creation of New Fields Based on Mathematics' (commonly known as the MACS Education Program).

Starting in the 2024 academic year, we will establish three new interdisciplinary research units within SACRA, 1) the Data Science Hypothesis Generation Unit, 2) the Unexplored Quantum Measurement Unit, and 3) the Earth and Life Coevolution Research Unit. These units will be staffed with young researchers who will lead future research endeavors.

We kindly request you to take a moment to learn more about our activities, and look forward to your cooperation and support in the future.

Koichiro Tanaka, PhD Dean and Professor Faculty and Graduate School of Science Kyoto University

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# **MISSION & OBJECTIVES**

Science comprises disciplines that explore the principles and laws governing natural phenomena. Through the products of scientific endeavor, these disciplines have contributed enormously to cultural advancements as intellectual assets and to universal improvements in human well-being and living standards across the globe.

Achievements to date: Since its inception over 100 years ago, Kyoto University's Faculty and Graduate School of

Science has made major discoveries in the fields of mathematics, physics, astronomy, earth and planetary sciences, chemistry and biological sciences, while also creating such new fields of study as primatology.

By doing so the school has garnered a stellar reputation worldwide, which is exemplified by its alumni as well as current and former faculty of the highest caliber, including **six Nobel laureates** and **two Fields Medal winners**.

**Mission:** We have the mission of enabling all enrolled students to elucidate the fundamental mechanisms of the natural sciences and, with that foundation, develop their abilities to pursue original research, create new intellectual value through pooled knowledge, and excel in independent career roles as researchers or responsible professionals.

To this end, we strive to be a place where academic freedom are preserved and promoted, and that is open to the public, students and academics at home and abroad.

**Objectives:** We value our students and faculty's autonomy and intellectual passion; commit ourselves to advancing fundamental and exploratory sciences; and seek to push back the frontiers of inter- and multi-disciplinary areas of study.

We also engage in teaching and research in the fields ranging from bio-sciences to nanotechnology to environmental and energy sciences, so as to address global issues pertaining to these areas.







# **Department of Mathematics**

Mathematics is an academic field revealing abstract relations between numbers, shapes, and other quantities. Although in its long history mathematics has established solid and lasting logical methodologies, countless new problems keep arising not only from within mathematics itself but also through the influence of other fields, such as physics, biology and economics, among others. New mathematical theories are being actively created one after another in order to deal with these new problems. In addition, owing to its power of



abstraction and universal nature, mathematics finds many unexpected applications in various fields, including information science, economics, as well as the natural sciences.

Numerous highly recognized mathematicians including two distinguished Fields Medalists, Dr. Heisuke Hironaka and Dr. Shigefumi Mori, are graduates of our department. Building on these precious assets in the spirit of "academic freedom" fostered by Kyoto University, the department of Mathematics has always been at the forefront of mathematical research worldwide.

In our graduate course, the education of young world-leading mathematicians successfully thrives on its rich traditions. After graduating from our program, graduates either pursue mathematical research, or play another active role in our society. In order to provide such graduate students with advanced expertise in mathematics, we created, amongst others, a cooperative course of Actuarial Mathematics. It is also our mission to train excellent junior and senior high school teachers of mathematics.

The research fields covered at the department of Mathematics are listed below.

**Research Fields:** Algebraic Geometry / Number Theory / Differential Geometry / Differential Topology / Algebraic Topology / Representation Theory / Complex Manifolds / Complex Analysis / Differential Equations / Operator Algebras / Functional Analysis / Probability Theory / Dynamical Systems / Algebraic Analysis / Mathematical Physics / Applied Mathematics / Computer Science / Actuarial Mathematics / Real Analysis / Discrete Group Theory

The Division of Mathematics & Mathematical Sciences consists of two courses; on the one hand it is the program in mathematics offered by the faculty of the Department of Mathematics at the Graduate School of Science, and on the other hand it is the program in mathematical sciences provided by the faculty of the Research Institute for Mathematical Sciences (RIMS).

Our undergraduate program offers the fundamental courses of algebra, geometry and analysis that were established in the first half of the 20<sup>th</sup> century, toward the understanding of modern mathematics. In addition, the department of Mathematics is responsible for general mathematics education for all undergraduate programs in Kyoto University. This includes in particular basic mathematics courses such as Calculus or Linear Algebra.



# Department of Physics I

In the Department of Physics I, research and education are carried out in order to interpret the characteristic properties of materials such as the macro-aggregate of atoms and molecules from the standpoint of modern physics in both experimental and theoretical approaches.



Research and educational activities are conducted in

cooperation with the Institute for Chemical Research, the Kyoto University Research Reactor Institute, and the Yukawa Institute for Theoretical Physics, in addition to the core courses, which consist of the following experimental and theoretical studies:

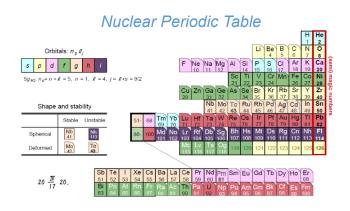
### **Research Fields:**

**Core Courses:** Physics of Disordered Systems / Quantum Optics / Low Temperature Physics / Solid State Spectroscopy / Quantum Materials /Quantum Condensed Matter / Dissipative and Life physics / Soft matter Physics / Statistical Physics and Dynamics / Theory of Condensed Matter Physics / Optical Materials Science **Cooperation Courses:** Neutron Scattering / Physics of Matter (Statistical Dynamics

**Cooperation Courses:** Neutron Scattering / Physics of Matter (Statistical Dynamics, Condensed Matter Physics, Quantum Computing)

# Department of Physics II

The Department of Physics II aims to clarify the universal and fundamental laws of nature, from micro-systems to the macro world. The main goals thereby are to advance theoretical and experimental research of basic physics in elementary particles, atomic nuclei and the Universe, as well as to promote graduate student education.



Research and educational activities are

conducted in cooperation with the Institute for Chemical Research, the Kyoto University Research Reactor Institute, and the Yukawa Institute for Theoretical Physics, in addition to the following core courses:

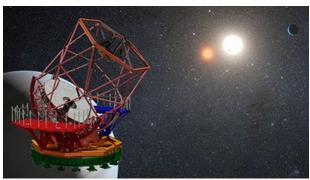
#### **Research Fields:**

**Core Courses:** Theoretical Particle Physics / Theoretical Nuclear Physics / Theoretical Astrophysics / High Energy Physics (particle experiments) / Experimental Nuclear and Hadronic Physics / Cosmic Ray Physics (experiments and observations) / **Cooperation Courses:** Beam Physics / Laser Matter Interaction Science / Nuclear Radiation Physics / Nuclear Beam Material Science

### Department of Astronomy

The Department of Astronomy is home to approximately 10 faculty members and 50 graduate students plus trainees, who work zealously on astronomical research over a broad spectrum of topics.

The studies of astronomy and astrophysics aim at describing various phenomena in



space with physical concepts and deepening our understanding of the Universe at different scales. Previous theses from our graduates have covered a wide range of topics from the active Sun, the evolution of stars and planetary systems, various types of transient phenomena and objects, interstellar phenomena, the evolution of galaxies, supernova explosions and their remnants, active galaxies, instrument design, construction and optimization and so on. The Department of Astronomy provides a diverse and vibrant environment for its students to grow and thrive thanks to its well-rounded curriculum and choices of mentors. Some of our faculty members offer research topics that involve works with a combination of theoretical and observational aspects, making our Department a unique place for prospective students who seek an opportunity to explore and experience both sides of the world.

**Research Fields:** Solar Physics / Solar & Cosmic Plasma Physics / Stellar Astrophysics / Galactic Astrophysics / Theoretical Astrophysics / Development of telescopes and instruments



# Department of Geophysics

The Department of Geophysics is composed of four groups; Physics of the Solid Earth, Hydrospheric Physics Atmospheric Physics, and Solar Planetary Electrodynamics. The faculty consists of instructors from the Department of Geophysics, the Institute for Geothermal Sciences, and the Data Analysis Center for Geomagnetism and Space Magnetism which all belong to the Graduate School of Science, as well as instructors from the collaborative courses of the Disaster Prevention Research Institute and the Research Institute for Sustainable Humanophere.

In the Department of Geophysics, we conduct research on the solid earth including the earth's core, mantle, and crust, and also on a wider range of



areas including the ocean, atmosphere and interplanetary space. We are advancing to clarify terrestrial dynamics which changes hourly and to forecast its variations by combining the analysis of ground-based and satellite data, and the studies utilizing theoretical, numerical, and simulation techniques.

**Research Fields:** Geodesy and Physics of Crustal Movements / Seismology and Physics of the Earth's Interior / Physical Volcanology / Tectonophysics / Environmental Geoscience / Physical Oceanography / Physical Hydrology / Atmospheric Sciences / Geothermal Sciences / Solar-Planetary Physics and Geomagnetism / Electromagnetism of the Earth's Interior

## Department of Geology and Mineralogy

The Department of Geology and Mineralogy is composed of four groups; Geotectonics, Earth and Planetary Materials Science, Historical Geoscience of the Biosphere and Cosmochemistry & Geochemistry.

In the Department of Geology and Mineralogy, researches are characterized by decoding the record of past events and elucidating the history of Earth and planet, through observation and analysis of sediments, rocks,

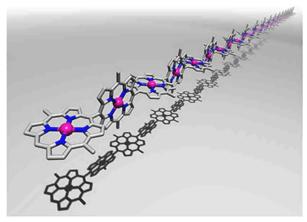


minerals, and fossils, from the field and indoor experiments, within the context of Earth's and planetary evolution. Therefore, the curriculum is designed so that students can systematically acquire the advanced knowledge and analytical methods of each field.

**Research Fields:** Geotectonics /Earth and Planetary Materials Science (Petrology, Mineralogy) / Historical Geoscience of the Biosphere (Paleoenvironmental Studies, Tectonics and Paleontology) / Cosmochemistry and Geochemistry

### **DIVISION OF CHEMISTRY**

Chemistry, as the core investigative system of "Material Science," has played a central role in the development of this science which supports contemporary society, built around the hubs of a systematic understanding of the principles and laws governing the character of material, and the creation of newer and more expedient materials. The research objective of chemistry is all materials which exist as gases, liquids, and in a solid state, and ranges diversely from simple organic & inorganic compounds and



metallic units to complex organism-related molecules.

The Division of Chemistry is comprised of 26 laboratories, 16 from the Department of Chemistry (Kitashirakawa Campus), 8 from the Institute for Chemical Research (Uji Campus), 1 from the Institute for Life and Medical Sciences (Hospital Campus), 1 from the Institute for Integrated Radiation and Nuclear Science (Kumatori Campus), and 3 laboratories headed by the adjunct faculty members of Kyoto University.

The field of research and education in the Division of Chemistry envelopes the diversity and multilayer characteristics which chemistry possesses, and is mainly classified into four areas: Theoretical & Physical Chemistry, Inorganic Chemistry of Materials, Organic Chemistry, and Chemical Biology. By integrating the study of these four areas, we are developing ultimately desired innovations in the fundamental fields such as the precise description of chemical reactions and the methodology to synthesize arbitrary molecules. Additionally, our objective in this Division is to enhance fundamental chemical concepts into a highly complex system including vital phenomena, and as a result foster graduate students who can accomplish such research.

#### **Research Fields:**

**Core Courses:** Solid-State Chemistry / Biological Structural Chemistry / Quantum Chemistry / Theoretical Chemistry / Molecular Spectroscopy / Physical Chemistry / Photo-physical Chemistry / Molecular Chemical Physics / Molecular Materials Science/ Solid State Physics and Chemistry / Inorganic Chemistry of Materials / Surface Chemistry / Synthetic Organic Chemistry / Organic Chemistry / Organic Chemistry of Molecular Assembly / Chemical Biology /

**Cooperation Courses:** Organoelement Chemistry / Electron Microscopy and Crystal Chemistry / Molecular Aggregates / Chemistry for Functionalized Surfaces / Hydrospheric Environment Analytical Chemistry / Advanced Inorganic Synthesis / Advanced Solid State Chemistry / Nanospintronics / Radiation Biochemistry / Biological Membrane System



# Department of Zoology

The Department of Zoology consists of the following three groups:

In the Science of Natural History Group, we advance the research of the function and mechanism of animal behavior, classification, systematics and biogeography of terrestrial



and freshwater animals, and adaptation, speciation and diversity of insects and fish.

In the Zoological Science Group, we conduct research to clarify the molecular mechanism of animal development and evolution, determination of the complete genome sequences of basal chordates, and the mechanism of speciation and the restraint of gene-mutation.

In the Anthropology Group, we conduct behavioral and ecological researches on various primates such as Japanese macaques and great apes, morphological investigation of fossils of Hominoidea, and research on paleoenvironments, in order to clarify the position of *Homo sapiens* in nature and the process of its evolution.

**Research Fields:** Systematic Zoology / Ethology / Animal Ecology / Developmental Biology / Stress Response Biology / Physical Anthropology / Human Evolution Studies / Marine Biological Science / Ecological Science I / Maintenance of Genetic Information

# Department of Botany

The Department of Botany consists of two groups:

In the Molecular Plant Sciences Group, we study molecular mechanisms underlying reception and transduction of outer environmental signals, biological timing system and its diversification, morphogenesis in primitive multicellular eukaryotes, functional differentiation of organelles of plant cells, and regulation of photosynthesis.



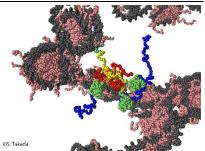
The Plant Systematics and Evolution Group comprehensively analyzes information such as the morphological and anatomical characteristics of plants, genome sequences and DNA fragment length polymorphisms to clarify plant diversity and the process of phylogenetic evolution.

**Research Fields:** Plant Physiology / Chronobiology / Plant Phylogeny and Taxonomy / Plant Molecular Physiology / Plant Molecular Genetics / Ecological Science II

## **Department of Biophysics**

The Department of Biophysics consists of three Groups:

The Integration Biology Group elucidates the molecular mechanism of expression, maintenance, and regulation of synaptic plasticity, studies the molecular mechanism of evolution and the diversity of living organisms, and



promotes the theoretical study of the structure and function of biomolecules.

In the Signal Biology Group, we research the structure & function of signaling proteins, and the molecular mechanism which adjusts the expression of genome information.

The Systems Biology Group investigates the molecular mechanism of sight, and the cellular and molecular mechanism of skeleton construction in sponges.

**Research Fields:** Biomolecular Information Science / Structural Physiology / Molecular Biology / Neurobiology / Theoretical Biophysics / Molecular Physiology / Molecular Embryology / Genome Integrity and Control



The Astronomical Observatory is mainly composed of the following three branch observatories:

(1) Okayama Observatory has a 3.8 m new technology optical infrared telescope that is called "Seimei telescope", aiming at observations of black hole X-ray binaries, gamma ray bursts, stellar flares, and planetary formation regions.

(2) Hida Observatory has two characteristic solar



telescopes, i.e. the Domeless Solar Telescope (DST) and the Solar Magnetic Activity Research Telescope (SMART).

(3) Kwasan Observatory is used for public outreach and education and training of graduate and undergraduate students.

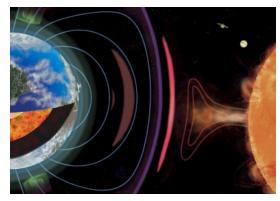
Research and education in the Astronomical Observatory consist of the following areas. It is conducted by the Observatory members and/or under collaboration with the members of the Department of Astronomy and researchers outside the Observatory:

- The development of astronomical telescopes and instruments by using cutting-edge technology is one of the most important research activities of the Observatory.
- Solar physics research whose objective is observationally to clarify atmospheric structure and the mechanism of energy storage, dissipation, and transport, based on high resolution observation of the solar atmospheric structure and solar active phenomena.
- Solar and cosmic plasma physics research approaches the hydromagnetic, active phenomena of the universe which extends to the sun, stars, and even to galaxies, through theoretical simulation and analysis of observational data.
- Stellar physics research which primarily targets transient active phenomena such as black hole X-ray binary stars, cataclysmic variables, gamma-ray bursts, stellar flares, and other transient objects and phenomena, principally based on spectroscopic and photometric observation in the optical and near-infrared range.
- Research on galaxies, star formation, planetary-system formation, etc. is also conducted under the collaboration.

**Research Fields:** Solar Physics / Solar & Cosmic Plasma Physics / Stellar Astrophysics / Development of telescopes and instruments



**Data Service**: Data Analysis Center for Geomagnetism and Space Magnetism operates the World Data Center (WDC) for Geomagnetism, Kyoto. The WDC is a regular member of the World Data System which is an interdisciplinary body of the International Science Council. As WDC, we provide geomagnetic field data supplied from a worldwide network of magnetic observatories, and geomagnetic indices derived in this Data



Analysis Center to the research community. Our data archive is regarded as one of the best repositories in the world in terms of both quality and quantity.

**Education and Research**: Through the analysis of data associated with plasma phenomena occurring in outer space around the Earth, we study the structure and formation mechanisms of currents flowing in outer space, the origin and propagation mechanism of plasma waves, and the electrical structures of the Earth, planets and their moons. We also promote comprehensive analyses of the origin and variation of the geomagnetic field.

**What is Geomagnetic Field**: The geomagnetic field is mostly dipolar like a magnetic field of a strong magnet at the center of the Earth directing to the south. There were many occasions in the past that the direction of the geomagnetic field was opposite to the present Earth. We call the temporal geomagnetic variation with timescales of 10 - 1,000 years 'secular variation' in which strength as well as direction of the geomagnetic field varies. Both the geomagnetic field itself and its secular variation are almost caused by the currents flowing in the Earth's liquid outer core. On the contrary, the variations of less than about 10 years period are mostly caused by the currents flowing external to the Earth. 'Geomagnetic storms' have durations of several days, during which the geomagnetic field is severely disturbed from its normal state. There is another phenomenon called the substorm, in which the geomagnetic field in the polar region is perturbed by strong electric currents flowing in the upper atmosphere with timescales of tens of minutes. Bright auroras show intense variations at the time of the substorm. The geomagnetic field also shows daily variations because of the Earth's rotation.

**Research Fields:** Space Plasma Physics / Upper Atmospheric Physics / Electromagnetic Induction in the Earth and planets / Physics and Informatics of Natural Electromagnetic Environment

### **Institute for Geothermal Sciences**

The Institute for Geothermal Sciences was launched in 1997 for the purpose of "research and education of thermal structure and thermal phenomena, from Earth's crust to its mantle," by integrating both the Beppu Geophysical Research Laboratory (in Beppu City, Oita Prefecture: established in 1924) and the Aso Volcanological Laboratory (in Minamiaso Village, Kumamoto Prefecture: established in 1928).



The facilities in Beppu serve as the headquarters, and those in Aso are referred to as the Volcanological Research Center, while the branch institute is located in Kyoto. All three facilities promote both educational and research activities.

We recognize the premise that "the earth is a huge thermomotor, which converts its internal thermal energy into the crustal phenomena of diastrophism, seismic activity, volcanic activity, and terrestrial heat hot spring activity and the like." We therefore aim to promote comprehensive earth science research concerning geothermal activity, by making the best use of our geographical advantage, and emphasizing observation, surveys, and experiments in the central part of Kyushu Island, which is considered "a huge experimental facility" of geothermal activity.

**Research Fields:** Geothermal Sciences / Physical Volcanology / One segment of the field of Hydrological Geophysics, Seismology, Electromagnetism of the Earth's Interior, and Active Tectonics

# **Center for Science Adventure and Collaborative Research Advancement (SACRA)**

The Center for Science Adventure and Collaborative Research Advancement (SACRA) was established in the Graduate School of Science, Kyoto University, on April 1, 2019. SACRA promotes interdisciplinary and frontier sciences by producing and supporting researchers who will lead the next generation in the natural sciences. The center also contributes to the whole



school by handling important matters such as international relations and community outreach.

SACRA consists of three divisions and two offices: the Interdisciplinary Science Division, the Publicity & Community Relations Division, the International Strategy Division, the Admission Strategy Office, and the Strategy Planning Office.

• <u>Interdisciplinary Science Division</u>, covers the boundary areas of the GSS's five academic disciplines, and promotes the frontier sciences.

• <u>International Strategy Division</u>, facilitates international research collaborations and promotes the recruitment and exchange of international students and researchers.

• <u>Publicity & Community Relations Division</u>, is responsible for all public relations and outreach in GSS. Whilst publicizing our educational and research activities both in print and via websites, it also hosts various scientific events for the local and broader communities.

• <u>Admission Strategy Office</u>, implements initiatives to attract students from diverse backgrounds, with a particular focus on increasing the proportion of female students and international students.

• <u>Strategy Planning Office</u>, supports and coordinates projects implemented by the above-mentioned three divisions and one office. The Strategy Planning Office also serves as a contact point and information hub of the GSS.

# Faculty & Staff

1 May 2024

Faculty				Total
Professor	85	(Limited term)		
Associate Professor	84	Faculty member	43	
Senior Lecturer	7	Researcher	19	
Assistant Professor	79			
Total	255	Total 62		
Staff			493	
Administrative Staff		(Limited term)		
Technical Staff	14	Specialist 7 Administrative Staff		
Counselor	1	Staff 114		
Total	55	Total	121	

# Number of Students

Graduate School 1 May 2					
Course	Master Course	Doctoral Course			
Mathematics and Mathematical Analysis	115(9)	56(8)			
Physics and Astronomy	179(4)	147(15)			
Earth and Planetary Sciences	94(7)	64(20)			
Chemistry	138(9)	82(33)			
Biological Sciences	119(17)	148(50)			
Subtotal	645(46)	497(126)			
Total	1,142(172)				

Number of international students are shown in parenthesis.

Undergraduate School						1 May 2024
Grade	1	2	3	4	Total	Non-degree seeking students
Undergraduate School of Science	311(6)	317(7)	324(5)	450(7)	1,402(25)	4

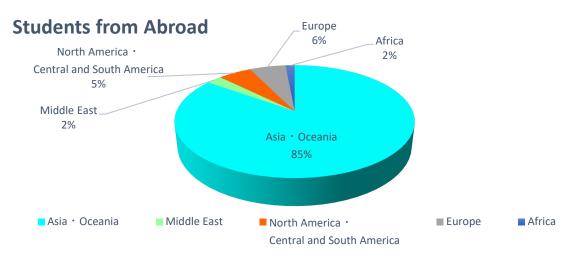
Number of international students are shown in parenthesis.

# **Students from Abroad**

#### Students from Abroad

								1 May 2024
Category Country/	Undergrad uate	Special Auditor (Undergraduate)	Credited Auditor (Undergraduate)	Total	Grac Master's	luate Doctoral	Research Student (Graduate)	Total
Region		(Undergraduate)	(Undergraduate)		Course	Course	(Graduate)	
Ireland				0	1			1
Iran				0	2	2		4
India				0	1	5		6
Indonesia	2			2	1	4		5
Egypt				0		1		1
Canada				0		1		1
Cuba				0		1		1
Kenya				0		1		1
Colombia				0	1			1
Spain				0		1		1
Solomon Islands				0			1	1
Thailand	1			1	1	1		2
Tanzania				0	1			1
Chile				0		1		1
Germany	1			1		1	2	3
Bangladesh				0			1	1
Philippines	2			2		1		1
France				0		3		3
Brazil	1			1		1		1
Vietnam	2			2				
Belgium				0		1		1
Poland				0		1		1
Portugal				0		1		1
Malaysia	1			1	1			1
Myanmar	1			1				
Mexico				0		2		2
Mongolia	1			1				
Lebanon	1			1				
Republic of Korea	7			7	10	8		18
Hong Kong				0	3	2		5
Taiwan	2			2		5		5
China	3			3	24	80	4	108
United States				0		2	1	3
Total	25			25	46	126	9	181

Commonly known names are used for the contry names.



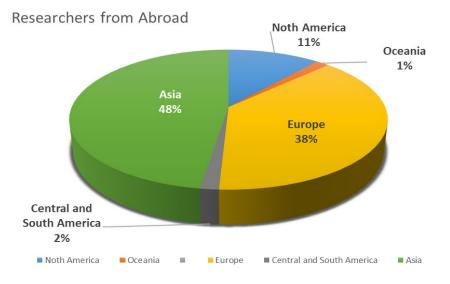
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# **Researchers from Abroad**

### **Researchers from Abroad**

Academic Year 2023(Apr.1-Mar.3					
Category	Guest Scholar	Guest Research Associate	Total		
United States	3	2	5		
United Kingdom		4	4		
Italy	1	1	2		
India	1	3	4		
Indonesia	1		1		
Australia		1	1		
Canada		2	2		
Switzerland		2	2		
Spain	2	2	4		
Thailand		1	1		
Bangladesh		1	1		
Brazil		1	1		
France	1	8	9		
Vietnam		1	1		
Lithuania		1	1		
Russia	1	1	2		
Republic of Korea	1	2	3		
Taiwan		3	3		
China	4	11	15		
Japan	1		1		
Total	16	47	63		

Commonly known names are used for the country names.



# International Exchange

#### International Exchange

Departmental-level N	Pepartmental-level Memoranda for Academic Cooperation and Exchange 1 May 201					
Country/Region	Institution's Name	Title	Since			
Gabonese Republic	Le Centre National de la Recherche Scientifique at Technologique	Convention de Cooperation Internationale entre L'Institut des Sciences de l'Universite de Kyoto et Le Centre National de la Recherche Scientifique et Technologique				
Republic of Indonesia	The National Coordinating Agency for Surveys and Mapping	Protocol of Agreement between the National Coordination Agency for Surveys and Mapping (BAKOSURTANAL), CIBINONG, Indonesia and the Graduate School of Science, Kyoto University, Kyoto, Japan, for Precise Gravity Measurements in Indonesia	10 January 2005			
United Kingdom of Great Britain and Northern Ireland, and Federal Republic of Germany	University of Bristol Botanic Garden; Botanic Garden and Herbarium, Heidelberg	Memorandum of Understanding: a Partnership to Promote the Objectives of the Global Strategy for Plant Conservation (GSPC)	6 November 2015			
United States of America	College of Science, University of Utah	Memorandum of Understanding concerning Academic Cooperation between the College of Science at the University of Utah, USA and the Graduate School of Science and the Research Institute for Mathematical Sciences at Kyoto University, Japan	13 October 2016			
China	Chengdu Institute of Biology, Chinese Academy of Sciences	General Memorandum of Understanding for Academic Cooperation and Exchange between Chengdu Institute of Biology, Chinese Academy of Sciences and Graduate School of Science, Kyoto University	10 July 2017			
United Kingdom	University of Edinburgh	General Memorandum for Academic Cooperation and Exchange between the University Court of the University of Edinburgh and the Faculty and Graduate School of Science, the Research Institute for Mathematical Sciences, Kyoto University	24 September 2020			
Republic of Croatia	Institute of Physics	General Memorandum for Academic Cooperation and Exchange between the Faculty and Graduate School of Science, Kyoto University and Institute of Physics	17 November 2020			
China	The School of Environmental and Chemical Engineering of Shanghai University	General Memorandum for Academic Cooperation and Exchange between the Graduate School of Science and Kyoto University Institute for Advanced Study of Kyoto University, Japan and the School of Environmental and Chemical Engineering of Shanghai University, China	6 February 2024			

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Departmental-level Student Exchange Agreements 1					
Country/Region	Institution's Name	Title	Since		
Federal Republic of Germany, France, United States of America, China	University of Bonn, École Normale Supérieure, New York University, Peking University	Memorandum of Understanding for GlobalMathNetwork	01 July 2017		
United Kingdom	University of Edinburgh	Student Exchange Agreement between the University Court of the University of Edinburgh and the Faculty and Graduate School of Science, the Research Institute for Mathematical Sciences, Kyoto University	24 September 2020		
Madagascar	University of Antananarivo	Student Exchange Agreement between The Faculty of Science, The Faculty of Arts and Human Sciences, University of Antananarivo, Madagascar and The Graduate School of Asian and African Area Studies, The Faculty and Graduate School of Agriculture, The Faculty and Graduate School of Science, Kyoto University, Japan	25 November 2021		



Railway Station	Transportation from the Station	Boarding Bus Stop	Bus Route No.	Travel Time	Arrival Bus Stop
JR Kyoto Sta.		Kyoto Sta.	206, 7	35 min	Hyakumanben (206) Kyodai Nogakubu-mae(7)
Hankyu Railway Kyoto Kawaramachi Sta.		Shijo Kawaramachi	203, 201, 31, 7, 3	25 min	Hyakumanben (201,31,3) Kyodai Nogakubu-mae (203,7)
Subway Karasuma Line Imadegawa Sta.	Kyoto City Bus	Karasuma Imadegawa	203, 201	15 min	Hyakumanben (201) Kyodai Nogakubu-mae (203)
Subway Tozai Line Higashiyama Sta.		Higashiyama Sanjo	206, 201, 31	20 min	Hyakumanben
Keihan Railway		Demachiyanagi Sta.	203,201,7,3	8 min	Kyodai Nogakubu-mae(203,7) Hyakumanben (201,3)
Demachiyanagi Sta.	Walk			20 min	

See also: https://www.kyoto-u.ac.jp/en/access/



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