HIROSHIMA UNIVERSITY

UNIVERSITY OF WORLD-WIDE REPUTE AND SPLENDOR FOR YEARS INTO THE FUTURE

In the academic year 2024,
Hiroshima University will celebrate its
75+75th Anniversary.

In 2024, Hiroshima University will celebrate the 75th anniversary of its establishment and the 150th anniversary since the founding of its oldest predecessor school, which was built 75 years before HU's formation.

A logo and catchphrase marking the 75+75th anniversary have been adopted!

Row out into
a sea of chaos;
go beyond the horizon
of creativity.

PROSPECTUS

2022-2023

UNIVERSITY OF WORLD-WIDE REPUTE AND SPLENDOR FOR YEARS INTO THE FUTURE

Hiroshima University Guiding Principles

We embrace the university's founding principle of "a single unified university, free and pursuing peace," striving to fulfill our missions as a national university under five guiding principles.

Hiroshima University was established on the land of Hiroshima as a 'university of peace' in 1949, four years after the atomic bomb was dropped. Since then, HU has continued its progress as a leading comprehensive research university in Japan. I am pleased to state that the project of integrating research by four graduate schools (Humanities and Social Sciences, Advanced Science and Engineering, Integrated Sciences for Life, and Biomedical and Health Sciences) has been launched, and now smoothly moving forward toward the scheduled opening of the Graduate School of Innovation and Practice for Smart Society in April 2023. In this new structure, researchers of the four graduate schools are expected to work together to produce integrated knowledge and realize innovative practices. Aiming to further expand globally while remaining deeply rooted in the local community, Hiroshima University will seek to open a new horizon in the fields of education, research and social contribution in the "with- and post-coronavirus" eras.

OCHI Mitsuo
President
Hiroshima University

CONTENTS

MIRAI CREA, a new facility of international exchanges

Hiroshima University Phoenix International Center MIRAI CREA, opened on the Higashi-Hiroshima Campus in October 2021, is slated to serve as a hub of innovation, knowledge sharing, and various international and domestic encounters and exchanges among students and researchers, as well as a base for community building through town-and-gown collaboration.

ASU-Hiroshima University Global Initiative

In August 2022, The Thunderbird School of Global Management-Arizona State University-Hiroshima University Global Initiative was launched. Through interaction with students admitted from abroad, this joint operation by the two universities enables students to experience an international-campus environment while studying at HU.

HU ranked third among Japan's universities in terms of global performance in achieving the SDGs

Hiroshima University was ranked third among Japan's universities (ranked between 100th and 200th worldwide out of 1406 universities) in "THE Impact Rankings 2022," which evaluates how universities contribute to society with the United Nation's Sustainable Development Goals (SDGs) as indicators. Hiroshima University also ranked among the world's top 100 in five of the SDGs.

Ranked among the world's top 100 in five of the SDGs

The School of Law to be relocated to Hiroshima City

Starting April 2023, classes of the School of Law will be held on the Higashi-Senda Campus in Naka-ku, Hiroshima City following its relocation. A "New center for humanities and social sciences with a focus on nurturing legal professionals," will be formed in this environment where numerous law firms and businesses, the Hiroshima High Court, and the Hiroshima High Public Prosecutors Office are located.

Embodying its founding principle of "a single unified university, free and pursuing peace," Hiroshima University is one of the largest comprehensive research universities in Japan. Today, HU is making steady progress as a global university, taking on worldwide challenges and strengthening its global educational network by signing international exchange agreements with universities around the world and opening overseas bases at strategic locations.

Organization for Education and Research (as of April 1, 2022)

National University Corporation Hiroshima University

Schools (undergraduate)

School of Integrated Arts and Sciences	Department of Integrated Arts and Sciences
	Department of Integrated Global Studies
School of Letters	Department of Humanities
School of Education	Cluster 1 (School Education)
	Cluster 2 (Science, Technology and Society Education)
	Cluster 3 (Language and Culture Education)
	Cluster 4 (Life-long Activities Education)
	Cluster 5 (Fundamentals for Education and Human Development)
School of Law	Department of Law
School of Economics	Department of Economics
	Center for Research on Regional Economic Systems
School of Science	Department of Mathematics
	Department of Physics
	Department of Chemistry
	Department of Biological Science
	Department of Earth and Planetary Systems Science
	Center for Developing Pioneers in Science
School of Medicine	Program of Medicine
	Program of Health Sciences
School of Dentistry	Program of Dentistry
	Program of Oral Health Sciences
School of Pharmaceutical Sciences	Program of Pharmaceutical Sciences
	Program of Medicinal Sciences
	Experimental Station of Medicinal Plants
School of Engineering	Cluster 1 (Mechanical Systems, Transportation, Material and Energy)
	Cluster 2 (Electrical, Electronic and Systems Engineering)
	Cluster 3 (Applied Chemistry, Biotechnology and Chemical Engineering)
	Cluster 4 (Civil Engineering and Architecture)
School of Applied Biological Science	Department of Applied Biological Science
	Training and Research Vessel *TOYOSHIO MARU*
School of Informatics and Data Science	Department of Informatics and Data Science

Graduate Schools

Graduate School of Humanities and Social Sciences	Division of Humanities and Social Sciences
	Division of Educational Sciences
	Division of Professional Development for Teachers and School Leaders
	Division of Law School
	Joint International Master's Programme in Sustainable Development (Hiroshima University – University of Graz)
Graduate School of Advanced Science and Engineering	Division of Advanced Science and Engineering
	Joint International Master's Programme in Sustainable Development (Hiroshima University – Leipzig University)
Graduate School of Integrated Sciences for Life	Division of Integrated Sciences for Life
Graduate School of Biomedical and Health Sciences	Division of Biomedical Sciences
	Division of Integrated Health Sciences

Advanced Course

Special Course of Special Support Education

Attached Research Institute

Research Institute for Radiation Biology and Medicine	Division of Radiation Information Registry

Hospital

Libraries

- Central Library
- East Library
- West Library
- Kasumi Library
- Higashi-Senda Library

Headquarters for Education

National Joint Usage Facilities

- Hiroshima Synchrotron Radiation Center

Joint Usage Facilities for National Universities in the Chugoku/Shikoku Area

- Saijo Seminar House

Joint Education and Research Facilities on Campus

- Research Institute for Nanodevices
- Research Institute for Higher Education
- Information Media Center
- Natural Science Center for Basic Research and Development
- Morito Institute of Global Higher Education
- Health Service Center
- The Center for Peace
- Environmental Research and Management Center
- Hiroshima University Museum
- Beijing Research Center
- Hiroshima Astrophysical Science Center
- Institute for Foreign Language Research and Education
- Hiroshima University Archives
- Institute of Sport
- HiSIM Research Center
- Research Center for Diversity and Inclusion
- Amphibian Research Center
- Translational Research Center
- Resilience Research Center
- Center for Brain, Mind and KANSEI Sciences Research
- Hiroshima University Genome Editing Innovation Center
- Hiroshima University Digital Monozukuri (Manufacturing) Education and Research Center
- Education and Research Center for Artificial Intelligence and Data Innovation
- The IDEC Institute
- Academic-Environment Social Governance Science and Technology Research Center
- Town & Gown Institute of Innovation for the Future

Joint Usage Facility on Campus

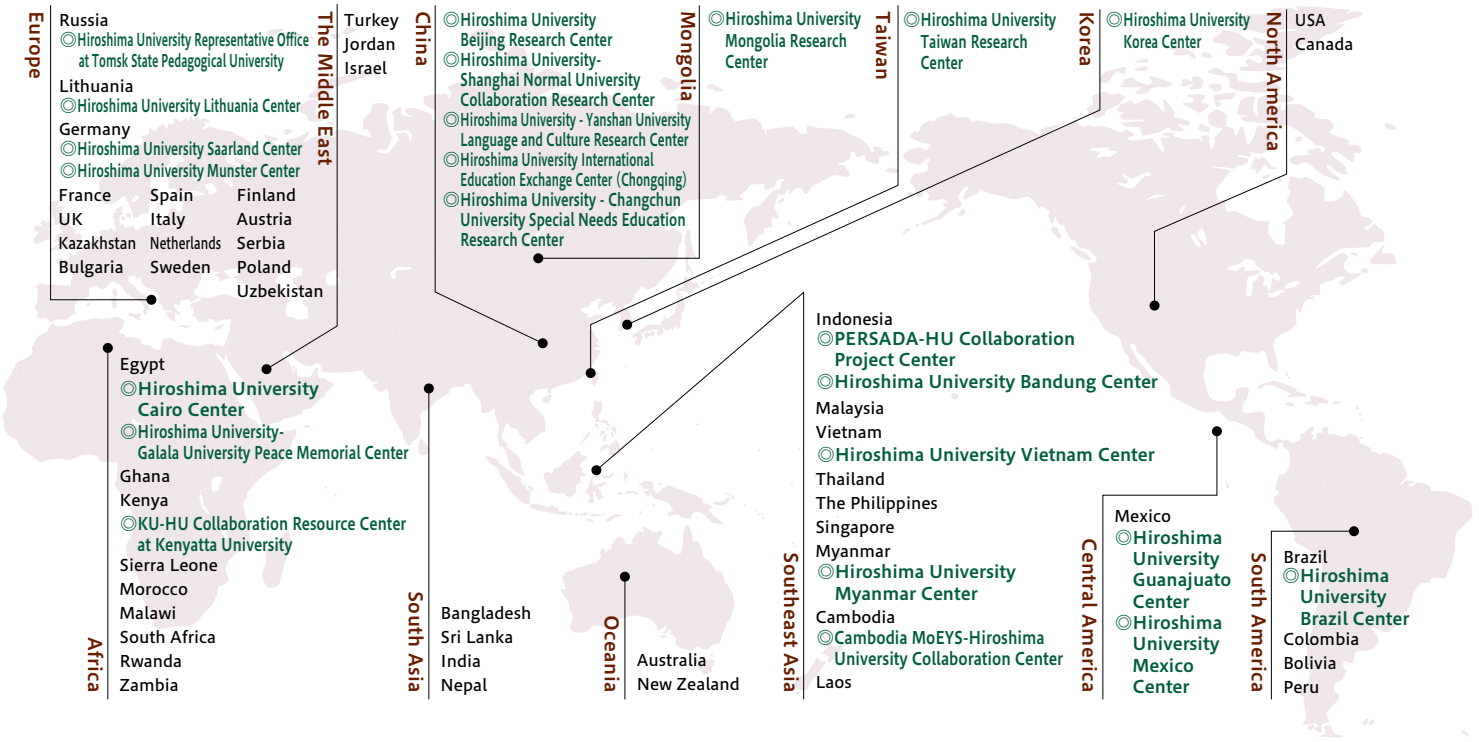
- Harassment Consultation Office

Attached Schools

Overseas Network and Bases (as of May 1, 2022)

Hiroshima University has international exchange agreements at the university level in 55 countries and regions, as well as at the faculty level in 51 countries and regions. It has overseas bases in 15 countries/regions: Brazil, Cambodia, China, Egypt, Germany, Indonesia, Kenya, Korea, Lithuania, Mexico, Mongolia, Myanmar, Russia, Taiwan and Vietnam.

*University-level international exchange agreements have been concluded in the countries/regions listed on the map.



International Exchange Agreements

Inter-university
55 countries and regions
347 organizations
391 agreements

Inter-faculty
51 countries and regions
366 organizations
403 agreements


Signing an inter-university agreement with the University of Parma, Italy (October, 2019)


Opening of the Hiroshima University Munster Center (May, 2019)

University Offices Outside Hiroshima Prefecture

The Tokyo Office supports Hiroshima University's teachers and staff in their activities in the Tokyo area and students in their job-hunting activities. The Osaka and Fukuoka Branches provide consultation services on college admission. In the fall of 2022, "Kiteminsai Lab" was opened for use as a coworking space and to sell industry-academia collaboration products.

Tokyo Office
2F Saiwai Building, 1-3-1 Uchisaiwai-cho, Chiyoda-ku, Tokyo

Office of Admissions, Osaka Branch
No. 139, Urban Office Kitahama, 3F, T・M・B Doshomachi Bldg., 2-1-10 Doshomachi, Chuo-ku, Osaka City, Osaka

Office of Admissions, Fukuoka Branch
No. 123, Urban Net Hakata Bldg., 4F 2-5-1 Hakata-eki Higashi, Hakata-ku, Fukuoka City, Fukuoka

Kiteminsai Lab
2F Hiroshima JP Building, 2-62 Matsubara-cho, Minami-ku, Hiroshima City

Attached Schools

The basic principle and role of the attached schools of Hiroshima University is to support the sound growth of people both within and outside of those schools. Its predecessors include Hiroshima Higher Normal School and Hiroshima Normal School. They provide kindergarten, elementary, middle school, and high school students with opportunities to learn a little about university education, aiming to help children develop into adults who can fulfill diverse roles. Those schools also serve as places for teaching practice where university students can become high-quality teachers.

Midori District (Hiroshima City)


Hiroshima University Elementary School


Hiroshima University Junior High School
Hiroshima University Senior High School

Shinonome District (Hiroshima City)


Hiroshima University Elementary School, Shinonome


Hiroshima University Junior High School, Shinonome

Higashi Hiroshima District (Higashi Hiroshima City)


Hiroshima University Kindergarten

Mihara District (Mihara City)


Hiroshima University Kindergarten, Mihara


Hiroshima University Elementary School, Mihara


Hiroshima University Junior High School, Mihara

Fukuyama District (Fukuyama City)


Hiroshima University Junior High School, Fukuyama
Hiroshima University Senior High School, Fukuyama

YAMAGIWA Juichi, Ph.D.
Director-General,
Research Institute for Humanity
and Nature

FEATURE:
SPECIAL
TALK

Talking about leadership in th

Leading JANU and SCJ in times of turmoil

Ochi: Dr. Yamagiwa, I have been privileged to know you personally through our engagements with the Japan Association of National Universities (JANU) and the Science Council of Japan (SCJ). Today, I'd like to talk with you about your years as the President of Kyoto University, your childhood, your research on gorillas and how exciting that must have been, and so on and so forth. Now, how do you occupy your days, now that you have left the post of President of Kyoto University after six years of service?

Yamagiwa: I work as the Director-General of the Research Institute for Humanity and Nature (RIHN), which is located in Kyoto. The RIHN is one of the six research institutions that constitute the research structure focusing on human culture within the Inter-University Research Institute Corporation. It may sound like a natural science research center, but its main research interests are in the humanities, which we pursue by placing environmental issues in the main framework of research on human culture. We publicly solicit and fund research projects that combine Humanities and Natural Sciences.

Ochi: While you were the President of Kyoto University, you also served as the President of the JANU and the SCJ. I myself served as a JANU trustee and a member of the SCJ while being a university president. It was quite tough juggling these roles.

Yamagiwa: There was a myriad of issues to be worked on at the JANU and the SCJ. I used to go to Tokyo almost every week. One Kyoto University board member sarcastically asked me when I could be found in Kyoto. Since there were many decisions that had to be made by the Board of Directors, I made sure to talk with directors in charge of different issues at least once a week and communicate my views to them. Looking back now, I regret not having spent more time at Kyoto University.

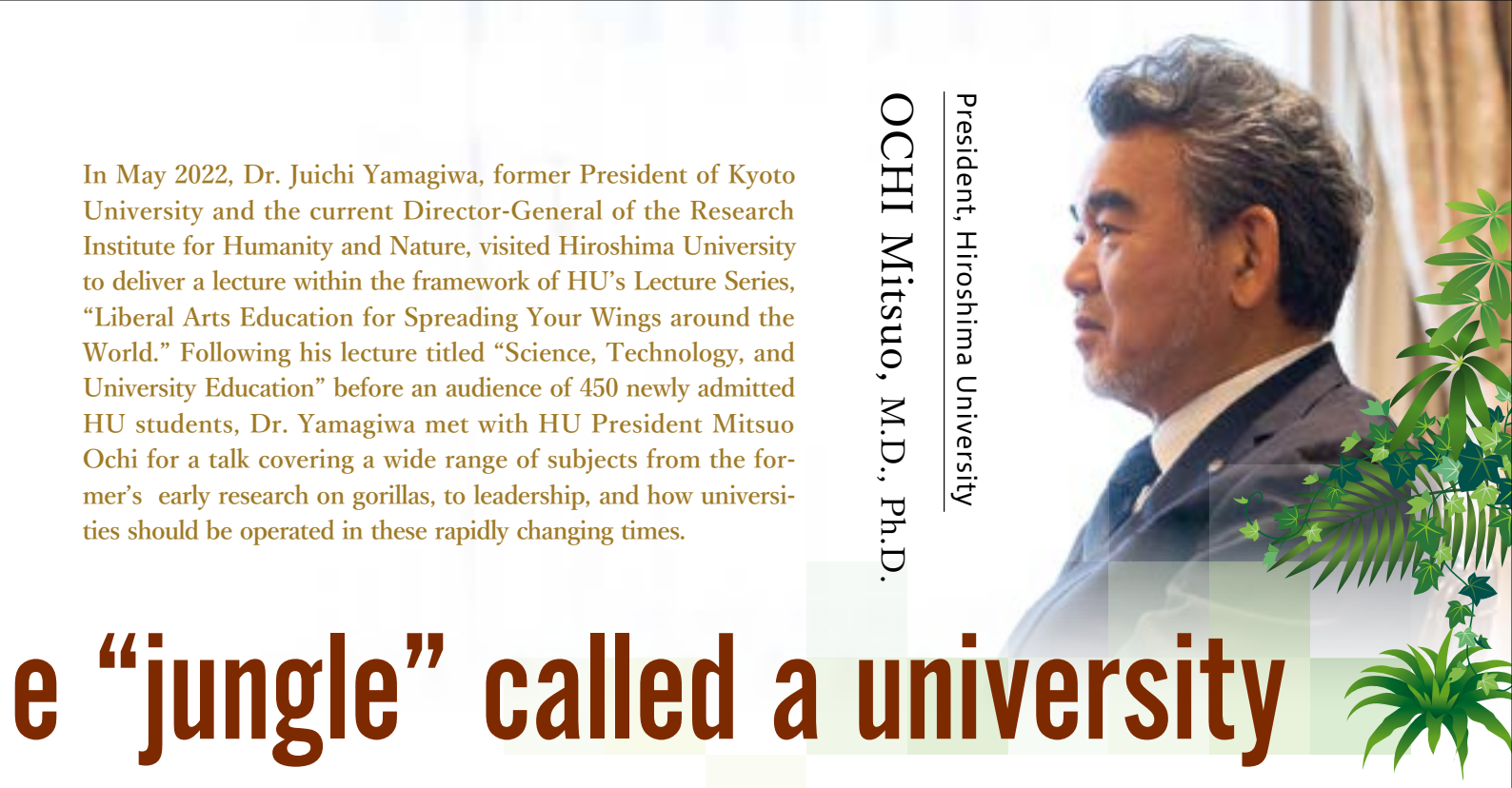
Ochi: Instead, you spent so much of your time for the sake of Japan as a whole, as I understand it. In 2015, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) presented the national universities with a framework of focused support that would divide them into three categories: universities in the provinces that promote research and human resource development to meet local needs, single-discipline or discipline-specific universities that form high-level education and research centers and networks in specific domains, and research-oriented universities that pursue excellence in education and research at levels rivaling the world's best universities. The 86 national universities of Japan were required to identify themselves as one of these three types. Hiroshima and Kyoto chose that of research-oriented universities. How did you find this, as the JANU President?

Yamagiwa: The MEXT had said that it would be a superficial matter and that the universities would remain essentially unchanged. However, it has brought about tremendous change. In those days, the Council for Designing 100-Year Life Society and the Regional Revitalization Council were still active, and the Central Council for Education and the Council for Science, Technology and Innovation (SCTI) were quite vocal. All government-related committees were unanimously and loudly calling for university reform. Up until then, the Japanese national universities had their respective distinctive characteristics. Quite a few provincial ones were active internationally, and many were living up to their unique traditions. They were now neatly confined within a three-part framework, as the government intended to guide them to pursue their designated missions. To begin with, the original objective of the reorganization of Japanese national universities as corporate bodies was to allow them greater freedom in university operation, particularly with regard to how to attract and utilize funding and human resources. A shift was now being made to align the universities along those courses toward unified goals. Obviously, we put up fierce resistance. I think we can say that the discontinuation of the MEXT's yearly reduction of operational subsidies was one achievement, but now universities have ended up having less funding at their disposal.

Ochi: You also took a strong position as the President of the SCJ on the question of how so-called military research should be handled.

Yamagiwa: In March 2017, immediately before I assumed the post of the President, the Executive Council of the SCJ issued a statement on its position on military research, in response to public calls for research projects by the Acquisition, Technology, and Logistics Agency of the Ministry of Defense. The statement basically reiterated the SCJ's previous statement of its unconditional commitment to the refusal of scientific research for war purposes. In response to the various reactions triggered in society by this statement, universities, scientific associations, and the industrial community reflected on the issue. As a result, it was decided that universities would establish an organization that determines whether or not to approve externally funded research projects suspected of having military purposes based on the respective universities' guidelines. The SCJ led the debate that finally concluded that, instead of simply questioning the legitimacy of certain research projects, researchers must take ownership of and be responsible for their own research results.

As another example of the SCJ's achievements, at the time of the revision of the Basic Act on Science and Technology, our insistence led to the removal of the parenthetical phrase in the Act excluding humanities from "science and technology" ("… other than science and technology whose sole concern is the humanities…"). We also decided that we should express our views directly to the Cabinet Office, which is the command center of the government, and succeeded in getting SCJ members appointed to sit on some committees



In May 2022, Dr. Juichi Yamagiwa, former President of Kyoto University and the current Director-General of the Research Institute for Humanity and Nature, visited Hiroshima University to deliver a lecture within the framework of HU's Lecture Series, "Liberal Arts Education for Spreading Your Wings around the World." Following his lecture titled "Science, Technology, and University Education" before an audience of 450 newly admitted HU students, Dr. Yamagiwa met with HU President Mitsuo Ochi for a talk covering a wide range of subjects from the former's early research on gorillas, to leadership, and how universities should be operated in these rapidly changing times.

OCHI Mitsuo, M.D., Ph.D.
President, Hiroshima University

e "jungle" called a university

under the Cabinet Office. I think that this move has resulted in some positive results, such as the establishment of the Fusion Oriented REsearch for disruptive Science and Technology (FOREST) program, which is a Japan Science and Technology Agency funding scheme that promotes daring and innovative research by young researchers for a period of up to 10 years.

A leader's viewpoint

Ochi: At Hiroshima University, seven young researchers have been chosen for the FOREST program. I believe that outside-the-box thinking is absolutely necessary to train researchers who can lead creatively disruptive innovation.
What was the most unforgettable experience you had as the President of Kyoto University?
Yamagiwa: Surveying an institution from the viewpoint of its top leader is an experience unlike any other. In 2022, Kyoto University has marked the 125th anniversary of its establishment, a major milestone and opportunity to review its history. Kyoto University was basically founded by Kinmochi Saionji (1849-1940), who served twice as the Prime Minister. He studied in France for nine years. Hiroji Kinoshita (1851-1910), the first President of Kyoto University, also studied in France for seven years. We can say that the establishment of Kyoto University was strongly inspired by French liberal thought. Kyoto University started as a university where research could be pursued with a high degree of freedom, whereas the University of Tokyo was designed to train future government officials. Kyoto was strongly research-oriented from the beginning, although its emphasis was more on practical research than basic research, as compared to European universities. I think it was this tradition at Kyoto that eventually led to Japan's first Nobel Prize being bestowed on a Kyoto University scholar after World War II. The axiom from The Analects of Confucius, "Those who do not look far into the future are bound to have trouble in the near future," applies to university administration as well. A university can't develop a distinctive character if its administrators are only concerned about short-term outcomes.
Ochi: Hiroshima University was established in 1949 under the new educational system on the foundation of nine forerunning institutions including Hiroshima Higher Normal School, which was related to Hakushima School established in 1874. Tatsuo Morito, who became HU's first president in 1950, had been forced out of his post of Assistant Professor at Tokyo Imperial University due to an article he wrote which was critical of the pre-war Japanese political system. After the end of the war, he served as a member of the House of Representatives and as Education Minister and eventually returned to Hiroshima to become the President of Hiroshima University in response to strong local demand. I have read Morito's articles and autobiography. By tracing his footsteps and those of other predecessors of mine, I have defined the perspective from which I should lead this institution, just like you did. I believe that national universities have the great advantage of being able to freely pursue their activities from a long-term perspective while fulfilling the public mission of responding to society's needs. However, with regard to faculty recruitment handled within a single department, it is rare to find the kind of autonomy that would take form in hiring people from outside, from totally new domains. In AY 2016, Hiroshima University established the Academy in order to centralize human resource management because we believe it is essential to manage human resources from a university-wide perspective rather than in a manner that is closed internally.
Yamagiwa: Without handling personnel affairs in a way that is open toward the new era, you can end up recruiting people only from within your closed circles. In the academic year 2016, Kyoto University also introduced a new system of classifying researchers' research areas that adds transparency to human resource management. In this system, academic faculty members belong to more broadly defined domains or streams, instead of the narrowly defined conventional departments or graduate schools. I believe that changes like this are naturally called for by the times.
Ochi: The concept of leadership proposed by

Referring to his research on gorillas, Dr. Yamagiwa said, "In order to survive in society, human beings have learned to empathize with others, thereby greatly developing the brain and acquiring language. Today, however, people have become less collective-minded, only barely connected with one another via information, with much fewer opportunities to mobilize their empathizing ability." He then conveyed this message to the students: "I would like to encourage you to not only acquire knowledge in university but also develop your ability to empathize with others and effectively express yourself to others, nurturing globally applicable qualities."

YAMAGIWA Juichi, Ph.D.

Dr. Yamagiwa was born in Tokyo in 1952. He graduated from the Faculty of Science, Kyoto University, and left the Graduate School of Science of the same university upon completing the doctoral course work, obtaining his doctorate later. After working in several posts, including as a research fellow at the Japan Monkey Center, a professor and the dean of the Graduate School of Science, and the dean of the Faculty of Science, all at the same university, Dr. Yamagiwa served as the President of Kyoto University until 2020. His main area of specialization is evolutionary anthropology. He conducted socio-ecological research on wild gorillas in various parts of Africa. He served as president of the International Primatological Society and president of the Science Council of Japan and has been a member of the Central Environment Council of the Ministry of the Environment of Japan since 2005. He has been in his present post since 2021. His numerous publications include books (published in Japanese) such as *Evolutionary History of Human Family* (University of Tokyo Press) and *What a Gorilla Researcher Thought about in the Jungle Called Kyoto University* (Asahi Shinsho).

Robert K. Greenleaf known as "servant-leadership" has been drawing a lot of attention. A group of pilgrims accompanied by a servant falls apart as soon as the servant leaves the group. The servant, the one who supported everyone in the group from behind, without giving orders, was indeed the true leader of the group. You published a book titled *What a Gorilla Researcher Thought about in the Jungle Called Kyoto University*, what are your thoughts on leadership?

Yamagiwa: Considering that a university is a sort of jungle, I applied what I learned from my experience with gorilla societies to leading a university. A leader is fundamentally different from a boss. A boss represses others with force and is therefore easily defeated when a stronger individual arrives from outside the group. A leader is someone who is supported from below. The leader need not suppress other members with force, which he would be better off directing toward the outside. A leader puts together a gorilla society. So I decided to emulate gorillas and tried to be a good tamer of fierce animals, because there were many fierce animals at Kyoto University (laughs). I believe that a leader is one who lets others freely use their abilities, instead of suppressing them, so that they can make a positive contribution to society, to Japan, and the world.

Ochi: I think that the types of leadership that universities need must vary, depending on what each university is like, whether it is, for example, a large university with many powerful individuals like Kyoto University or a smaller one in the provinces. I think that diversity is also needed in the images we have of leadership.

Yamagiwa: Kyoto University has an enormous number of divisions and research institutions. One-quarter of the faculty members belong to their respective research centers, and they rarely see others outside their own organization. It's quite hard to get those independent-minded researchers who are used to only minding their own business to look outward, to get a more global perspective conscious of the center. An organization can lose its dynamism if all members are only doing their separate things in their dispersed corners. So I decided that we should strive for more cohesion where it was necessary. I explained this patiently and held discussions at the deans' meetings and the education and research council meetings. I think we managed to make some satisfactory achievements.

Longing to be an explorer as a boy

Ochi: By the way, what interested you the most when you were a child?

Yamagiwa: The idea of becoming an explorer. *Robinson Crusoe* and *Two Years' Vacation* were my favorite books. I wanted to sail off to explore a solitary island and go to Africa and discover unknown animals in the jungles.

Ochi: So you did realize your dream in a way…

Yamagiwa: Dr. Dolittle, in *The Story of Dr. Dolittle* series, learns animals' languages from a parrot that can speak with all kinds of animals in their own languages, goes to Africa, and talks with monkeys and many other animals. I knew it was fantasy, but I dreamed of doing something similar anyway. So, yes, I can say that I made my dream come true in a way.

Ochi: I believe we will be able to find out what dogs, birds, and other animals think about when further progress is made with digital transformation (DX) and it becomes possible to verbalize thoughts that are only formed in the brain. I sort of understand the feelings of my two dogs, although it is mostly me guessing since the dogs don't articulate their feelings with words.

Yamagiwa: I don't think that we really communicate our feelings with words or that language has developed as a means to communicate feelings. For me, language has always been a vehicle of information, something that makes us think. There was one time that I put my dream of becoming an explorer on hold, and it was during the student protests in the 60s, which involved even high school kids. I was living in Tokyo in those days. There were protests in Shinjuku, with students gathering for demonstrations. I used to attend meetings at nearby universities and didn't care at all about becoming an explorer. I was beginning to ask myself hard questions: What are human beings? What is society? I was fed up with living in Tokyo and went to Kyoto, where I discovered primatology. To understand what humans are, you have to step outside of the world of humans once. To understand human society, you have to begin with the time when society was not yet fully formed as such. This is how you think in primatology. I found the idea of stepping outside of the human world very intriguing. This is how my dream of being an explorer got connected with my research.

Student protests as a turning point

Ochi: Why did you choose the Faculty of Science at Kyoto University?

Yamagiwa: Initially, I was drawn to Physics, where Dr. Hideki Yukawa was. In high school, I was good at physics and loved math, too. So in this sense, I made a complete change of course.

Ochi: I went to an integrated six-year secondary school in Matsuyama and lived in a dormitory. There were about 50 of us in total, and we all lived in the dormitory. Many of those who graduated from this school before and after me turned out to be eminent figures in various fields, such as members of the Diet, university presidents, and directors of major corporations. I became good friends with highly original personalities, like this one I recall whose passion was judo and who also loved the classics. What do you think influenced you the most in your youth?

Yamagiwa: I guess it was the student protests, after all. I was in the first class of students subjected to the new cluster-based entrance examination system introduced into Tokyo's municipal high schools. In this system, you couldn't tell in advance which high school you would be admitted to among those that made up the cluster you chose. Some clusters were a mixture of prestigious and not-so-prestigious schools. So there was a tendency among the applicants to choose a cluster of relatively evenly high-level schools, if not the highest level. As a result, even in the school I entered, there were quite a few high achievers from central Tokyo, those pedantic and cheeky types. At school, we had heated debates

OCHI, Mitsuo, M.D., Ph.D.

Born in 1952 in Imabari City, Ehime Prefecture, Dr. Ochi graduated from the Faculty of Medicine, Hiroshima University, and joined the Department of Orthopedic Surgery at Hiroshima University Hospital. In 1995, he was made a professor at Shimane Medical University (the present Faculty of Medicine at Shimane University). In 2002, he was appointed p rofessor (in orthopedic surgery) of the Graduate School of Medicine, Dentistry and Pharmacology at Hiroshima University. Having served as the d irector of Hiroshima University Hospital, Dr. Ochi has been the President of Hiroshima University since 2015. In the same year, he received the Order of Culture, Medal with Purple Ribbon. In 2021, he was appointed member of the Central Council for Education of the Ministry of Education, Culture, Sports, Science of Technology of Japan. His area of specialization is knee joint surgery.

every day about politics and social issues, as well as different ways of solving this and that mathematical problem. It was quite an intellectually stimulating environment.

And what about you, Dr. Ochi? Why did you choose Hiroshima University's Faculty of Medicine?

Ochi: I also loved math in high school, while my weak subject was social sciences. During my last year of high school, I changed the subjects in which I'd take the university entrance exam three times. My homeroom teacher gave me an earful, saying that I was not serious about getting into university. He then recommended to me the Faculty of Medicine at Hiroshima University, which didn't have social sciences among its exam subjects. Reading novels such as *Dr. Manbo's Records of Youth* and *The House of Nire* by the physician-cum-novelist Morio Kita, who went to Tohoku University's School of Medicine from Matsumoto Higher School, I got the impression that life as a physician could be interesting. I also took the exam for the Faculty of Political Science and Economics at Waseda, for which it was possible to take mathematics instead of social sciences, because I wanted to do physically active work and a newspaper reporter's career appealed to me. It was not that I absolutely wanted to get into medical school, for my mother had forbidden me to spend an extra year preparing for the entrance exam because she knew that I would never study then.

Understanding gorilla culture after attacks

Ochi: Among the primates, your research focuses on gorillas, not chimpanzees or orangutans. Why?

Yamagiwa: When you think about Japanese society, you can't ignore family as a social unit. Chimpanzees and orangutans don't live in families. Only gorillas live in family-like units. Dr. Kinji Imanishi, one of the founders of Japanese primatology, intended to search for the origin of family when he went to Africa in 1958. However, wars for independence erupted in Africa in 1960. His research was interrupted as Congo and other habitats of gorillas were turned into battlefields. I had the daring idea of going there and finding a breakthrough. I did fieldwork in Congo, but internal disturbances continued. I actually went through quite dangerous situations as well.

Ochi: What was the most dangerous experience you had?

Yamagiwa: I was surrounded by boy soldiers, with a gun pointed at me. I was also attacked by gorillas. To get into a group of gorillas, you have to spend several years, patiently showing up and following the group every day to let the gorillas know that you're not dangerous. The gorillas flee at first. If you chase them persistently, then you could get attacked. I was once surrounded by female gorillas who were feeling hostile toward me. I got bitten on the head, with my leg almost bitten off.

Ochi: Weren't you afraid that you might get killed when you were attacked?

Yamagiwa: My injuries required 17 stitches on my leg and five stitches on my head. Reflecting on the incident, I later figured that they could have cut the carotid artery or torn open my abdomen if they intended to kill me. Why did they attack me on the head and the leg? These parts of the body that were bitten were fatty areas in the gorilla body. But, being a human, I didn't have much fat there, I only got injured. I understood that the female gorillas wanted to punish me without the serious intention of killing me.

Ochi: Nevertheless, it must have been a frightening experience.

Yamagiwa: Based on my research on mountain gorillas, I had initially assumed that once I had the male gorilla of the group under control, the female gorillas hiding in his shadow would never attack me. But those gorillas were western lowland gorillas, a subspecies different from mountain gorillas. Western lowland females would attack perceived enemies, ignoring their males. I was totally wrong to assume that all gorillas were the same. The experience drove home to me that they had different cultures and behavioral patterns in different regions.

Regional culture as a source of innovation

Ochi: You have said, "culture is what is not included in the 17 Sustainable Development Goals (SDGs)." In Japan, there are diverse regional cultures rooted in their respective societies and their history. Inevitably, I feel a sense of crisis when I feel that this diversity is in danger of homogenization. It would be too late to react once regional cultures were lost for good. I believe that we must take action at the earliest time possible to protect them.

Yamagiwa: Today's young people don't have the opportunity to learn about regional cultures within Japan. They develop their decision-making criteria and methods mostly based on information available on the internet. This phenomenon can be termed "denationalization of culture."

Ochi: Do you mean that Japanese people's identity has essentially developed on the foundation of regional culture?

Yamagiwa: Yes. To put it simply, Japanese identity is an amalgam of some 300 identities originating from those 300 han (feudal domains) that existed at the end of the Edo period. They each have their traditional and customary knowledge that gives rise to different ways of thinking. When two different cultures meet, they give birth to something new. These differences are the source of innovation. When everything is identical, nothing new can be created. We in Japan should make the most of this advantage of diverse regional cultures.

Ochi: It's the same in Italy, where I studied before. Northern and southern parts of Italy are completely different, and encounters between those different regional cultures produce new cultures and ideas. Now, returning to the subject of university, if all Japanese universities become carbon copies of the University of Tokyo or Kyoto University, no innovation can occur in a global manner that encompasses universities in the provinces. I think it's necessary that totally different types of universities maintain their originalities while moving forward in tandem with other universities. We should build a new mechanism for creative collaboration that replaces simple competition.

Liberal arts are all the more important today

Yamagiwa: That's true on an international scale as well. Instead of competing against each other in terms of rankings, universities need to form alliances with one another within and beyond the national borders, just as Hiroshima University is doing with the Arizona State University (ASU) of the United States. Joint-degree and double-degree programs are good examples. I think that scholarship and education must be transnational to build the foundation for ushering in a new era.

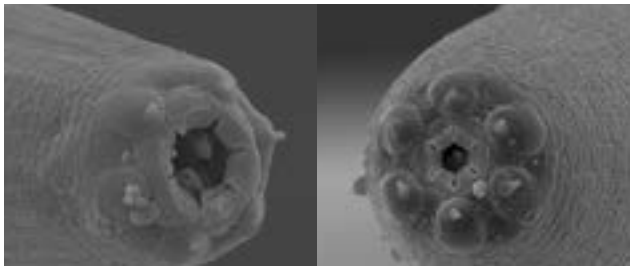
Ochi: We have invited ASU to open its Japanese school on a Hiroshima University campus. In our joint program, students spend two years at HU and the other two years at ASU in the United States. I hope that, by making use of this environment, HU students will have more opportunities to experience different cultures.

Finally, what do you think students should learn while in university?

Yamagiwa: I consider university as a place of dialogue where teachers and researchers share their future visions that may be dormant in their minds with students so that all can help each other in developing ideas. While at Kyoto University, I consistently promoted dialogue-based autonomous learning and a liberal university culture. Dialogue is a two-way communication and not a debate in which you can either defeat or be defeated by your opponent. To engage in a dialogue, you must have a broad culture.

Ochi: At HU, we inaugurated the Special Lecture Series, "Liberal Arts Education for Spreading Your Wings around the World" in the academic year 2017 in the hope that lectures would further motivate students to enjoy learning and take up many challenges. Their target audience are newly admitted students, and as lecturers we have had prominent personalities who are active in their respective fields, including you. The ultimate objective of this program is to get students to acquire, at the outset of their university life, the attitude of pursuing liberal arts throughout their lives. Thank you very much for this enjoyable talk today.

After the lecture, President Ochi presented Dr. Yamagiwa with a certificate conferring the title of "Special Invited Professor."



Electron microscope images of the mouth of *Pristionchus pacificus* (photographed at HU's joint-use experiment facility); the shape of the mouth becomes either wide (left) or narrow (right), depending on the environment.

Associate Professor,
Graduate School of
Integrated Sciences for Life
School of Science

OKUMURA Misako

Research interests

Developmental biology, neuroscience, genetics

How is the development of animals regulated by the interaction of the environment and genome?

Why does a fertilized egg divide not into two fertilized eggs, but instead into all kinds of cells in succession and develop into an adult? I first became interested in animal development (the process of an egg growing into an adult individual) when I was in high school. I had forgotten about this question for a while until it resurfaced during a developmental biology class at university. I ended up joining a developmental biology laboratory in graduate school. Using *Drosophila melanogaster* (fruit fly), a common model animal in high school biology textbooks, I set out to find which genes were involved in the process whereby nerve cells took shape. I dissected thousands of fruit fly brains and observed the morphology of nerve cells every day. Finally, I obtained the results indicating that an unexpected gene is involved in the morphological development, which I put together in a paper, and then published.

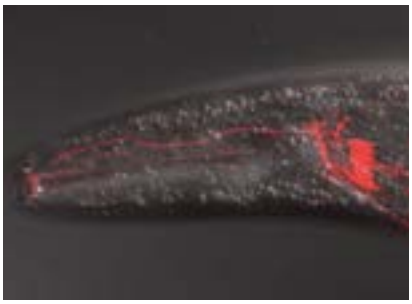
Since finishing graduate school, I have been continuing my research, expanding its scope to include environmental factors, in addition to genes. Animal development is determined not only by the genetic information but also the environment in which they grow. Among your friends and acquaintances, there are perhaps identical twins. They carry exactly the same genetic information, but I am sure they are not totally identical as persons. This is because the environment where they grew up has also influenced their morphology, disposition, and so on.

To elucidate how the environment influences animal development, I am currently conducting research using *Pristionchus pacificus* (roundworms) as a model organism. Roundworms are about 1 mm in length and, interestingly, their mouth can take one of two shapes, depending on the environment it grows in. The focus of my research is the light environment during the developmental process. In addition to microscopic observation, I actively apply new technologies in my research, such as genome editing and bioinformatics.

It is known that the environment in which animals grow influences not only their development but also their susceptibility to disease in adulthood. How this is related to the environment during the fetal period and infancy is still largely unknown. I am hoping that my research with roundworms will eventually lead to such basic findings.

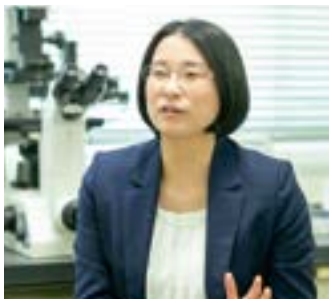
Hiroshima University is an excellent environment in which you can learn to your heart's content. I hope that students will learn and grow as persons while cherishing the questions and interests that arise in them as they encounter various people and acquire new knowledge at university.

Like roundworms, fruit flies make excellent lab animals for genetic experiments because of their short generation time. In the photo, flies are exposed to carbon dioxide for anesthesia.



A confocal microscope image of *Pristionchus pacificus* (roundworm) expressing flurescent protein (red) in the sensory neurons; it shows that the nerve cells that perceive environmental stimuli extend to the tip of the mouth.

"English is essential for us to access the latest research findings, write papers, and communicate with other researchers. To use bioinformatics, which combines biology with data processing, we must also have programming skills. So I'm currently learning them with students," says Prof. Okumura.



Distinctive research facilities

Attached Research Institute

Research Institute for Radiation Biology and Medicine

The Institute conducts comprehensive research projects on the effects of radiation on the human body, ranging from cutting-edge basic research in genomics to advanced clinical deployment of regenerative medicine, etc. While being involved in research and development of medical treatments for A-bomb survivors for over half a century, the Institute is actively engaged, as a research hub in the field of radiation disaster medical science, in joint research projects with researchers and doctors across the country.

Joint Education and Research Facilities on Campus

- Research Institute for Nanodevices
- Research Institute for Higher Education
- Information Media Center
- Natural Science Center for Basic Research and Development
- Morito Institute of Global Higher Education
- Health Service Center
- The Center for Peace
- Environmental Research and Management Center
- Hiroshima University Museum
- Beijing Research Center
- Hiroshima Astrophysical Science Center
- Institute for Foreign Language Research and Education
- Hiroshima University Archives
- Institute of Sport
- HiSIM* Research Center
- Research Center for Diversity and Inclusion

The geothermal heat pump experimental system

Associate Professor,
Graduate School of Advanced Science and Engineering
School of Engineering

KINDAICHI Sayaka

Research interests

Architectural environment, architectural equipment, unutilized energy

A heat pump for a healthy, comfortable, and environment-friendly living space

Is your home comfortable? It is said that many people in Japan live in an environment that is particularly cold in winter. This is partly due to the structural problems of Japanese housing but also because Japanese people have traditionally preferred methods of heating that involve warming themselves near a heat source, such as a sunken fireplace and a *kotatsu* (low, covered table), rather than heating the entire house. This leads to a great difference in temperature between different parts of a housing unit, which can cause heat shock, a health hazard, to its dwellers. Creating a healthy and comfortable living environment through an engineering approach and with minimum energy consumption is the basic theme of my research.

The pursuit of greater housing comfort usually requires larger quantities of energy. You have perhaps personally experienced this principle due to the COVID-19 crisis: you open the windows more frequently for ventilation, which lowers (or raises) the indoor temperature, which consequently necessitates greater use of AC units. In one of my ongoing research projects, I am developing a system that increases ventilation without increasing energy consumption. The key is the efficient use of a heat pump, and not relying on people's patience.

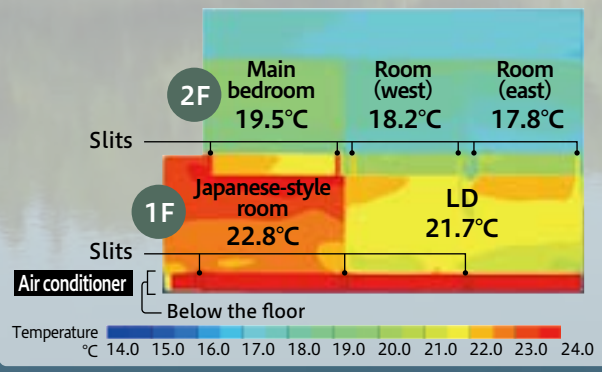
A heat pump operates on the same principle as air conditioners and refrigerators. The efficiency of the device itself has been increasing year after year, but its energy-saving efficiency largely varies, depending on how it is used. An air conditioner comprises outdoor and indoor units used in tandem, the former collecting heat from the atmosphere. Heat pump energy efficiency fluctuates, according to exterior temperatures: it saves more energy when the temperature is lower for cooling, and when the temperature is higher for heating. In general, however, cooling is more needed when the exterior temperature is higher, and heating is needed for lower exterior temperatures. A heat source that is more suitable for a heat pump may be able to solve this problem: unutilized energy in the ground, river and sea waters, etc. My research involves developing a system that uses heat collected from water in ponds dispersed around the Seto Inland Sea area. So far, I have found that pond water heat is suitable for a heat pump since its temperature is considerably low, around 15°C even in summer, at 5 meters below sea level or deeper toward the bottom. I hope to be able to produce a system unique to the region that cannot be realized in a big city.

In 2021, Hiroshima University issued a "Carbon Neutral x Smart Campus 5.0 Declaration," committing itself to actions to achieve carbon neutrality by 2030. With regard to "carbon neutrality," the use of solar panels to generate power and other such technologies seem to attract people's attention, but it is equally important to think of ways to reduce energy consumption in buildings. Introducing heat pumps using unutilized energy will be a major step in this direction. Energy conservation may sound like an outdated term, but its essential importance has not changed over the years.

What I find particularly significant about my research is its utility to society in improving spaces inside buildings that are indispensable for people's lives. I am hoping to communicate from Hiroshima University to society and to the whole world my research findings that can increase comfort in people's lives while caring for the environment.

Analysis of indoor temperature distribution during whole-house ductless heating by an air conditioner (example)

A single air conditioner, installed in the space underneath the floor, can heat the whole house by allowing heated air to spread throughout the house via slits.



"Engineering is an academic discipline for society and people. I want to create a housing environment that ensures people's health and comfort without increasing energy consumption," says Prof. Kindaichi.

Background photo: For its natural convection, water can release waste heat from a heat pump more efficiently than earth. Prof. Kindaichi is working toward the practical application of an unutilized energy-based heat pump that uses water stored in a retention basin as a heat source.

supporting world-class research

- Amphibian Research Center
- Translational Research Center
- Resilience Research Center
- Center for Brain, Mind and KANSEI Sciences Research
- Hiroshima University Genome Editing Innovation Center
- Hiroshima University Digital Monozukuri (Manufacturing) Education and Research Center
- Education and Research Center for Artificial Intelligence and Data Innovation
- The IDEC Institute
- Academic-Environment Social Governance Science and Technology Research Center
- Town & Gown Institute of Innovation for the Future

*HiSIM (Hiroshima-University STARC IGFET Model) is a transistor model used in circuit design that has been developed by Hiroshima University in collaboration with the Semiconductor Technology Academic Research Center (STARC).

National Joint Usage Facilities

Hiroshima Synchrotron Radiation Center

Synchrotron radiation is generated when an electron traveling at the speed of light is forced to change direction by a magnetic field. Synchrotron radiation is called "dream light" because it is not only powerful but also includes light of various wavelengths. The center promotes advanced materials science and emerging interdisciplinary fields using synchrotron radiation.

Associate Professor,
Graduate School of Humanities and Social Sciences
School of Education

KUMAHARA Yasuhiro

Research interests

Physical geography, tectonic geomorphology, disaster reduction education

A scene from Prof. Kumahara's survey on active faults in Bhutan: he is pointing at a fault that has appeared on an outcrop (cliff).

Rediscovering disaster, geography, and history through fieldwork as personally relevant issues

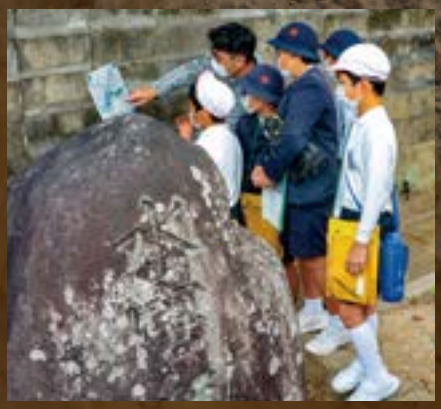
Since my student days up until now, I have been studying active faults in the Himalayas stretching from Nepal to India to Bhutan, determining when and where major earthquakes of what magnitude occurred in the region based on geomorphological and geological observations. In Bhutan, I also assist the production of active fault maps as a short-term Japan International Cooperation Agency (JICA) expert. In Japan, I conduct surveys with researchers from other universities on active faults across the country, including the Futagawa fault, which caused the 2016 Kumamoto Earthquake.

In the major floods of July 2018 in Western Japan, debris flows occurred at various locations, including the area around Hiroshima University. Some HU researchers, students, and I immediately identified their starting points based on geomorphological interpretation using aerial photos and publishing our findings. We had already been conducting research with a focus on monuments to flood victims in Hiroshima Prefecture, which can convey precious information on past natural disasters to later generations. The 2018 floods attracted attention to our study, leading to the adoption of a new map symbol for past natural disaster monuments by the Geospatial Information Authority of Japan (GSI). We received an award from the GSI for this.

Students who enter the social studies course of the School of Education, to which I belong, are mainly those who wish to be social studies teachers in junior high school or geography, history, and civic study teachers in senior high school. This year (AY 2022), general geography has become a compulsory subject in senior high school, and the main features of this subject are disaster reduction and fieldwork. In disaster reduction, it is essential to think of a disaster as something that is personally relevant to you. It is also important to accurately anticipate disasters that can happen in your areas, and the key to this is understanding past disasters. In my unit, we carry out research in a comprehensive manner covering everything from how to investigate disaster-related geographical features on-site to how to handle findings in actual classes. We try particularly consciously to link our research with actual educational application, participating in the production of videos for community-oriented disaster reduction education (a joint project between HU's Resilience Research Center and the Board of Education of Higashi-Hiroshima City) and supporting disaster reduction education in Municipal Kumano Elementary School in Fukuyama City.

I have also conducted fieldwork with my students about the geography and history of the area around the university campus. We published the results of this research in book form under the title *Saijo Chireki Wōku (Geographical and historical walks in Saijo)*. For the students, seeing this tangible fruit of their hard work appearing in bookshops in town was a wonderful reward, a source of confidence, and an intellectual asset. I hope to continue training future teachers and researchers who can lead younger generations to make new discoveries about disasters, geography, and history through fieldwork and effectively communicate them and their significance.

This is the tip of a plate boundary in the southeastern part of Nepal. With an active fault in the middle, the river strata do not meet. The Eurasian Plate is on the left, and the Indian Plate on the right. The photo shows how the originally horizontal river strata were largely deformed.



A scene from a session of disaster reduction education with Kumano Elementary School pupils in Fukuyama City (with a monument to flood victims in the foreground). The research focusing on flood monuments by Prof. Kumahara's team began with a graduation research project by students interested in stone monuments. The GSI maps indicate a total of 1345 monuments commemorating past natural disasters in 399 municipalities across Japan (as of March 2022).

Saijo Chireki Wōku, the book published by Prof. Kumahara and his students, and a video for disaster reduction education in Higashi-Hiroshima City. Learning local topography and disaster history strengthens disaster preparedness.

Creating World Top-level

Network-type Research Center

Network for Education and Research on Peace and Sustainability (NERPS)

The Network for Education and Research on Peace and Sustainability (NERPS) is a network hub widely open to the world and not exclusively linked to Hiroshima University. NERPS aspires to be an education and research center characterized as follows:

1. A research hub focusing on peace, the global environment, and the Sustainable Development Goals (SDGs) backed by research capabilities of international standards
2. A problem-solving-oriented education and research hub in which researchers in the humanities and social sciences can also participate
3. An education and research hub enabling collaboration by diverse actors, including individuals, NGOs, private businesses, governmental entities, and international organizations

NERPS

The logo symbolizes NERPS's priority focus on SDG 4 "Quality education" and SDG 16 "Peace, justice and strong institutions," while contributing to all of the 17 SDGs.

At the top of research on Italian criminal law and French juvenile law

For several years, Prof. Yoshinaka has been teaching an intensive course of over 30 hours on Japanese criminal law at the China University of Political Science and Law (CUPL). He is the first Japanese to receive from CUPL the title of a National Institute of Legal Aid Special Invited Research Fellow. As Japan's prime criminal law researcher, he is actively engaged in education and research with universities and students all over the world.

Prof. Yoshinaka says he initially wanted to pursue literature given his attraction to novels and other literary works. He became interested in the extreme situations involving life and death and the relationship between punishment and the law as depicted in the novels and entered the world of legal research.

Professor,
Graduate School of Humanities and Social Sciences
School of Law

YOSHINAKA Nobuhito

Research interests

Criminal law, criminal procedure law, criminal policy, juvenile law, international criminal law, victimology

The students of the School of Law mainly study Japanese law. For people who live and work in Japan, it is important to have knowledge of Japanese law. Many students are in the School of Law also for a future legal career, as a judge, public prosecutor, or attorney. When you meet first-rate jurists from different parts of the world, you usually discover that they are not only specialists in the law of their home country but also quite knowledgeable about other countries' laws and often speak several languages quite fluently.

In the past, education and research at the School of Law were mostly one-sided, involving the introduction of legal systems of other countries to a Japanese audience. This practice was largely influenced by the way foreign languages were taught in Japanese schools beginning from the Meiji era, centering on reading foreign-language texts and translating them into Japanese. For this reason, even legal researchers have sometimes referred to their work as "*yoko/tate* (horizontal/vertical) papers" in a self-deprecating way. That is to say, merely translating papers by foreign researchers in horizontally written Western languages into vertically written Japanese would be considered an academic achievement. Unfortunately, not enough has been done in the opposite direction: presenting Japanese law in foreign languages to the rest of the world for rigorous international analysis and discussion. There are, of course, legitimate reasons for this state of affairs. In the natural sciences, the subject matter is identical anywhere in the world (there is no difference in mathematics or physics between Japan and the United States, for example), with English well-established as the common language of academic communications. In the legal field, on the other hand, the law differs from one country to another, and the laws of a given country are always written in the language or languages of that country. Unlike other disciplines that are globally operable from the beginning, legal students usually undergo education and research first to understand their own country's law and legal theory in their own languages before taking part in global legal debates in other languages. That is to say, for a Japanese person to be a first-rate legal researcher in the world, it is necessary to pursue education and research in Japanese as well as other languages. Fortunately, as an undergraduate student, I met a professor, an internationally recognized researcher, who became my mentor and taught me the importance of learning foreign languages and researching foreign laws. As a graduate student, I went to France and Germany to study the history of the incorporation of European law into Japanese law from the Meiji era, while conducting research in my specialization, the interpretation of criminal and juvenile law. Upon arriving at Hiroshima University, I conducted research on how to teach Japanese law in English in particular, at the University of Auckland in New Zealand, which was adopted as an advanced overseas educational program of the Ministry of Education, Culture, Sports, Science and Technology. I have since given countless lectures and seminars at universities all over the world.

Japanese legal researchers cannot excel in the world unless they are also first-rate researchers in Japanese academia. I take pride in being a communicator of advanced knowledge about the whole spectrum of Japanese criminal law to the rest of the world while being among the top researchers on Italian criminal law and French juvenile law in Japan. I think my specialization is unique in the country in that most Japanese legal scholars are oriented toward German or American law. Drawing on this originality, I intend to continue research that is worth presenting to the whole world at Hiroshima University.

Research Centers

Centers of Excellence

HU aims to create world-class research centers on a continuous basis by providing support for research groups conducting active research activities to drive their further development.

- Hiroshima Drug-Delivery Research Center Using Photoirradiation*
- The Research Core for Plant Science Innovation*
- Hiroshima Institute of Plate ConvErgence Region Research (HiPeR)
- Hiroshima Institute of Health Economics Research (HiHER)
- Advanced Core for Energetics (HU-ACE)
- Hiroshima Research Center for Healthy Aging (HiHA)
- Chirality Research Center (CResCent)*
- Core of Research for Energetic Universe (CORE-U)*
- The Research Center for Animal Science*
- The Research Center for Drug Development and Biomarker Discovery*
- HiSENS Research Center
- Research Center for the Mathematics on Chromatin Live Dynamics
- Research Center for Hepatology and Gastroenterology
- Center for Regenerative Therapy

*Validity of certification is until March 2023.

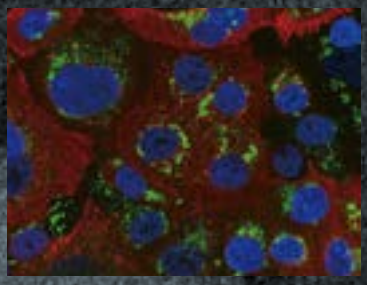
Chirality Research Center to elucidate the mystery of right- and left-handedness

Your right and left hands are very similar, yet they are not identical. This property is called chirality. Our research has revealed that chiral magnets made only from right-handed materials are completely different from normal magnets. It is becoming clear that problems with chiral magnets have commonalities with problems in molecule biology and high energy physics. The center is working to elucidate chirality-related problems from a basic science perspective.

Professor,
Graduate School of Biomedical and Health Sciences
School of Medicine
SAKAGUCHI Takemasa

Research interests

Virology, mechanism of viral multiplication and virulence expression



Cells infected with SARS-CoV-2: the cell nuclei are shown in blue, Nsp3 proteins of the coronavirus in green, and N proteins (in the cytoplasm) in red. The photo shows the cell membranes that have collapsed, allowing adjacent cells to fuse.

Microorganisms are small living things that are invisible to the naked eye. Among them, viruses are particularly small. Essentially, they are genes, not cells as bacteria are. Viruses are substances made up of DNA or RNA, which are genes, combined with viral proteins.

Viruses only measure about 100nm (a 10,000th of one millimeter) on average. They are so small that to condense them in a centrifuge, they must be rotated at high speed, which is done in a special device called an ultracentrifuge. They are observed with an electron microscope because they are invisible under an optical microscope, through which an observer can naturally see objects with the eyes.

Experiments involving viruses are conducted in compliance with biosafety rules to protect researchers from inadvertent contamination. To handle SARS-CoV-2 (COVID-19-causing virus) in experiments, researchers must wear gowns and gloves and work in a P3 laboratory (P3 meaning Physical Containment Level 3). A P3 laboratory is a negative pressure room, which prevents pathogens, even if leaked within the room, from being released into the external environment.

The COVID-19 pandemic has affected many people. Perhaps some of you have been infected. It has caused many inconveniences and difficult experiences, including the obligation to wear a face mask in school and the cancellation or restriction of school trips, sports competitions, and other events.

Research on viruses is essential in producing treatment drugs and vaccines to combat viral infections. At Hiroshima University, we are engaged in the development of new drugs and the evaluation of the therapeutic efficacy of existing vaccines and medicines.

Viruses can also be used as tools. For example, AstraZeneca's vaccine for COVID-19 has been produced by modifying an adenovirus (a type of common cold-causing virus) to make a coronavirus spike protein while making it safer to prevent propagation inside the human body.

Another example of a virus as a tool is the production of iPS cells, which involves inserting the four genes called "Yamanaka factors" into differentiated cells via viruses, which initializes cellular development to generate iPS cells. In this example, viruses are used as the carrier (vector).

Such applicability is interesting, but viruses in themselves are quite intriguing as well. For example, human coronavirus OC43, a virus widespread among humans as a common cold pathogen, is believed to be linked with the Russian flu, which caused a worldwide pandemic at the end of the 19th century and killed one million people. This has been revealed as a result of research into the viral genetic tree. This finding suggests the possibility that the COVID-19 virus would eventually be attenuated to become a stable presence in human society.

Viruses can multiply only when they infect cells. Studying how this occurs is also studying the functionality of cells. Considering that viruses infect animal individuals, it is also about studying how the infection expands to organs inside the body and how the immune system is related. By researching viruses, you can have an ever-expanding scope of research themes.

Expanding universe of research into viruses… Contributing to the development of COVID-19 treatment drugs

Background photo: An electron microscopic photo of omicron, a variant of SARS-CoV-2. The successive emergence of variants almost makes us wonder if the coronavirus has its own mind and is trying to trick or elude human efforts and immunity. In reality, however, variants result from intergenerational copying errors. The coronavirus, which has a single-chain RNA as viral genome, is susceptible to copying errors. Among numerous variants that emerge, those that are not wiped out by human efforts and immunity remain, and infections with them spread.

An ultracentrifuge is used to collect extremely lightweight viruses. The black tube containing samples is rotated at a very high speed to let viral particles settle to be separated.

Creating World Top-level Research Centers

Promising Research Initiatives

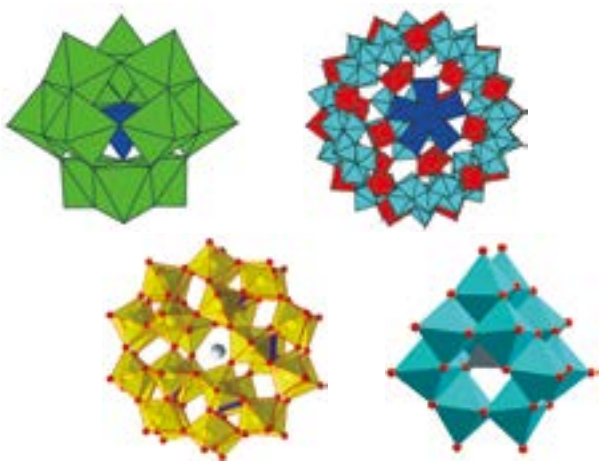
HU selects and provides priority support to promising research initiatives, which are researcher groups who have the potential to grow into independent world-class research centers (Centers of Excellence).

- International Network on Polyoxometalate Science
- Core of Research for Organelle Diseases
- Catchment Healthy Cycle between urban and rural in Setouchi to Asia, toward the creation (HURu-SAto)
- MBR Center

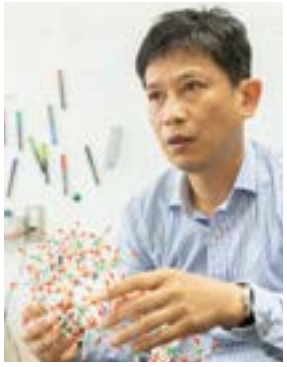
Creation of new academic field for the healthy cycle between urban and rural area in Asia

The center for the "Catchment Healthy Cycle between urban and rural in Setouchi to Asia, toward the creation (HURu-SAto)" aims to create healthy circulation (including people and food) between cities and their surroundings in Asia, where urbanization is progressing. Based on the successful experience in the Seto Inland Sea basin, this center aims to create a new academic research field that will contribute to solving problems in Asian countries.

Joy of discovering new metallic oxide molecules that serve society



Polyhedron illustrations of the polyoxometalates (POMs: metallic oxide molecules) handled by Prof. Sadakane. Either in liquid or solid state, POMs have a high degree of acidity, even higher than sulfuric acid, and are frequently used as industrial catalysts and in manufacturing methacrylic acid. Methacrylic acid is an important raw material of highly transparent and strong acrylic resin (used for such objects as transparent fish tanks for aquariums, contact lenses, lighting fixtures, and automobile headlight covers).



Professor,
Graduate School of
Advanced Science and Engineering
School of Engineering

SADAKANE Masahiro

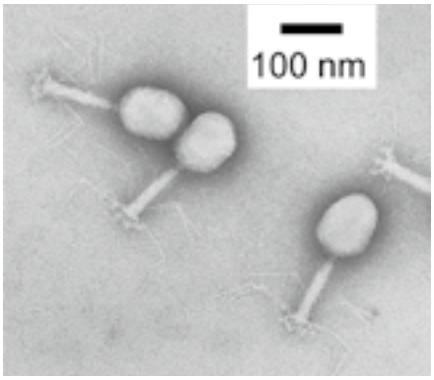
Research interests

Inorganic chemistry, metallic oxides, catalysts, viral stains

Perhaps many of you remember learning in high school science classes that many metals react to oxygen in water or in the atmosphere and produce oxides. Many elements from alkaline earth metals to transition metals generate metallic oxides. Since ancient times, our ancestors have been using metallic oxides to enrich their lives, as exemplified by their use in ancient earthenware and glass vessels and as raw materials in metal smelting.

My research concerns oxide molecules generated by transition metals, such as tungsten (W), molybdenum (Mo), and vanadium (V). What I find fascinating about my research is that it is possible to synthesize differently structured oxide molecules by changing elements to combine and synthesizing conditions. Their shapes can be highly varied: globular, disk-like, football-shaped... It requires a lot of time and effort to synthesize new compounds and clarify their structure, but you often have the chance of discovering ones with breathtakingly beautiful structures. What is more, some of those beautiful compounds also have properties that can be useful for society. For example, some metallic oxide molecules are highly acidic or have oxidation-reduction reactions that transfer electrons. For such properties, they can be used as catalysts in the production of chemicals that are essential in modern life.

Metallic oxide molecules can also be used as stains to render visible viruses that are normally invisible under an ordinary light microscope. This is an application of the weight of elements such as tungsten and molybdenum. Recently, we have demonstrated that the use of a compound we have synthesized makes it possible to obtain a very clear image of the novel coronavirus.



POM compounds, because they are heavy, can be used as viral stains for electron microscopy, which realizes vivid images showing even very small details such as the "tail" of a virus.

At Hiroshima University, students can study chemistry in various divisions, including the Schools of Science, Engineering, and Education. At the School of Engineering, our ultimate goal is concrete realization. In life, there are many things that we cannot fully control or manage on our own, such as viruses, warfare, and natural disaster. Still, we at the School of Engineering endeavor to design and realize concrete solutions based on scientific knowledge, to meet society's needs and overcome various challenges, by using available resources in the best possible manner. If you are interested in serving society through chemistry, I urge you to come and study in the chemistry cluster within the School of Engineering. My research unit carries out many joint international research projects, and our students have many opportunities to study at our partner research institutions overseas. I sincerely hope that the COVID-19 situation will be resolved so that students can freely travel abroad for their study and research at the earliest possible time.

Educational systems

UNDERGRADUATE EDUCATION

Hiroshima University offers undergraduate education in diverse schools leading students to acquire a broad culture and specialized knowledge.

Bachelor's Degree Programs

- School of Integrated Arts and Sciences
- School of Letters
- School of Education
- School of Law
- School of Economics
- School of Science
- School of Medicine
- School of Dentistry
- School of Pharmaceutical Sciences
- School of Engineering
- School of Applied Biological Science
- School of Informatics and Data Science
- Special Course of Special Support Education

HU's original goal-oriented educational system

HiPROSPECTS®

*HiPROSPECTS (Hiroshima University Program of Specified Education and Study) is a registered trademark of Hiroshima University.

A combination of three programs to match each student's academic interests and intellectual curiosity

In accordance with his/her academic interests, each student can select a desired program from a combination of three programs: "major program" of the school/department in which the student is enrolled; "minor program" in which the student can learn majors of other departments; and "specified program" designed for the student to develop higher abilities and acquire official qualifications.

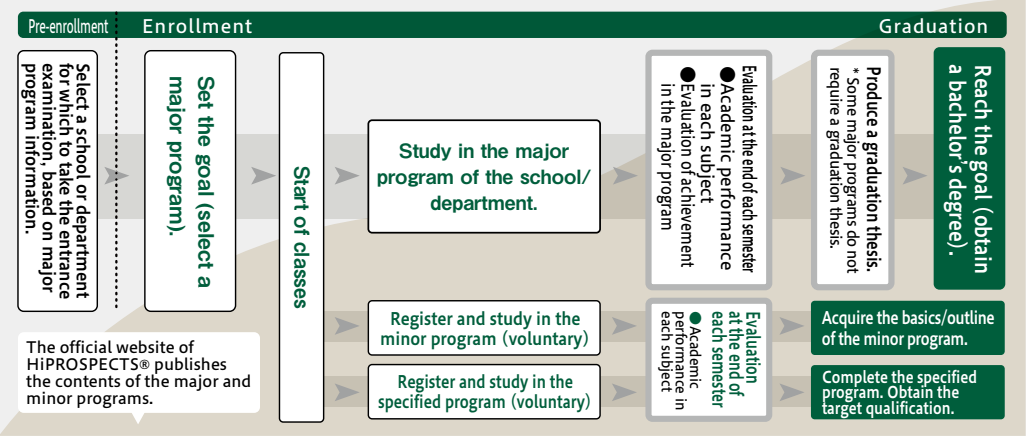
Major program
Students work toward a bachelor's degree in this specialization.

Minor program
Students learn other majors

Specified program
Students study specific subjects to fulfill personal goals or acquire official qualifications.

Each program clarifies targets to reach

In each program, the target levels of knowledge and competency that each student is expected to reach by graduation are clearly indicated, and their degrees of achievement are periodically checked. This approach enables students to make progress steadily toward their final goal.



https://www.hiroshima-u.ac.jp/prog

TOEIC®L&R IP TEST

Measuring English language proficiency by a socially and internationally recognized test

All HU students are required to take this internationally recognized test at least twice, upon admission and in or after their third year (exact timing depending on students' affiliation). The test scores enable the students to objectively evaluate their English language proficiency and also contribute to further improving HU's English language instruction.

Basic Courses in University Education

Compulsory courses for all students preparing to engage in intellectual activities at Hiroshima University

Hiroshima University's liberal arts education is categorized into four major areas (Peace Science Courses, Basic Courses in University Education, Common Subjects, and Foundation Courses). The Basic Courses in University Education are compulsory for all students, in which they learn the basics of intellectual activities in college through Introductory Seminar for First-Year Students and Introduction to University Education.

matching students' motivation

POSTGRADUATE EDUCATION

Deepening understanding in areas of specialization and cultivating multiple perspectives through interdisciplinary and integrated research

Master's & Doctoral Program

- Graduate School of Humanities and Social Sciences
- Graduate School of Advanced Science and Engineering
- Graduate School of Integrated Sciences for Life
- Graduate School of Biomedical and Health Sciences
- Graduate School of Innovation and Practice for Smart Society

Education and Research Environment

Faculty and facilities for the most advanced research in the world

To be among the world's highest-level research universities, Hiroshima University promotes original and distinctive basic and cutting-edge research. Each graduate school comprises laboratories or units that cover a broad range of research areas. Students can engage in the most advanced research projects under the supervision of diverse and highly qualified faculty members. The graduate schools work closely with affiliated research institutions to realize highly specialized educational and research activities.

Common Graduate Courses

Basic knowledge for active roles in today's society

Common Graduate Courses are offered to equip students with the basic knowledge necessary to play active roles in society by learning about the recent developments of social systems. Furthermore, through these courses, the students are expected to cultivate their broad perspective, interest and awareness concerning social issues, thereby elaborating their reflection on how their academic discipline can concretely contribute to society as a science for sustainable development.

Sustainable Development Courses

Through these courses, students are expected to deepen their understanding of the global community's Sustainable Development Goals (SDGs) in order to develop the ability to create sciences for sustainable development and propose solutions to various problems in society.

Career Development and Data Literacy Courses

These courses lead students to understand recent advances in social systems, acquire the knowledge necessary now and in the future, and develop the ability to concretely tackle challenges facing today's society by using knowledge and technology as needed.

WISE Program (Doctoral Program for World-leading Innovative & Smart Education)

Training Ph.D. holders who bring about innovation to benefit society

This program aims to develop human resources who will lead new industrial creation. Taking advantage of Hiroshima University's high levels of specialization and advanced knowledge and industry-academia partnership for human resource development, this program aims to produce outstanding Ph.D. holders who lead the creation and application of new knowledge to create new value for future generations, tackle challenges facing society, and bring about innovation to society.

- **The Frontier Development Program for Genome Editing** (adopted by MEXT in AY 2018)

Two inter-departmental courses to develop human resources capable of fully utilizing genome editing and linking it with industrial creation

- Life Science Course (five-year program)
- Medical Course (four-year program)

Program for Leading Graduate Schools

Training next-generation leaders for global activities

Hiroshima University has inaugurated the Program for Leading Graduate Schools, new trans-graduate school doctoral programs that train future global leaders who create new forms of knowledge beyond the conventional boundaries of academic disciplines and research areas. On the basis of profound specialization cemented at Hiroshima University over the years, the programs offer courses that cultivate students' ability to create, discern, take action and solve problems, and common subjects that form the "Hiroshima University spirit." The students are trained to be leaders capable of taking on global challenges, approaching issues from an original perspective, with discernment based on broad and deep knowledge.

- **Phoenix Leader Education Program (Hiroshima Initiative) for Renaissance from Radiation Disaster** (adopted by MEXT in AY 2011)

Three transversal courses to train experts in the field of radiation disaster recovery

- Radiation Disaster Medicine Course (four-year program)
- Radioactivity Environmental Protection Course (five-year program)
- Radioactivity Social Recovery Course (five-year program)

- **TAOYAKA Program for Creating a Flexible, Enduring, Peaceful Society** (adopted by MEXT in AY 2013)

Three transversal courses to train future leaders who promote on-site reverse innovation

- Cultural Creation Course (five-year program)
- Technical Creation Course (five-year program)
- Social Implementation Course (five-year program)

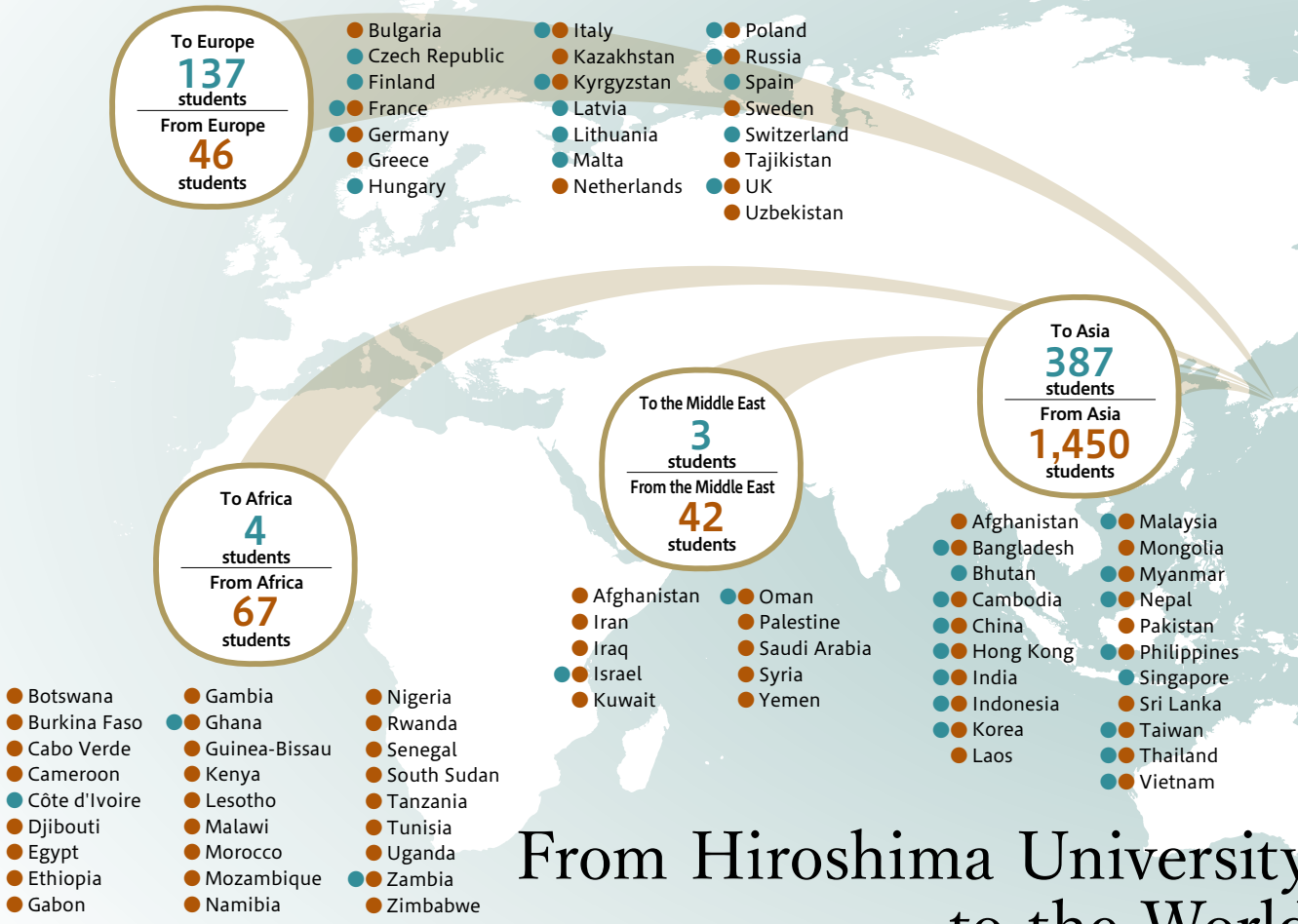
Graduate School of Innovation and Practice for Smart Society

*Set to open in April 2023

Training globalized individuals who will be responsible for the realization of smart societies

Education and research at the Graduate School of Innovation and Practice for Smart Society is centered on the six areas of research that have been highlighted as the main research fields for Society 5.0: **Cyber Physical System, Smart Mobility, Smart Energy, Smart Agriculture, Global Health and Medical Science, and Social Innovation Science.** By linking and integrating these areas, the School trains globalized individuals who can design, develop, and implement systems and technologies to achieve a smart society to flexibly respond to social issues among diverse human societies from the range of the entire earth to local communities.

The World Is Yo



From Hiroshima University to the World

A total of 845 students were sent to 44 countries and regions (AY 2019)

*Data prior to COVID-19

An internship in the Philippines as a scholarship recipient of the Tobitate! (Leap for Tomorrow) Study Abroad Initiative

I received a scholarship to study for eight months in the Philippines about the gender gap there. The HUSA Program allowed me to study sociology and other subjects at the University of the Philippines, and I also experienced an internship at an NGO on Negros Island. I was able to freely try doing what I wanted to do, thanks to the HU professors and administrative personnel whom I had met at HU, as well as my friends who encouraged and supported me. While in this environment where there are many people who would support and root for you, I hope other HU students will find a place to be themselves.

Fourth-year student, Department of Integrated Global Studies, School of Integrated Arts and Sciences (graduated March 2022)

OHMORI Kaede

Studying in the United States and Germany as a Global Peace Leadership Program student

I went to study in the United States during my second year and in Germany during my third year as part of the Global Peace Leadership Program, which is a special program designed to develop your extensive global general culture. In Germany, I had many interesting encounters: dancing with total strangers with our arms around each other's shoulders at a beer festival, becoming close friends with UN employees, having a big fight with my landlord after losing my keys... These and many other experiences while studying abroad drove home to me how immature I was, and they really motivated me to keep doing my best. Hiroshima University offers you a whole range of possibilities. If you are studying for the entrance exam, I encourage you to keep doing your best every day, for the great reward that awaits you when you are finally admitted.

Fourth-year student, Department of Integrated Arts and Sciences, School of Integrated Arts and Sciences (graduated March 2022)

HIROSE Eitaro

ur Campus

At Hiroshima University, the whole world is your campus.
As a hub of international education and research,
HU has signed international exchange agreements with
education and research institutions across the globe.
Hiroshima University attracts many students from all corners
of the world and sends many Japanese students abroad.

International exchange agreements

(As of May 1, 2022)

Between universities

391 agreements signed with 347 institutions in 55 countries/areas

Between divisions

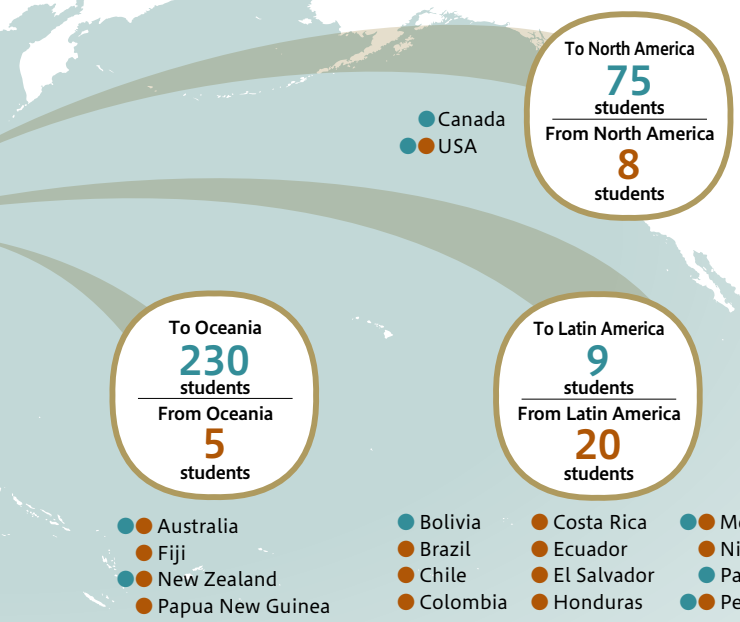
403 agreements with 366 institutions in 51 countries/areas

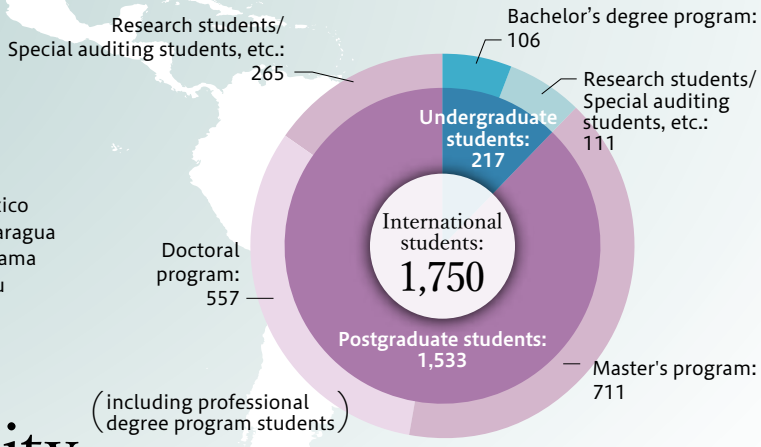
An inter-university exchange agreement was signed with the University of California, Berkeley (USA), represented by its Chancellor, Dr. Carol T. Christ (November 2017).

Overseas bases

(as of May 1, 2022)

23 bases in 15 countries/areas





From the World to Hiroshima University

A total of 1,638 students from 84 countries and regions are studying at HU (as of May 1, 2022)

Research in the sociology of agriculture at HU leading to research papers published in online scientific journals

At Hiroshima University, I conduct research mainly in the sociology of agriculture, as a participant of the Taoyaka Program and the International Economic Development Program. HU has allowed me to significantly grow as a researcher. The financial assistance I have received for academic communications and conference attendance has allowed me to focus on writing my research papers, some of which have been published in the online versions of scientific journals. At HU, with many opportunities to encounter students from many different countries, I have made many new friends. With a sense of gratitude, I will always cherish my memories of Hiroshima University and Japan.

Second-year doctoral course student, Division of Humanities and Social Sciences, Graduate School of Humanities and Social Sciences

Clarisse Mendoza Gonzalvo (Philippines)

Researching biology in a multilingual environment among students from all over the world and experiencing various cultures

I am from Greece. At present, I am conducting research in biology at the Graduate School of Integrated Sciences for Life. Students of various nationalities gather here, speaking in many different languages, producing amazing proposals and experiments one after another. I am grateful for the opportunity to be able to do my research in such a stimulating environment. I am also enjoying familiarizing myself with not only Japanese culture but also many other cultures, thanks to my international friends.

First-year doctoral course student, Graduate School of Integrated Sciences for Life

Pallas Christos (Greece)

Each undergraduate and graduate school has its own admissions policy in accordance with its educational objectives and goals. At the undergraduate level, in addition to the general entrance examination, students are selected through various processes that look into candidates' individuality and motivation, including the Hiroshima University Splendor (Hikari Kagayaki) Entrance Examination.

Ideal Student Profile / Hiroshima University Admission Policy (for the bachelor's degree courses)

Hiroshima University looks forward to welcoming students with the following qualities:

1. Students with a well-rounded personality wishing to contribute to peace
2. Students highly motivated to pursue, create, and develop knowledge
3. Students wishing to acquire specialized knowledge and skills so as to contribute to the development of society
4. Students wishing to learn about diverse cultures and values so as to play an active role in the local and international communities

To accept individuals who demonstrate these qualities, each faculty or department evaluates and selects candidates in a multifaceted and comprehensive manner in accordance with its diploma and curricular policies. For this process, each faculty or department clearly indicates the competences required of candidates and how they are evaluated, in terms of knowledge and skills; the ability to think, make decisions, and express themselves; and attitude toward learning preferably marked with both independence and willingness to collaborate with others of diverse backgrounds.

Entrance Examinations to Undergraduate Schools

Open to high school students, working adults, and senior citizens

1 General Entrance Examination

- **February-Term**
- **March-Term**

Candidates are evaluated mainly in relation to their academic abilities in subjects covered in higher secondary school that are necessary to receive university education. Written tests constitute the main part. The final pass/fail decision is made based on the results of the Common Test for University Admissions and the university's specific academic examination.

2 Hiroshima University Splendor (Hikari Kagayaki) Entrance Examination

Comprehensive Selection

- **Type Ⅰ** (without Common Test for University Admissions)
- **Type Ⅱ** (with Common Test for University Admissions)

Candidates are evaluated with focus on their scholastic interest, motivation, and basic academic abilities in a combination of several test methods, such as essay writing, written examination, interview, skill performance, and oral presentation. In this examination method, candidates can show their individuality and specific skills.

- **International Baccalaureate holders, and mature applicants, IGS entrance examination**

This method is designed to accept students with diverse learning backgrounds, including International Baccalaureate Diploma holders (including those expected to receive the diploma), working adults, and those capable of enrolling in English courses (IGS).

- **Phoenix Entrance Examination** (For senior citizens)

Hiroshima University has an entrance examination for senior citizens, thereby responding to society's needs for lifelong learning.

School Recommendation-Type Selection

- **Selection by School Recommendation**

Candidates are evaluated in a multifaceted and comprehensive manner. Their academic abilities in a broad range of subjects, their extracurricular activities in senior high school, and other achievements are assessed via their application documents and an interview.

- **Selection by Recommendation for the Department of Medicine, School of Medicine** ("Furusato quota")

A "Furusato quota" is set up for applicants from Hiroshima Prefecture for the purpose of developing future medical professionals who will engage in local community health care services.

- **Selection by Recommendation for the Department of Informatics and Data Science, School of Informatics and Data Science** ("Regional revitalization quota system")

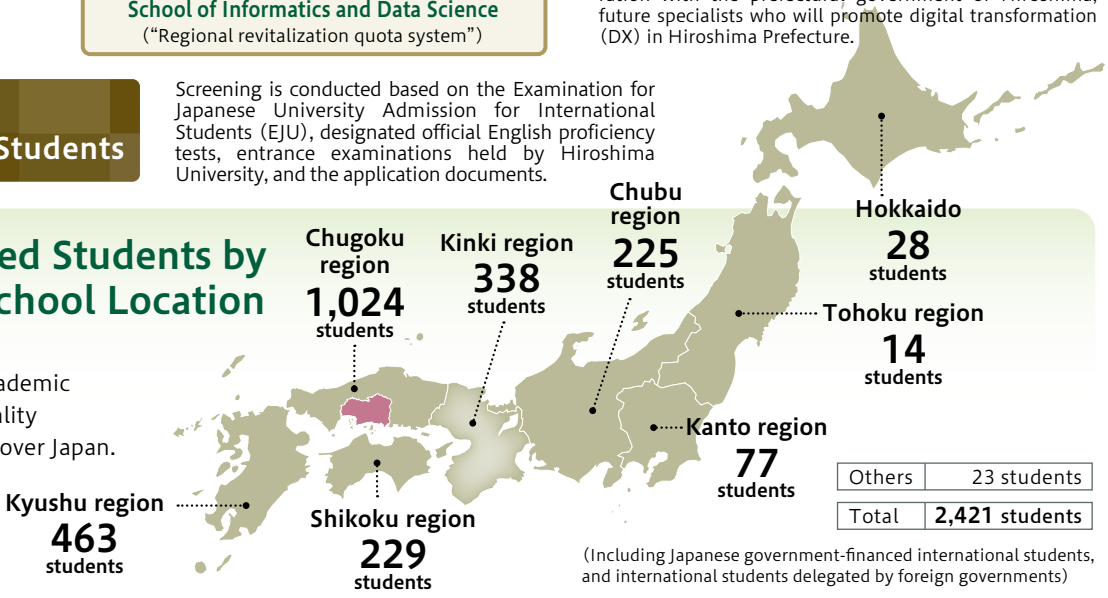
An advantageous local revitalization scholarship quota (Regional Development Quota) is set to train, in collaboration with the prefectural government of Hiroshima, future specialists who will promote digital transformation (DX) in Hiroshima Prefecture.

3 Selection for International Students

Screening is conducted based on the Examination for Japanese University Admission for International Students (EJU), designated official English proficiency tests, entrance examinations held by Hiroshima University, and the application documents.

Newly Admitted Students by Senior High School Location (AY 2022)

Students with proven academic ability and rich individuality gather together from all over Japan.



Others	23 students
Total	2,421 students

(Including Japanese government-financed international students, and international students delegated by foreign governments)

Hiroshima University has a well-developed system of support that meets students' needs relating to their pursuit of studies, daily life, career development, and financial situation. Various forms of assistance are available to enable each and every student to have a fruitful student life.

Support for Career Development

Hiroshima University offers various programs that constitute an integrated system of support for career development for undergraduate and postgraduate students and young researchers.

Career Design and Job Selection Support Available from the First Year

- Lectures in the introduction to university education, a compulsory course for first-year students
- Internships
- Career guidance (general education seminar)
- Career-oriented general education subjects
- Introduction of university-operated support services
- Career consultation and job placement consultation

Support Programs for Students Preparing for Job Searching

- Employment search guidance and seminar
- Distribution of the booklets ("Shushoku Ouen Book") for students 1st and 2nd year undergraduates and the "Job Searching Handbooks" for students looking for a job
- Career development and job search counseling
- Providing information through the "Momiji" student information platform and homepage

Human Resource Development Support Programs for Young Researchers

- Practical program for career and skill development
- Career consultation and matching support for doctoral students
- Core IT system, HIRAKU-PF (young researchers' portfolio)

Global Career Design Center

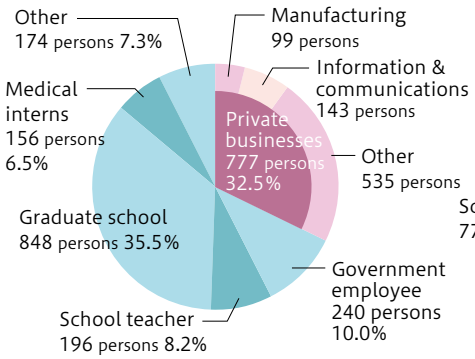
Staffed by academic faculty members and advisors who have worked in the divisions of personnel affairs, recruitment, education, and overseas operation of private businesses, the center provides all students (domestic and international) and young researchers with comprehensive support for their career design and employment search in collaboration with HU's undergraduate and graduate schools.

Employment Status

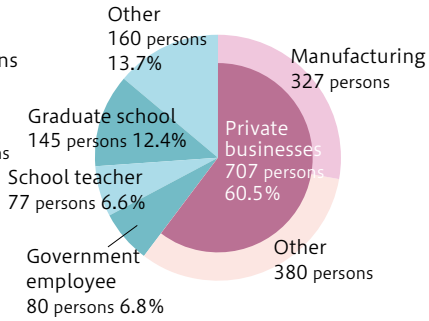
(Undergraduate School 1,213 jobfinders / Graduate School* 864 jobfinders in AY 2021)

* Students completing master's program

Undergraduate School



Graduate School



Main Employers

〈Private sector〉 NTT DOCOMO, INC.; Nippon Life Insurance Company; KYOCERA Corporation; Chugoku Electric Power Transmission & Distribution Co., Inc.; IBM Japan, Ltd.; NEC Corporation; Fujitsu, Ltd.; Rakuten Group, Inc.; IZUMI Co., Ltd.

〈Public sector〉 Hiroshima Prefecture; Hiroshima City; Ministry of Finance Chugoku Bureau; Ministry of Land, Infrastructure, Transport and Tourism; National Tax Agency Hiroshima Bureau; Hiroshima Labor Bureau; Ministry of Agriculture, Forestry and Fisheries, Hiroshima Prefectural Police Department

〈Teaching posts〉 Hiroshima Prefectural Board of Education; Hiroshima City Board of Education; Hyogo Prefectural Board of Education; Wakayama Prefectural Board of Education; Ehime Prefectural Board of Education; Fukuoka Prefectural Board of Education

Support for Studies and Daily Life

Tutor System

Each student is supervised by several academic faculty members serving as tutors and representing different departments and courses. The tutors provide support for overall student life, including studies and daily problems from entrance to graduation.

Center for Academic Practice and Resources

The student staff (graduate students) of this "Learning Support Counter" assist other students with their education and learning-related questions, problems, and concerns. They also offer useful advice, including study skills for liberal arts education (English, Physics, Chemistry, and Mathematics). The staff also organize gatherings for new students.

Peer Support Room

This counseling room for students is operated by students who have received instruction from professional counselors. Students can confide in their peers about problems in their university lives. Student counselors guarantee confidentiality and listen to their counselees attentively and patiently. If necessary, the Peer Support Room can refer counselees to professional institutions on or off campus.

Accessibility Center

The center assists students with disabilities in their pursuit of studies, advises on accessibility, and conducts accessibility leader programs (ALP). In AY 2006, Hiroshima University was the first in Japan to inaugurate an accessibility leader training program. By AY 2021, the Accessibility Leadership Program (ALP) has produced 2,834 Accessibility Leaders at 23 universities, including HU, four corporations, and two government agencies in Japan.

Health Service Center

The Center provides first-aid treatment and consultations by internists and nurses, consultations by psychiatrists, and counseling by clinical psychologists.

Financial Support

■Hiroshima University's original programs

1. For students with academic excellence experiencing financial difficulty in starting or continuing university education

- Hiroshima University Phoenix Scholarship Program
- Hiroshima University Splendor Scholarship Program

2. Tuition fee assistance for graduate students with academic excellence

- Hiroshima University Excellent Student Scholarship

■Japanese governmental programs

(from AY 2020, mainly for undergraduate students of Japanese nationality)

- Higher Education Student Support System (Scholarship + Enrollment Fee/Tuition Fee Exemption)

* Specific conditions must be met to be program beneficiaries.

A University Open to Society, Progressing Together with Society

Hiroshima University's Collaborative Research and Other Collaborative Endeavors with Corporate and Governmental Partners Have Resulted in Various Technologies and Products.

Responding to wide-ranging society/industry needs as a research university

Collaborative Research | 384 projects

Sponsored Research | 345 projects

* This is the number of new projects implemented in AY 2021 (including projects not generating research expenses).

Products Born from Research Collaboration

Setokomachi

(high-grade cake containing *hassaku* orange)
Nishikido Corporation

Research has confirmed that hassaku oranges are rich in Vitamin C and dietary fibers. This Japanese-style cake is made of hassaku orange jam wrapped in rice-based pastry.
It has a refined sweetness mixed well with slight bitterness.

Researcher
Professor Emeritus HIRATA Toshifumi
Professor YANAKA Noriyuki
(Graduate School of Integrated Sciences for Life)

Conducting a range of support projects

Venture Business Startup Support | 81 companies (cumulative)
(as of April 1, 2022)

Products Born from Research Collaboration

Etak Antimicrobial Spray α

Eisai Co. Ltd.

This is an antimicrobial spray whose principal ingredient is Etak®, a long-acting antimicrobial agent developed at Hiroshima University. You can repel viruses and bacteria by spraying this spray on tables, clothes, etc. The antimicrobial component is bound to the spray area, providing an antimicrobial effect that lasts not just immediately after spraying but for one week. Due to its strong binding power, the effect remains even after wiping with a damp cloth.

Researcher Professor NIKAWA Hiroki
(Graduate School of Biomedical and Health Sciences)

Operating on-campus research bases jointly with corporate partners

Collaborative Research Laboratory | 34 laboratories
(as of April 1, 2022)

Advanced Technologies for Assisting Humans

Prosthetics restoring mobility to disabled hands

The production of computer-operated prosthetics is underway. The computer instantaneously captures electric signals from the brain and translates them into hand movements. The use of a 3D printer reduces production time and cost.

Researcher
Professor
TSUJI Toshio
(Graduate School of Advanced Science and Engineering)

Enhancing research capabilities through organizational collaboration

Comprehensive Research Agreements | 91 agreements
(as of April 1, 2022)

Advanced Technologies for Assisting Humans

Practical proposals of highly accessible learning methods adapted to human characteristics

With a combined use of widely accessible devices and software, learning methods can be adapted to human characteristics, instead of human learners adapting themselves to learning methods. This is the practical solution that Prof. Ujima at the Center for Special Needs Education Research and Practice makes to elementary, secondary and tertiary students across Japan for introduction in their daily lives and school work.

Researcher
Associate Professor
UJIMA Kazuhito
(Graduate School of Humanities and Social Sciences)

Products Born from Research Collaboration

MYFLORA

Nomura Dairy Products Co., Ltd.

MYFLORA is a new "fermented food," developed based on research conducted at Hiroshima University. This fermented lactic acid bacteria extract contains plant-derived lactic acid bacteria that reach the intestines alive, Lactobacillus plantarum. Since L. plantarum helps balance the intestinal flora, you can keep your intestines clean by drinking a glass of the extract every day.

Researcher

Professor Emeritus
SUGIYAMA Masanori
(Graduate School of Biomedical and Health Sciences)

Opening on-campus research centers jointly with corporate partners

Center for Collaborative Research with External Organizations

2 research centers
(as of April 1, 2022)

Products Born from Research Collaboration

Chocolat Mill

Ishino Mitoku Co., Ltd.
Inoue Stone Mason Co., Ltd.

Chocolat Mill is a bean to bar chocolate-maker utilizing a granite mill to grind the beans. With this apparatus whose analogues are rare in the world, totally personalized manufacturing is possible, starting from the selection of cacao beans.

Researcher

Professor Emeritus SATO Kiyotaka
Professor UENO Satoru
(Graduate School of Integrated Sciences for Life)

Supporting industrial development with accumulated academic knowledge and information

●Technical Consultation ●Collaborative Research ●Hiroshima University's Industry-Academia-Government-Partnership Network

HU has established an "Industry-Academia Collaboration Consultation Desk" to receive inquiries and provide consultation for companies regarding their technical problems or collaborative research and development projects. The Hiroshima University's Industry-Academia-Government-Partnership Network is working to strengthen services to local industries through training programs, research grants, and in-house lectures.

Products Born from Research Collaboration

Altan NA Hand Soap

Altan Co., Ltd.

This hand soap, containing persimmon tannin extract, keeps your hands clean. The smooth and creamy lather will thoroughly wash out the stains from your hands.

Researcher

Professor SHIMAMOTO Tadashi
(Graduate School of Integrated Sciences for Life)
Professor SAKAGUCHI Takemasa
(Graduate School of Biomedical and Health Sciences)

Hiroshima University's joint research has produced many other foods, industrial products, pharmaceutical drugs, and more.

Major Programs under the Industry, Academia, Government, and Community Collaboration

Digitalizing manufacturing to promote community-level innovation

Digital Monozukuri (Manufacturing) Education and Research Center

To respond to the need for digitalizing manufacturing, an imminent challenge facing local communities, the center is engaged in a broad range of R&D and human resource development relating to model-based materials research, the creation of smart control and production processes, and so forth. The center also aims to construct a full-fledged academia-industry collaboration system to realize community-level innovation.

Elucidating KANSEI on the basis of brain sciences to contribute to people's well-being

Center for Brain, Mind and KANSEI Sciences Research (Moonshot R&D Project for Mental Wealth by Music and KANSEI Sciences)

Mental health maintenance and enhancement have become a major global challenge. Expectations have been riding high on scientific studies attempting to elucidate the mechanism of the mind and the development of technologies that contribute to mental well-being and enrichment, particularly in recent years against the background of the coronavirus pandemic and trends toward the metaverse era. The Center for Brain, Mind and KANSEI Sciences is working to elucidate the brain mechanism of perception and sensibility (so-called KANSEI) through analysis of the brain interoceptive network (BIN), and to develop wearable technologies visualizing KANSEI, in creative collaboration with other domestic and international universities, businesses, local governments, and many other stakeholders. The Center expects to apply its research achievements to maximize positive perception and minimize negative perception, thereby helping realize a society where well-being is assured.

Contributing to the realization of the SDGs through industry-academia collaboration in "Bio-DX"

Japan Science and Technology Agency (JST) Program for Industry-Academia Co-creation Center of innovation for Bio-Digital Transformation ("Bio-DX")

To overcome societal challenges, such as new infectious diseases, food shortages, and carbon emission reduction, Hiroshima University promotes industry-academic co-creation based on the concept of Bio x Digital Transformation ("Bio-DX"), which draws out the maximum potential of biological functions. This project is ultimately aimed at building an innovative ecosystem for a bio-economy society that contributes to the achievement of the SDGs.

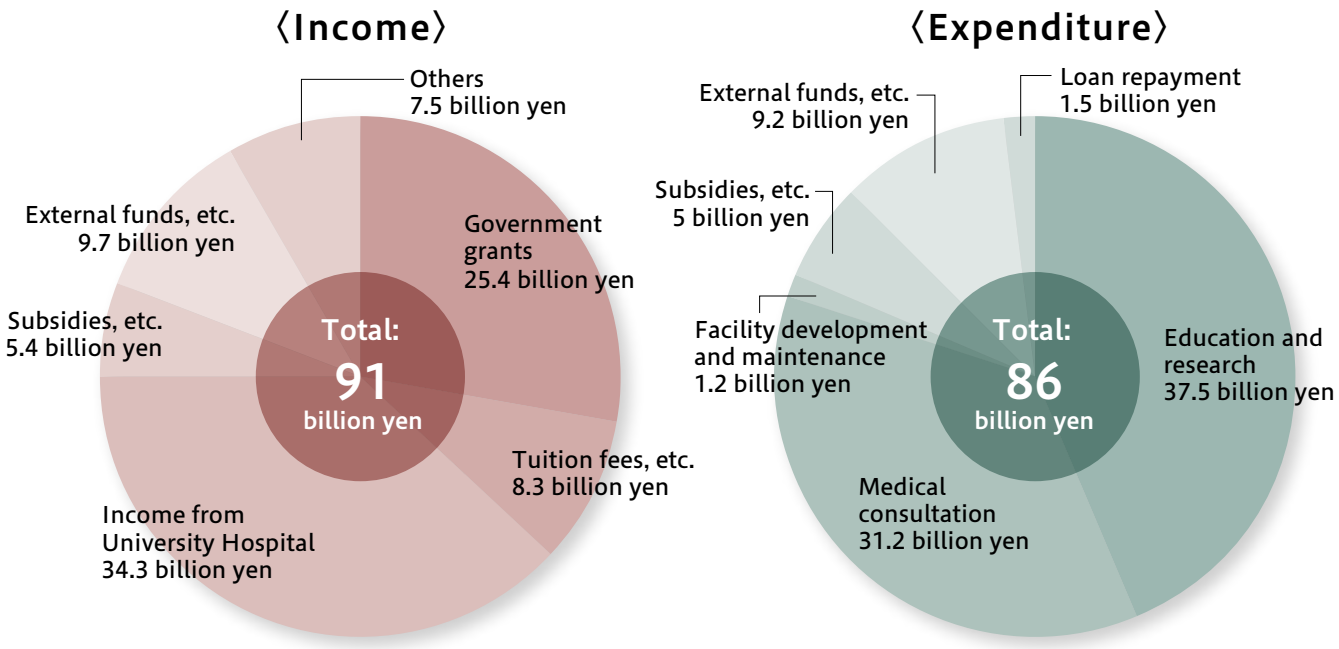
Tackling synergistic torrential rainfall-induced disasters, which are intensifying due to climate change

Resilience Research Center

The 2018 Western Japan heavy rainfall disaster (successive heavy downpours in southwestern Japan in July 2018) caused heavy damage to the local social infrastructure, including housing, water supply systems and roads, due to widespread mudslides, sediment flow, and floods, claiming over 200 lives. While raising funds through various means, including crowdfunding, the Resilience Research Center works to elucidate the mechanisms of disasters. The center is committed to supporting disaster-resilient community building through human resource development and collaboration with the national and local governments, private businesses, and local residents.

To further develop its education and research, Hiroshima University efficiently utilizes its financial resources, mainly comprising tuition fees and government grants. The university has also established funds for student support programs, among other purposes.

Hiroshima University Income and Expenditure (AY 2021)



Totals may not sum exactly due to rounding.

Foundations and Funds

Hiroshima University operates a donation system to fund student support programs, assisting excellent students experiencing difficulty in continuing their studies due to economic reasons and supporting Japanese and international students studying abroad and in Japan. Corporate and individual donors can benefit from tax deductions in accordance with the sum of their donation. Donors offering above a specified amount are publicly honored or presented with a commemorative gift.

The fund for uplifting Hiroshima University and energizing the local communities of Hiroshima has been launched (for the "75 + 75 year anniversary" of Hiroshima University).

Established 75 years after Hakushima School, the predecessor to Hiroshima University, the university will celebrate its 75th anniversary in 2024. Accordingly, the university has set up a fund for uplifting Hiroshima University and energizing Hiroshima's local communities for its "75 + 75 year anniversary." By doing so, Hiroshima University will enhance support projects for social contribution, education and research environment improvement, and research activities, in addition to existing projects for student support and international exchange.

The Hiroshima University Fund

(established in AY 2007)

Projects to support students and researchers are carried out to develop "peace-pursuing, cultured individuals with an international mindset and a challenging spirit" to make Hiroshima a Top 100 university.

Objective ❶ Hiroshima University Phoenix Scholarship / Splendor Scholarship

Hiroshima University's original scholarship to offer 100,000 yen per month to students demonstrating excellent academic results while experiencing difficulty in starting or continuing university education due to economic reasons

Number of beneficiaries (AY 2008-2022)
178 students

Objective ❷ START Program and START+ Program

Partial coverage of travel and accommodation expenses for participants in the START Program targeting first-year undergraduate students who have little overseas experience, and in the START+ Program designed for second- and third-year undergraduate students aimed for their independent learning

Number of beneficiaries (AY 2010-2021)
1,835 students

Objective ❸ Support for graduate students' conference attendance

Support for graduate students attending international academic conferences held abroad, to increase their paper-reading opportunities overseas and promote their research

Number of beneficiaries (AY 2011-2021)
1,867 students

Hiroshima University Fund with Sponsor's Title

(established in AY 2015)

Hiroshima University supports international and Japanese students through projects named after donors or according to donors' wishes, to make the whole world HU's campus.

Objective ❶ Scholarship for international students

Hiroshima University has a pre-entry scholarship system in which recipients are selected prior to their arrival in Japan so as to ensure a large number of international students and globalize the campus.

Objective ❷ Scholarship for Japanese students studying abroad

Japanese students studying abroad can benefit from this scholarship established to train "peace-pursuing, cultured individuals with an international mindset and a challenging spirit" and aspire for international-scale activities.

Hiroshima University hosts a range of lectures and fora featuring world-renowned researchers and leaders in their respective fields to intellectually stimulate and motivate the students.

From Hiroshima University to the World
– The Wisdom of World-Renowned Researchers –

Hiroshima University invites Nobel Prize winners and other world-leading researchers to hold lecture and discussion sessions on a regular basis. This provides valuable opportunities for students who aim to become a scientist, allowing them to feel close to findings and studies that have astonished the entire world.

●The 1st "The Wisdom from World-Renowned Researchers" (March 7, 2016)
Sir John Gurdon
Professor, Wellcome Trust/Cancer Research UK Gurdon Institute, University of Cambridge, UK
The 2012 Nobel Prize in Physiology or Medicine

●The 1st "The Wisdom from World-Renowned Researchers" (March 7, 2016)
Dr. Shinya Yamanaka
Director, Center for iPS Cell Research and Application, Kyoto University, Japan
The 2012 Nobel Prize in Physiology or Medicine

●The 2nd "The Wisdom from World-Renowned Researchers" (November 29, 2016)
Dr. Takaaki Kajita
Director, Institute for Cosmic Ray Research, University of Tokyo, Japan
Distinguished University Professor, University of Tokyo, Japan
The 2015 Nobel Prize in Physics

●The 3rd "The Wisdom from World-Renowned Researchers" (April 5, 2017)
●"The Wisdom from World-Renowned Researchers" in Tokyo (January 9, 2019)
Sir Paul Nurse
Director, Francis Crick Institute, UK
Source : Fiona Hanson / AP Images
The 2001 Nobel Prize in Physiology or Medicine

●The 86th Hiroshima University Lecture Meeting (March 27, 2018)
Dr. Muhammad Yunus
Founder, The Grameen Bank
The 2006 Nobel Peace Prize

●Commemorative Lecture Conference for the Establishment of the School of Informatics and Data Science and the Department of Integrated Global Studies in the School of Integrated Arts and Sciences (May 16, 2018)
Dr. Yoshinori Ohsumi
Honorary Professor, Tokyo Institute of Technology's Institute of Innovative Research
The 2016 Nobel Prize in Physiology or Medicine

●The 4th "The Wisdom from World-Renowned Researchers" (March 11, 2019)
Dr. Hiroshi Amano
Professor, Institute of Materials and Systems for Sustainability, Nagoya University, Japan
The 2014 Nobel Prize in Physics

●Commemorative Lecture Conference for the Establishment of the Graduate School of Integrated Sciences for Life and the Graduate School of Biomedical and Health Sciences (July 20, 2019)
Dr. Tasuku Honjo
Director, the Kyoto University CCII
Deputy Director-General and Distinguished Professor, Kyoto University Institute for Advanced Study
The 2018 Nobel Prize in Physiology or Medicine

●Commemorative Lecture Conference for the Establishment of the Graduate School of Humanities and Social Sciences and the Graduate School of Advanced Science and Engineering (July 2, 2020)
Dr. Akira Yoshino
Honorary Fellow, Asahi Kasei Corp.
The 2019 Nobel Prize in Chemistry

●The 5th "Wisdom from World-Renowned Researchers" (September 25, 2021)
Dr. Harvey J. Alter
Scientist Emeritus, National Institute of Health, U.S.
© Nobel Prize Outreach. Photo: Joy Asico
The 2020 Nobel Prize in Physiology or Medicine

Becoming a Global Citizen : Lecture by Special Instructor

As part of liberal arts education, Hiroshima University invites leaders who play active roles in a variety of fields, such as sports, arts, science and business, to hold lecture meetings mainly for new undergraduate students. Their special lectures provide students with opportunities to learn the perspectives and histories of such leaders and to consider the goals of their campus lives and future dreams.

《 Lecturers in AY 2017-2022 》

Dr. IOKIBE Makoto
Chancellor, University of Hyogo

Dr. IKEGAYA Yuji
Professor, Graduate School of Pharmaceutical Sciences, The University of Tokyo

Mr. IKEDA Koji
Chairman, The Hiroshima Bank

Mr. ITO Toyo
Architect

Mr. INOUE Kosei
Coach,
All-Japan Men's Judo Team

Mr. UEDA Sōkei
Grandmaster, Ueda Sōko Tradition of Japanese Tea Ceremony

Ms. OYAMADA Hiroko
Novelist (awardee of the 150th Akutagawa Award), Graduated School of Letters, Hiroshima University

Mr. KANEMARU Yasufumi
Chairman and President, Group CEO, Future Corporation

Mr. KAWABUCHI Saburo
Captain (advisor), The Japan Football Association
First chairman, The J.League

Mr. KUSUNOKI Yuji
President, Rakuten Securities, Inc.
Graduated School of Letters, Hiroshima University

Mr. KOBAYASHI Hiroyuki
Risk management and aviation specialist (former Japan Airline Captain)

Mr. TAKAOKA Kozo
President and CEO,
Nestlé Japan Ltd.

Mr. TSUKUDA Kazuo
Senior Executive Advisor,
Mitsubishi Heavy Industries, Ltd.

Ms. NAKAMARU Michie
Opera singer (winner of the Maria Callas Grand Prix)

Mr. NINOMIYA Seijyun
Sports journalist

Mr. NOMURA Kenjiro
Baseball critic
Former manager,
The Hiroshima Toyo Carp

Mr. HIROKANE Kenshi
Manga artist

Mr. FUKAYAMA Hideki
Chairman, The Hiroshima Chamber of Commerce and Industry
Adviser and Honorary Chairman, Hiroshima Gas Co., Ltd.

Mr. FUWA Toru
Former Director and Vice President, Wakunaga Pharmaceutical Co., Ltd.

Ms. HORIKAWA Keiko
Non-fiction writer, Graduated School of Integrated Arts and Sciences, Hiroshima University
Keiko Horikawa©MAL

Mr. MAEKAWA Masao
Advisor, Mayekawa Mfg. Co., Ltd.

Mr. MATSUI Kazumi
Mayor, The City of Hiroshima

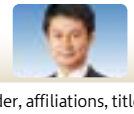
Mr. Morley Robertson
International journalist

Dr. MOGI Kenichiro
Neuroscientist

Mr. YANO Hirotake
Chairman, Daiso Sangyo Co., Ltd.

Dr. YAMAGIWA Juichi
Director-General, Research Institute for Humanity and Nature
The former President of Kyoto University

Mr. YAMASAKA Tetsuro
President, Balcom Co., Ltd.
Graduated School of Education, Hiroshima University



Mr. YUZAKI Hidehiko
Governor, Hiroshima Prefecture

(Japanese syllabary order, affiliations, titles, etc. are as of the date of the lecture.)

Hiroshima University is composed of three campuses (Higashi-Hiroshima, Kasumi, and Higashi-Senda). Aside from the School and Graduate School buildings, the campuses consists of five libraries and various other experimental and research facilities, as well as cultural and sports facilities, which provide a wide range of front-line educational and research activities.

Higashi-Hiroshima Campus

Higashi-Hiroshima City

School of Integrated Arts and Sciences | School of Letters | School of Education | School of Economics | School of Science | School of Engineering | School of Applied Biological Science | School of Informatics and Data Science

Higashi-Hiroshima Campus having an area of approximately 2.5 million m² is situated in Higashi-Hiroshima City, located in the center of Hiroshima Prefecture. It is the main campus of Hiroshima University, housing eight faculties and three graduate schools, such as the School of Integrated Arts and Sciences.

A warm welcome to the lush garden university, one of the largest Japanese national universities in terms of campus size.

Visit the official HU website to see the exact locations of the buildings.

Hiroshima University website

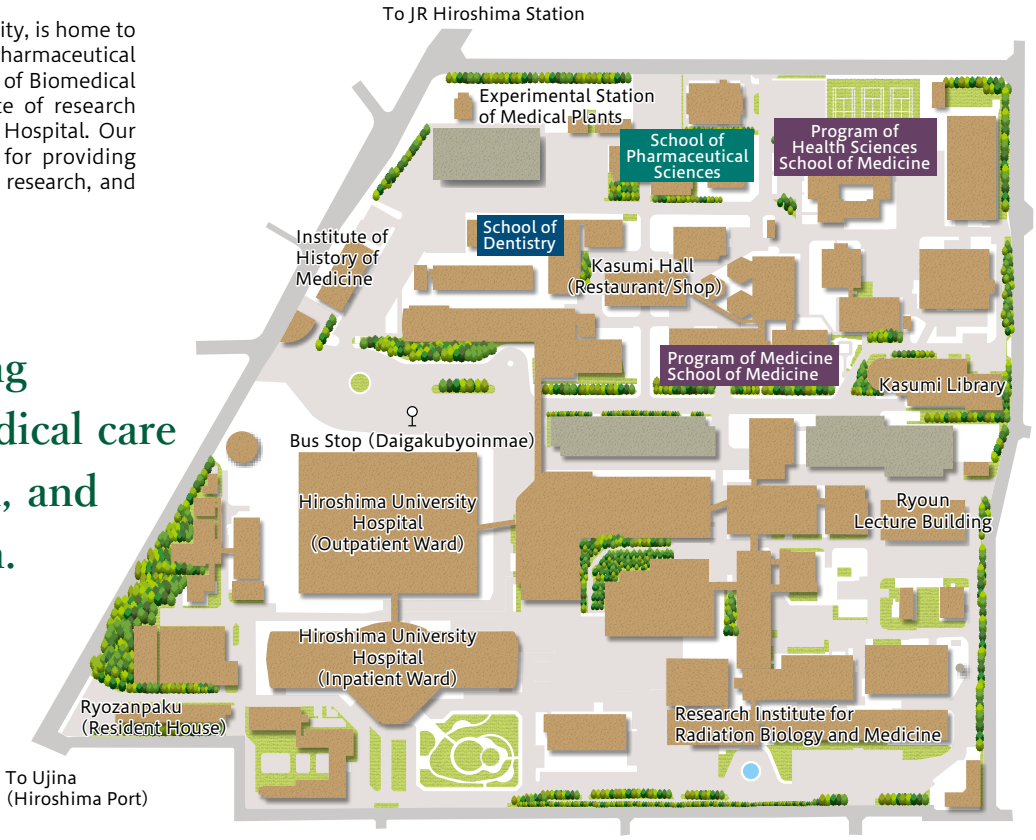
Access ▸ Higashi-Hiroshima campus ▸ Campus map ▸ Around the campus (with building names and numbers)

Kasumi Campus Hiroshima City

School of Medicine | School of Dentistry | School of Pharmaceutical Sciences

Kasumi Campus, located in Hiroshima City, is home to the Schools of Medicine, Dentistry and Pharmaceutical Sciences, as well as the Graduate School of Biomedical and Health Sciences. It is also the site of research facilities and the Hiroshima University Hospital. Our campus plays a major role as a base for providing state-of-the-art medical care education, research, and clinical information.

A base for providing state-of-the-art medical care education, research, and clinical information.



Higashi-Senda Campus Hiroshima City

School of Law Daytime Course
School of Law Evening Course
School of Economics Evening Course

The Higashi-Senda Campus is located in Hiroshima City, covering a part of the former site of Hiroshima University prior to its relocation to Higashi-Hiroshima City, where the most HU divisions are assembled on a single campus. The School of Law (daytime and evening courses) and the School of Economics (evening course) hold classes on this campus.

A major learning hub where the history of Hiroshima University overflows.

Phoenix International Center MIRAI CREA

〈Higashi-Hiroshima Campus〉

The Phoenix International Center ("MIRAI CREA"), opened in October 2021, is housed in a building designed on the concept of a "green-lined hill of encounters and exchanges," with a symbolic exterior embodying a sustainable society. It has a spacious multi-purpose hall, a community kitchen, a cafeteria, meeting rooms, and other facilities. Residential rooms and exchange lounges occupy the third to seventh floors. The seventh-floor houses executive rooms for selected researchers. The center is well equipped for multiple purposes, including diverse academic and cultural activities, knowledge-sharing events, and safe and comfortable residences for selected researchers and students visiting from abroad. MIRAI CREA is expected to serve as a hub of knowledge to further enhance the status of Higashi Hiroshima as an international research center.

Fukuyama Tsuun Komaru Nigiwai Pavillion

〈Higashi-Hiroshima Campus〉

The pavillion was completed in 2019 as a multipurpose facility for students. Its interior features locally sourced wood from Hiroshima Prefecture. The pavillion can be used for various purposes, including students' business start-up activities, meetings and self-study. This building was constructed by Yamane Holdings Co., Ltd. through generous donations from Fukuyama Transporting Co., Ltd. and the Shibuya Ikueikai Foundation.

Libraries

The Hiroshima University Library comprises five libraries and holds approximately 3.44 million volumes in total, one of the largest university collections in Japan. The Central Library is equipped with an automated retrieval system, in which books can be accessed by computer operation. A collection of school textbooks, from the Edo period to the present, and many other valuable materials are also stored at the libraries.


Central Library (Higashi-Hiroshima Campus)


West Library (Higashi-Hiroshima Campus)


East Library (Higashi-Hiroshima Campus)


Kasumi Library (Kasumi Campus)


Higashi-Senda Library (Higashi-Senda Campus)

Facility Outline (as of 2022)

Library/location		Surface area	No. of seats for reading	No. of volumes	Main categories in the collection
Central Library	Higashi-Hiroshima Campus	16,053㎡	992 seats	Approx. 2.29 million	Books and periodicals in the fields of education, other human and social sciences, and natural sciences
East Library		1,745㎡	29 seats	Approx. 0.25 million	Books and periodicals in the fields of engineering, biology, and other natural sciences
West Library		6,102㎡	882 seats	Approx. 0.64 million	General books, study guides, periodicals in all subjects and books on natural sciences
Kasumi Library	Kasumi Campus	2,382㎡	385 seats	Approx. 0.19 million	Books and periodicals in the fields of medicine, dentistry, pharmacology, and public health
Higashi-Senda Library	Higashi-Senda Campus	685㎡	81 seats	Approx. 0.07 million	Books and periodicals in law and economics

Databases and Services

The libraries have databases for newspaper and journal article search and other purposes. At the libraries, audiovisual materials, including movies, music, and language learning software, are available. Library staff is ready to help visitors to locate materials and information necessary for their studies and research.

Writing Center

This is where students can turn for help when they experience difficulty with academic writing while preparing class projects, term papers, and the like. Graduate students who underwent specialized training in writing instruction serve as tutors and use dialogue, brainstorming, and other techniques to help writers to write better. Assistance in academic writing in English is also available.

Learning support space, BIBLA

The libraries are provided with free spaces for students' activities, such as group work, discussion, and preparation for presentations, as well as independent study using the internet (Wi-Fi). Movable whiteboards available for free use and spacious tables perfect for spreading out books and documents are particularly appreciated by users. BIBLA in the Kasumi Library is open around the clock to students whose home campus is Kasumi.

Special Collections

The Central Library holds Special Collections of rare and valuable materials. The Collections include private collections, special collections, large collections, and depository collections. Some items from the collections are digitized and made available online as digital collections.


Gakumon no Susume (Encouragement of Learning) by Yukichi Fukuzawa, 1872


The first edition of Capital, Volume 1, by Karl Marx

For further information 》 **Japanese edition** https://www.lib.hiroshima-u.ac.jp/

English edition https://www.lib.hiroshima-u.ac.jp/?lang=english

Satake Memorial Hall 〈Higashi-Hiroshima Campus〉

Constructed to commemorate the 50th anniversary of Hiroshima University's establishment, Satake Memorial Hall has a beautiful exterior designed to resemble a grand piano. The hall is used for various purposes, including academic conferences, concerts, theatrical plays and other performing arts, and local community events.This building was constructed with donations from Satake Corporation, other companies, and HU graduates.

Faculty Club 〈Higashi-Hiroshima Campus〉

The Faculty Club was established for several purposes, including to facilitate academic exchange and thereby contribute to educational research within the university, to promote academic and cultural exchange between the university and the community, and to promote friendship and interaction among faculty members, students and alumni. The Faculty Club features various facilities, including a restaurant, a reception hall, conference rooms and lodging facilities.

Hiroshima University Museum 〈Higashi-Hiroshima Campus〉

Hiroshima University Museum is an Eco-museum. In the area, there is the main museum, six Satellite Museums, and the Discovery Trail (a natural promenade across the vast Higashi-Hiroshima Campus) linking these museums. In addition to its permanent exhibition, the Museum organizes theme-based exhibitions, nature observation tours (Field Navi) and other events.

Main Museum

This is the central facility of the Hiroshima University Museum, which introduces the university and exhibits rare artifacts and documents relating to the local environment and culture, such as fossils and stuffed specimens. It also serves as the information center for the whole museum complex.

Satellite Museums

Satellite Museums exhibit artifacts and documents relating to the specializations of the respective schools and centers concerned. The Satellite Museums are situated at six locations: the Archaeological Research Section, the School of Applied Biological Science, the School of Science, the School of Letters, the Central Library, and the Amphibian Research Center.

Discovery Trail (Hakken-no-komichi)

Along this trail, you can enjoy nature in changing seasons and observe a variety of animals and plants that live on Higashi-Hiroshima Campus, including some endangered species, and numerous ruins of pre-historic and later ages.

Higashi-Senda Innovative Research Center 〈Higashi-Senda Campus〉

As a "New center for humanities and social sciences with a focus on nurturing legal professionals," the Center provides education for students in daytime courses at the School of Law as well as other schools and conducts educational and research projects in collaboration with other universities, industry, local governments, and organizations.

Legal Service Center 〈Higashi-Senda Campus〉

The Graduate School of Humanities and Social Sciences Legal Service Center was established in 2005 as part of Hiroshima University Law School's social contribution activities. It offers free legal counseling concerning civil affairs once a week.

Institute of History of Medicine 〈Kasumi Campus〉

The present Hiroshima University Institute of History of Medicine was completed in 1999, retaining almost the same design as that of the former Institute of History of Medicine, which was used as an arms depot of the Hiroshima Army Weaponry Factory during the war. The current building, partially constructed with bricks and stones in use at the time of the atomic bombing, is designated as a hibaku building.

Hiroshima University Hospital 〈Kasumi Campus〉

With the philosophy of "Provide holistic and integrated medical care," "Foster superior medical experts," and "Pursue new medical innovations," Hiroshima University Hospital, as a core hospital in the Chugoku/Shikoku area, offers advanced medical care that reflects the latest headways in the rapidly progressing field of medicine.

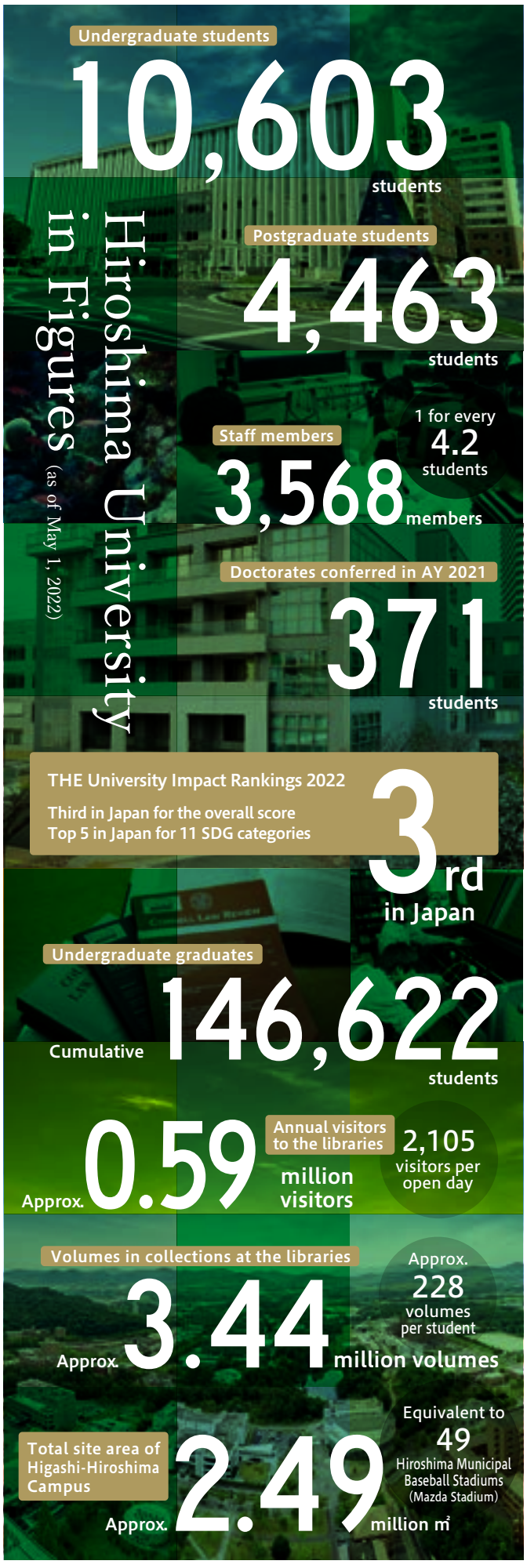
Partnership with Local Professional Sports Teams

Hiroshima serves as a base for professional sports teams, including Hiroshima Toyo Carp, Sanfrecce Hiroshima F.C., and JT Thunders Hiroshima. In active cooperation with these teams, Hiroshima University Hospital contributes to improving their performance through measurement of the physical fitness of newly joined players, and daily healthcare guidance.

Response to the COVID-19 Pandemic

Concerning clinical care, the Hiroshima University Hospital has eight beds reserved for critically ill patients — whose treatment includes ECMO. In the event of an infection outbreak, the hospital has 28 beds for patients with moderate symptoms to provide all-out medical attention. The total number of hospital admissions (number of patients x number of days) exceeded 2,000. Hiroshima University Hospital quickly responded and announced its participation in the national government's workplace vaccination campaign. Not limiting itself to only vaccinating HU students and faculty members, the hospital has actively promoted the campaign in partnership with Higashi-Hiroshima City, undertaking workplace vaccinations at local companies, dispatching dentists to perform certain medical acts, and operating large-scale collective vaccination centers established by Hiroshima City. The hospital has thus far implemented a total of over 100,000 vaccinations.

For further information 》 **https://www.hiroshima-u.ac.jp/en/hosp/**



History

Hiroshima University has nine schools as its forerunners, which is the largest number in Japan. Firstly, seven schools were integrated, namely Hiroshima Normal School (formerly Hakushima School, established in 1874), Hiroshima Women's Higher Normal School (formerly Hiroshima Girl's High School, established in 1887), Hiroshima Higher Normal School (established in 1902), Hiroshima Higher Technical School (formerly Hiroshima High Institute of Technology, established in 1920), Hiroshima Prefectural Training Institute for Teachers of Young Men's Schools (formerly Hiroshima Prefectural Training Institute for Teachers of Vocational Supplementary Schools, established in 1922), Hiroshima High School (established in 1923), and Hiroshima University of Literature and Science (established in 1929). Secondly, Hiroshima Municipal Higher Technical School (established in 1945) was annexed, and Hiroshima University came into being under the new university system. In 1953, Hiroshima Medical College was reorganized under the new system (formerly Hiroshima Prefectural Medical School, established in 1945) and merged into Hiroshima University.

1874
- Establishment of the schools that were later reorganized and integrated into Hiroshima University

1945
- Atomic bombing in Hiroshima City

1949
- Establishment of Hiroshima University (with six undergraduate faculties, four annex schools, and one research center) as one of the national universities of Japan under the new educational system

1950
- Opening ceremony of Hiroshima University
- Declaration by the first President Tatsuo Morito: Hiroshima University will be "a single unified university, free and pursuing peace"

1953
- Integration of Hiroshima Prefectural Medical College into Hiroshima University
- Establishment of Hiroshima University Graduate Schools (three schools)

1956
- Adoption of the Hiroshima University crest

1957
- Adoption of the Hiroshima University song

1972
- Decision by the Council for the integration and relocation of Hiroshima University

1982
- Opening of Higashi-Hiroshima Campus

1995
- Completion of university integration and relocation

1999
- The 50th anniversary

2002
- Establishment of Hiroshima University's first overseas base in Beijing, China

2004
- Reorganization of Hiroshima University as a national university corporation

2006
- Introduction of the Hiroshima University Program of Specified Education and Study

2010
- Establishment of the Student Plaza

2013
- Opening of new outpatient clinical building

2016
- Opening of the Higashi-Senda Innovative Research Center

2018
- Establishment of the School of Informatics and Data Science

2019
- Establishment of graduate schools (Graduate School of Integrated Sciences for Life, Graduate School of Biomedical and Health Sciences)
- The 70th anniversary

2020
- Establishment of graduate schools (Graduate School of Humanities and Social Sciences, Graduate School of Advanced Science and Engineering)

2021
- Opening of Hiroshima University Phoenix International Center MIRAI CREA

2022
- Opening of the Arizona State University (ASU) Thunderbird School of Global Management-Hiroshima University Global School

CAMPUS LOCATION & ACCESS

❶ 〈Hiroshima City (Midori District)〉
Elementary School
Junior High School
Senior High School

❷ 〈Hiroshima City (Shinonome District)〉
Elementary School
Junior High School

❸ 〈Higashi Hiroshima City〉
Kindergarten

❹ 〈Mihara City〉
Kindergarten
Elementary School
Junior High School

❺ 〈Fukuyama City〉
Junior High School
Senior High School

Access to Higashi-Hiroshima Campus

Narita Airport	By Air	80～100min. Bus	Haneda Airport	90min. Plane	Hiroshima Airport	25min. Bus / 15min. Bus	Shiraichi Sta.	10min. Local Train	Saijo Sta.	15min. Bus	Higashi-Hiroshima Campus	
	By JR	80min. Limited Exp.	Tokyo Sta.	200～250min. Shinkansen	Fukuyama Sta.	40min. Shinkansen			Higashi-Hiroshima Sta.	15min. Bus* or Taxi		
Kansai Airport	By JR	60min. Limited Exp.	Shin-Osaka sta.	70min. Shinkansen	Fukuyama Sta.	40min. Shinkansen			Higashi-Hiroshima Sta.	15min. Bus* or Taxi		

＊ HU-bound bus service operated only on weekday mornings

Access to Kasumi Campus

Narita Airport	By Air	80～100min. Bus	Haneda Airport	90min. Plane	Hiroshima Airport	45min. Bus / 15min. Bus	Shiraichi Sta.	50min. Local Train	Hiroshima Sta.	15min. Bus	Kasumi Campus	
	By JR	80min. Limited Exp.	Tokyo Sta.	250min Shinkansen					Hiroshima Sta.	15min. Bus		
Kansai Airport	By JR	60min. Limited Exp.	Shin-Osaka sta.	90min. Shinkansen					Hiroshima Sta.	15min. Bus		

Access to Higashi-Senda Campus

Narita Airport	By Air	80～100min. Bus	Haneda Airport	90min. Plane	Hiroshima Airport	45min. Bus / 15min. Bus	Shiraichi Sta.	50min. Local Train	Hiroshima Sta.	30min. Tram	Higashi-Senda Campus	
	By JR	80min. Limited Exp.	Tokyo Sta.	250min Shinkansen					Hiroshima Sta.	30min. Tram		
Kansai Airport	By JR	60min. Limited Exp.	Shin-Osaka sta.	90min. Shinkansen					Hiroshima Sta.	30min. Tram		

UNIVERSITY OF WORLD-WIDE REPUTE AND SPLENDOR FOR YEARS INTO THE FUTURE

Hiroshima University's Mascot
Hiroty®

HIROSHIMA UNIVERSITY

Public Relations Office, Hiroshima University

1-3-2 Kagamiyama, Higashi-Hiroshima City, Hiroshima, Japan 739-8511
TEL.082-424-3701　FAX.082-424-6040
E-mail　koho@office.hiroshima-u.ac.jp
Official website　https://www.hiroshima-u.ac.jp/en

2023.3