HIROSHIMA UNIVERSITY

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

HIROSHIMA UNIVERSITY'S FIRST-EVER MASCOT

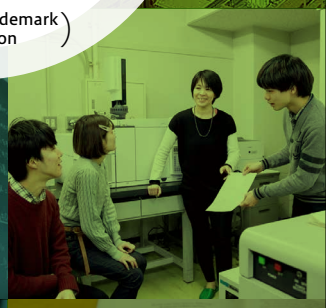
Hiroshima University Phoenix Mark

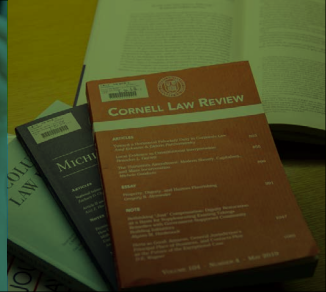
Hiroshima University Mascot "Hiroty"

(Applied for trademark registration)

PROSPECTUS

2020-2021





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

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. In 2020, graduate school reform was completed, and a four-graduate-school system has been started, comprising the Graduate School of Humanities and Social Sciences, the Graduate School of Advanced Science and Engineering, the Graduate School of Integrated Sciences for Life, and the Graduate School of Biomedical and Health Sciences. 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

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.

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Hiroshima University's Phoenix Mark and Mascot "Hiroty"

Phoenix Mark (Applied for trademark registration)

Mascot "Hiroty"

The phoenix mark's design is based on the motif of HU's symbol, "The Phoenix," which portrays the legendary immortal bird and a plant of the Palmae family known as the phoenix tree. HU has adopted the mythical bird as its symbol to signify its rebirth out of the ashes after Hiroshima was laid to ruins by the atomic bomb. The mascot "Hiroty" has been designed to familiarize HU members with the phoenix mark. These artworks were designed by internationally renowned illustrator Mr. Hirofumi Kamigaki.

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 October 1, 2020)

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
  - Institute for Interdisciplinary 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
  - Research Institute of Early Childhood Education
  - Center for Primary and Secondary Education Research and Development
  - Center for Special Needs Education Research and Practice
  - Training and Research Center for Clinical Psychology
  - Legal Service Center
- Graduate School of Advanced Science and Engineering
- Graduate School of Integrated Sciences for Life
  - Setouchi Field Science Center
  - Marine Biological Laboratory
  - Miyajima Natural Botanical Garden
  - Laboratory of Plant Chromosome and Gene Stock
- Graduate School of Biomedical and Health Sciences
  - Center for Advanced Nursing Practice and Research
  - Center for Advanced Practice and Research of Rehabilitation

Advanced Course

- Special Course of Special Support Education

Attached Research Institute

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

Hospital

- Hiroshima University Hospital
- Hiroshima University Dental Clinic

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 Nanodevice and Bio Systems
- Research Institute for Higher Education
- Information Media Center
- Natural Science Center for Basic Research and Development
- Morito Institute of Global Higher Education
- Center for the Study of International Cooperation in 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
- The Center for Contemporary India Studies at Hiroshima University
- 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

Joint Usage Facility on Campus

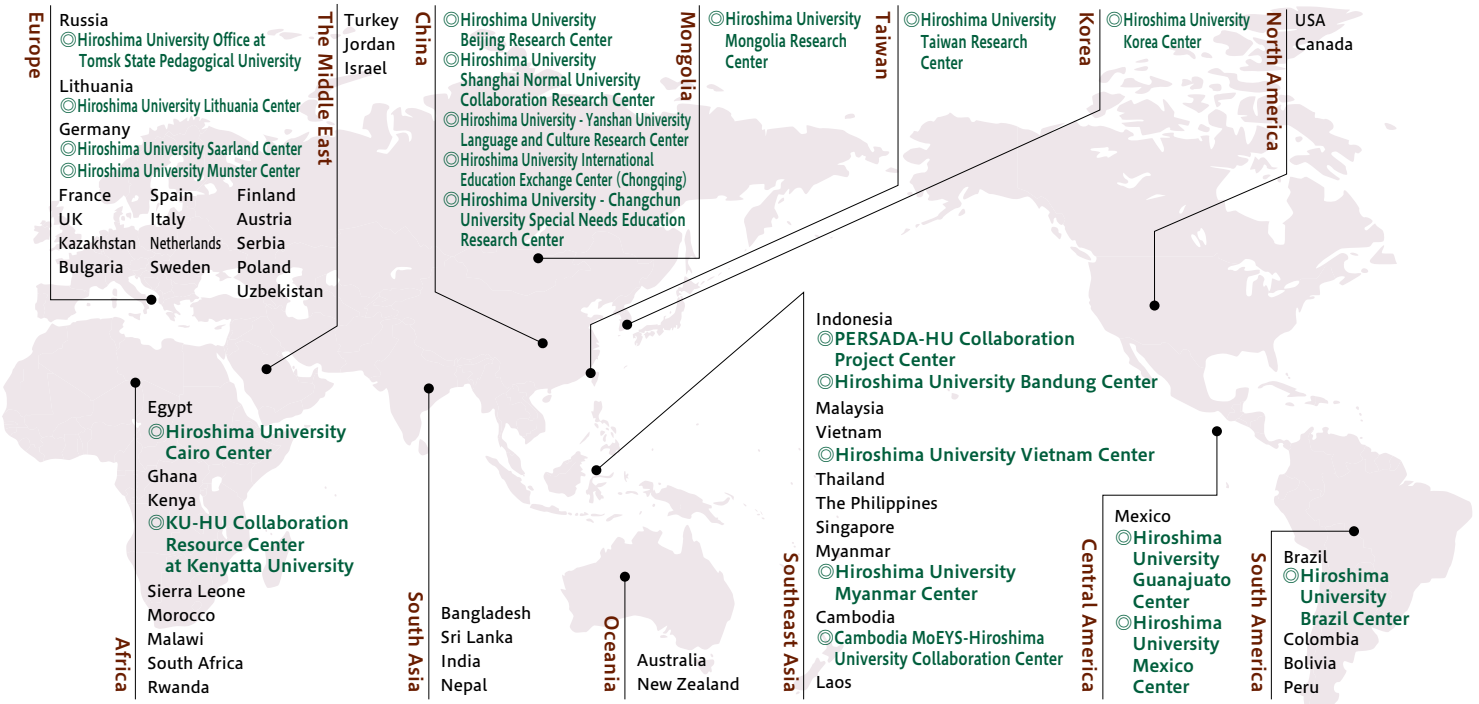
- Harassment Consultation Office

Schools (primary and secondary)

Overseas Network and Bases (as of May 1, 2020)

Hiroshima University has international exchange agreements at university-level in 53 countries/regions, as well as at faculty-level in 51 countries/regions. The overseas bases are in 15 countries/regions: China, Taiwan, Russia, Egypt, Kenya, Brazil, Vietnam, Indonesia, Korea, Myanmar, Mexico, Cambodia, Lithuania, Germany and Mongolia.

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



International Exchange Agreements

Inter-university
53 countries and regions
334 organizations
370 agreements

Inter-faculty
51 countries and regions
359 organizations
398 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 Offices provide consultation services on college admission.

Tokyo Office

No. 409, Campus Innovation Center 3-3-6 Shibaura, Minato-ku, Tokyo

Office of Admissions, Osaka Office

No. 503, Osaka University Nakanoshima Center
4-3-53 Nakanoshima, Kita-ku, Osaka City, Osaka

Office of Admissions, Fukuoka Office

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

Schools (primary and secondary)

The basic principle and role of the affiliated 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 pupils and 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

FEATURE:
SPECIAL TALK

IOKIBE Makoto
Chancellor, University of Hyogo

OCHI Mitsuo
President, Hiroshima University

— From the post-war to the post-COVID era —

Discussing Japanese society and university education

In July 2020, Dr. IOKIBE Makoto, Chancellor of the University of Hyogo and a specialist in political and diplomatic history, visited Hiroshima University's Higashi-Senda Campus (Naka-ku, Hiroshima City) as part of HU's Lecture Series, "Liberal Arts Education for Spreading Your Wings around the World." Dr. Iokibe presented a 90-minute lecture on the theme of "The world and Japan in turbulent times" recorded on campus. Afterward, he met with Dr. OCHI Mitsuo, President of HU, and talked about various topics, ranging from how Dr. Iokibe had come to pursue an academic career and his passion for research, to society and university education in the coming post-COVID era.

Drastic changes in work and daily life due to COVID-19

Ochi: Dr. Iokibe, thank you very much for taking the trouble of coming all the way to Hiroshima University today, despite the coronavirus crisis, and for delivering your invaluable lecture. Because of COVID-19, my schedule has become completely void of business trips to Tokyo or overseas destinations. I suppose you have also seen significant changes in your professional life.

Iokibe: Thank you for inviting me to Hiroshima University, where I spent my younger days. I always look back on those days fondly.

This is my first in-person engagement since the outbreak of COVID-19. As you've just said, COVID-19 has radically modified many things. All my business trips to Tokyo and speaking engagements across the country were cancelled. Recently, some events have been rescheduled and are finally being resumed, but I take part in most lectures and symposiums online from home. It's hard to adjust your timing when you're only looking at a computer screen.

Ochi: Outside work, I now spend more time taking walks. I look up and memorize the names of trees that I hadn't noticed before. Have there been any changes in your daily life?

Iokibe: At the moment, I am seriously building up my physical strength. I've been practicing baseball every week for some time. My batting power has surpassed the peak that I reached when I was younger, and I can now hit the ball far above outfielders' heads. I've never been a better batter than I am now at age 76!

Dr. Iokibe standing on Morito Road near the then Hiroshima University headquarters (November 1971)

Ochi: Your main research interests are political and diplomatic history, policy-making processes, and the U.S.–Japan relationship. Could you tell me why you chose these subjects?

Iokibe: As an undergraduate at Kyoto University, I entered a seminar taught by Prof. INOKI Masamichi (later head of the National Defense Academy), who was a specialist in international politics and political and diplomatic history. The way Prof. Inoki recounted history was lively and fascinating. He described Japan within the world very vividly based on the dynamic philosophy of history of the German philosopher Hegel, which he had completely assimilated into his thought system. I quickly became a great fan of Prof. Inoki. In graduate school, I wrote my master's thesis on the theme of ISHIWARA Kanji and the Manchurian Incident. On Prof. Inoki's recommendation, I decided to research Ishiwara, the Kwantung Army staff officer who started the Manchurian Incident, as the first step in what I wanted to do, that is, understanding Japan's major pre-war turning points in those turbulent times from the democratization movement during the Taisho period to the rise of the militarist regime, and then to the postwar economic development.

Caught up in the student movement upon arriving at HU

Ochi: You arrived at Hiroshima University in April 1969 to work as a Research Associate of the then-existing Faculty of Economics and Political Science at the height of the student movement. How did you find Hiroshima University and its students at that time?

Iokibe: 1969 had begun with the occupation of the Yasuda Auditorium at the University of Tokyo by student protestors. The situation was not very different at Kyoto University. Civil war-like scenes were raging there, with Molotov cocktails flying about. I accepted the post at Hiroshima University as if to escape that, only to find the university completely blocked up by the Zenkyoto (All Campus Joint Struggle Committee). There was a maze of barricades in front of the main gate, and you had to crawl through them in order to go in and out of the campus. Under such circumstances, Prof. IIJIMA Soichi of the Faculty of Medicine was appointed President at the young age of 46. I found him extremely articulate with exceptional intellectual acuity. One day, collective bargaining was held at the protesters' demand, which I attended as a record keeper. President Iijima held his ground and handled the students' remarks aptly, far from letting them attack him in a one-sided manner. I was quite impressed. He even went so far as to give them a good scolding, saying, "Aren't you college students? Can't you present your ideas more logically?" So the audience gradually began to root for him and applaud him more and more. The students then decided to walk away on the pretext that the "conservative and reactionary President" was "helpless." They never demanded collective bargaining again. Prof. Iijima was able to face and challenge the student protesters, instead of avoiding or running away from them. He had a firm stand, striking back sharply in debate, demonstrating his intellect. I was simply there, looking up at him in admiration.

In August of the same year, President Iijima decided to let the riot police in, and the blockage was removed. It was then decided that faculty members would take turns on night duty on campus to prevent any re-blockage. A much older and renowned professor asked if he could be exempted because of health issues. I gladly offered to take his place, because in those days I was living on my own in an apartment in Danbara Nakamachi in Hiroshima City. In those times of crisis, I had the privilege of being able to associate with great academics like close friends. Later, the faculty formed a softball team to maintain that new friendly easy-going atmosphere. As for me, I sometimes had dinner with some enthusiastic students from the seminar after classes. I found young Hiroshima people very friendly. I remember my Hiroshima years as very pleasant and enjoyable.

Postwar partition plan for Japan discovered at U.S. National Archives

Ochi: Your academic career began at HU. What kind of research were you conducting at first?

Iokibe: At HU, I belonged to the Chair of Political and Diplomatic History of the Faculty of Economics and Political Science. Since I had already written on pre-war Japan, I was hoping to next carry out demonstrative historical research on postwar Japan. Even if your research area is Japanese history, if you cover the postwar period, you can't avoid international relations. In fact, the postwar occupation of Japan by the U.S. was virtually America's plan for rebuilding Japan. In 1974, in part through the good offices of Prof. KOSAKA Masataka, who had taught me at Kyoto University, I was given the opportunity to investigate the literature on the American occupation of Japan at the National Archives and Records Administration (NARA) in Washington, D.C.

Upon arriving there, I was deeply struck by the great breadth of documents and the state of their preservation, which was far better than in Japan. After the attack on Pearl Harbor (December 1941), the American government formed a research group comprising experts in Japan, an enemy state then, with an eye to post-defeat reconstruction. The requirements for being recognized as an expert in Japan were being able to speak Japanese and having lived in Japan. One such expert was Hugh Borton, who is considered the "architect" of postwar Japan. In the enormous volume of documents I had been surveying at NARA, I found a handwritten memo by Mr. Borton describing how postwar Japan should be rebuilt. It was written about six months after the Pearl Harbor attack. The proposal was submitted to the Far East group, whose discussions constituted the basis for the first draft of the basic policy for Japan's post-defeat reconstruction. This was then classified as a document of the U.S. State Department executive board, and next developed into a document compiled by the State-War-Navy Coordinating Committee (SWNCC) to finally be submitted to President Truman for approval. This whole process was recorded in documents so clearly that, reading them, I felt as if it had just happened the day before.

For a week, I spent every waking moment devouring those documents. At the same time, I began going through military documents as well because it was the military that actually occupied Japan. There I found a document consisting of several dozens of pages titled "The Final Occupation of Japan and the Japanese Territories." It had been completed by the military the day after August 15, 1945, the day the war ended. It described a proposal for occupying post-defeat Japan by dividing the country among the Allied

IOKIBE Makoto, Ph.D.

Born in 1943 in Hyogo Prefecture, Dr. Iokibe obtained his B.A., M.A., and Ph.D. all from the Faculty of Law, Kyoto University, majoring in Political Science. His area of specialization is Japanese political and diplomatic history. After serving successively as Research Associate, Lecturer and Associate Professor in the Faculty of Economics and Political Science at Hiroshima University, he was named Professor at the Faculty of Law, Kobe University. He has since served as Visiting Professor at the Institute of Social Science, the University of Tokyo; Visiting Scholar, Harvard University; and President of the National Defense Academy. He is currently Chancellor of the University of Hyogo. For his book *Beikoku no Nihon senryō seisaku (The U.S. Occupation Policy of Japan)*, Dr. Iokibe won the Suntory Prize for Social Sciences and Humanities. He is also a recipient of the Yoshida Shigeru Award (twice) and the Yoshino Sakuzo Award. In 2011, he was decorated as a Person of Cultural Merit. In 2020, he was appointed Counselor of the Imperial Household Agency.

countries: Hokkaido and the Tohoku region to the Soviet Union, the Kyushu and Chugoku regions to Great Britain, the central part of Honshu Island from Tokyo to the Kansai region to the United States, and Shikoku Island to China. The plan was illustrated with a colorful map, indicating demographic, economic, and various other conditions that had been taken into account in designing the plan. It was a document of utmost importance. I almost trembled at this discovery, thinking that Japan could have been cut into pieces like Germany.

Ochi: I heard that the Chugoku Shimbun scooped with an article covering your research and that it created a great, unexpected sensation.

Iokibe: When I returned to Japan, a journalist acquaintance of mine from the Chugoku Shimbun came to interview me. The following day, an extensive article about the aborted plan to divide Japan appeared in the newspaper with a photo of me. Another journalist from the Asahi Shimbun read the article and came rushing to me to learn more. From then on, the news that a lecturer from Hiroshima University had discovered the proposal for a postwar partition of Japan spread nationwide.

But soon afterward, Tokyo-based authorities in international politics and diplomacy began voicing their criticisms. They said, "If such a document really existed, it would have become widely known. Perhaps a young clueless provincial scholar saw an illusion." An influential monthly magazine also carried an article harshly condemning me. I was dumbfounded. But when I read the article, I understood. President Truman had not approved the military proposal to divide Japan as detailed in the document I had found, but instead, opted for the Department of State plan for a unified occupation of the whole of Japan by the United States. As a result, the document had been shelved and remained hidden from the light of day. It was only natural that nobody knew about it. But it was a fact that this document of such immense implication had been prepared. So I wrote a letter to the editor of the monthly magazine to ask if I could contribute a counterargument article in which I would back with supporting documents. I never heard from him. I was so devastated that I couldn't sleep at night.

Ochi: You were in great difficulty. How did you manage to overcome it?

Iokibe: In fact, I had ordered a copy of all the important documents that I had consulted at NARA, and so I received them, some 3,000 pages in total, from the United States three months later. I decided that my ultimate counterattack would be a proper academic paper that I would construct using those references to discuss the decision-making process regarding the American occupation of Japan. Fortunately, I was allowed to read my paper at the Japan Association of International Relations conference held the following year. The conference venue was packed beyond capacity, and I saw seated there Prof. HOSOYA Chihiro, Vice President of the Association, who had criticized me. In the Q&A after my presentation, he was the first to raise his hand. It was a censure, rather than a question. I felt frightened but explained patiently and meticulously, based on the references. Suddenly, the tide turned, and I was praised as a young and spirited "samurai" capable of effectively debating Vice President Hosoya. When I met him in person on a later day, he said quite frankly, "Forgive me for my attitude at the time. I was wrong." I felt the fairness of academia at that moment. When the magazine editor completely ignored me, I thought that my career was in danger, but in academia, once I did what I had to do I was welcomed with open arms.

Academic career for understanding postwar Japan

Ochi: You come from a family of academics, with both your father and your elder brother having been university professors. When you were a child, were you already aware that you wanted to do research in academia?

Iokibe: What I knew for sure back then was that academics were poor. I heard that before the war, academics enjoyed a relatively high standard of living; but, when I was a child in the immediate postwar years, national government employees' salaries were much lower than in the private sector. Since we were a big family, my father's meager salary was not enough to feed all of us well. So I knew that I would be poor if I chose an academic career instead of being employed in the private sector. But at the same time, I felt such a strong desire to understand postwar Japanese society. I wanted to know what it was and what the future would hold for Japan. So I decided to further my studies in graduate school, and I didn't engage in job-hunting during my last undergraduate year.

Ochi: You had already been studying with a focus on getting admitted to graduate school?

Iokibe: To tell you the truth, my academic performance was rather poor. Instead of attending classes, I used to spend hours in a café called Shinshindo near Kyoto University, discussing with friends. Our subjects were drawn from books by great thinkers of the world that were being published in succession in those days, such as The Phenomenology of Spirit by Hegel and other major works by Bergson, Marx, Thomas Aquinas, among others. I truly enjoyed Prof. Inoki's classes, but I didn't feel like attending other classes at all. As a result, my grades were not good enough to allow me to go on to Kyoto University graduate school without examination under the university's internal admission system. I ended up having to take exams with candidates from other universities. When I informed Prof. Inoki of my wish to go to graduate school and he approved, I heaved a deep sigh of relief.

Ochi: In those days, Prof. Inoki used to frequently appear in the media as an active opinion leader. What did you learn from him as a researcher?

Iokibe: Prof. Inoki had a strong sense of duty towards society. His mentor was Prof. KAWAI Eijiro, a liberalist oppressed by the military in the pre-war years. In the wake of the February 26 Incident of 1936, Prof. Kawai wrote in the University of Tokyo newspaper an article harshly critical of the military. The military hated it and persecuted and forced him out of his post at the university. He passed away just before the end of the war. Prof. Inoki was the successor of Prof. Kawai's philosophy and fought totalitarianism, both left and right. He was opposed to rightist nationalist dictatorship and

OCHI Mitsuo M.D., Ph.D.

Born in 1952 in Ehime Prefecture, Dr. Ochi graduated from the Faculty of Medicine, Hiroshima University in 1977. As an orthopedic surgeon, he began the world's first three-dimensional autologous cultured cartilage transplantation in 1996. For this achievement, he received the President's Prize of the Science Council of Japan from the Prime Minister's Office in 2004. From 2007 to 2011, he served as the Director of Hiroshima University Hospital. In 2015, he was appointed President of Hiroshima University and was awarded the Order of Culture, Medal with Purple Ribbon. Dr. Ochi also served as physician of the professional baseball team Hiroshima Toyo Carp for 30 years.

leftist communism. He insisted on a society that respected and cherished individual freedoms. He was critical of Marxist trends, which had become stronger in postwar Japan. He also warned about an excess of pacifism, which could lead to inadequate security responses. He was severely criticized for this position by leftist students, who put up a huge signboard at the front gate of Kyoto University saying, "We denounce the statement by Wrong Way INOKI," a wordplay on his given name Masamichi, which reads the "right way."

I think that all in all his argument was sound. In his book *Kyōsanshugi no keifu (Genealogy of Communism)*, he recognized positive aspects of communism, but he also argued superbly how humans end up making huge mistakes when they deify something, as with the premise of "absolute justice." Prof. Inoki believed in adhering to what he believed to be true, no matter what criticism he might face from others. He was a fighter who embraced the idea that a professor must profess his beliefs, whether they pleased society or not. I myself am not a fighter type but prefer acting in harmony with others. Still, I admire those who never deviate from their principles.

U.S. – Japan alliance plus China–Japan entente

Ochi: It's often very difficult to stick to one's principles. Looking back now at Japan's postwar years so far, we can say that Japan has developed economically because it did not build arms or did not have to spend much on armaments. How do you evaluate this national policy?

Iokibe: Speaking as a researcher who has studied international politics from a realistic perspective, I don't think that Japan's postwar development has resulted from its pacifism. Japan was able to rely on the United States for its security, taking shelter in the cover offered by the world's No. 1 superpower under the U.S.–Japan Mutual Security Treaty. All Japan has had to do is to maintain the Self-Defense Forces within its means. In those days, the main threat was the Soviet Union. Japan would not have been able to rival this superpower even by madly building arms. However, with the U.S.–Japan Mutual Security Treaty, which forms an alliance that excludes any third country, Japan has been able to focus its efforts on economic and pacifist endeavors. It was Prime Minister YOSHIDA Shigeru who chose this policy. I think that thanks to this, Japan has prospered economically and developed culturally as well.

Ochi: At present, China is on the rise, and the China–U.S. confrontation is intensifying to the point that some say we have entered a new cold war era. In this situation, it is no easy task for Japan to serve as a bridge between China and the United States. What position do you think Japan should assume vis-à-vis these two countries?

Iokibe: That's a very important question. In public debates on Japan's diplomacy, I have always maintained that there should be a U.S.–Japan alliance plus a China–Japan entente. Given the present situations involving North Korea and China, it is obvious that the alliance with the United States is extremely important for Japan. On the other hand, Japan must also build friendly relations with neighboring countries like China and South Korea. That's why Japan must have an entente with China. "Entente" is a diplomatic term referring to a mutually beneficial relationship. Despite ongoing confrontation, the two parties involved must maintain a calm and peaceful relationship, as possible, in mutually beneficial areas. So Japan should urge China to take a hard look at itself with regard to its disgraceful behaviors, while asking the United States to demonstrate better leadership on the world scene. I believe that only Japan can appeal to both the United States and China for realigning the order, just as Great Britain mediated between the United States and the Soviet Union after World War II.

Dignity and benefits of provincial living

Ochi: At the moment, due to the COVID-19 pandemic, we are being pressed to modify many aspects of our daily lives and various mechanisms in society, including education, in ways we have never imagined before. Some people view this situation as a great opportunity for a paradigm shift. How do you think Japanese society should evolve, in having experienced the pandemic?

Iokibe: First of all, I think that online networks making use of 5G technology should be further promoted. Since Japan is traditionally a conservative country, it has been extremely difficult to change things, and Japan has been far behind other countries in this regard. Then, the coronavirus crisis happened, and the country is being forced to go remote. Moreover, Japan should revitalize itself by minimizing dependence on physical volume-oriented industrial sectors and actively utilizing advanced technologies. The industrial sectors capable of such reorganization can see their stock prices go up and attract people.

In the post-COVID era to come, tourism and transportation will probably continue to suffer for a year or two because globalization has slowed down. But I believe that a U-shaped recovery is possible once the obstacle of the virus is removed. In the meantime, new advanced domains that society recognizes as being valuable will achieve remarkable growth.

Ochi: With the pandemic, overconcentration in the Tokyo Metropolitan Area has also come into question.

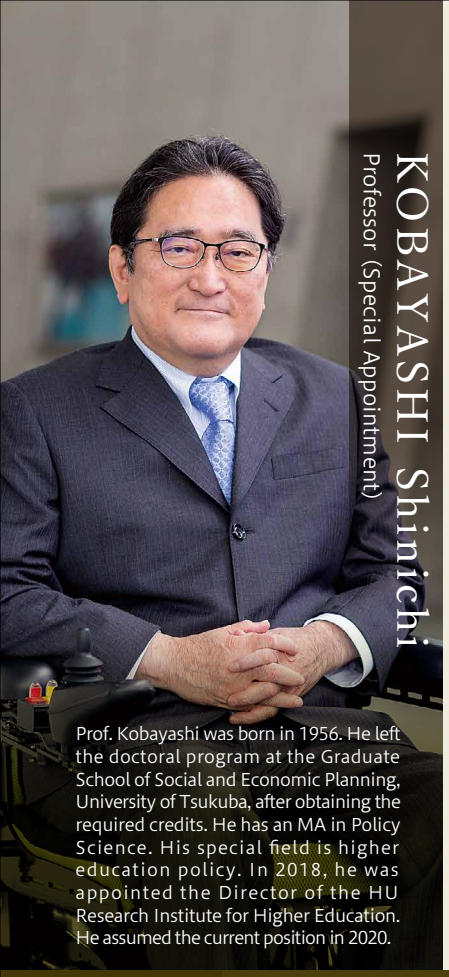
Iokibe: Overconcentration has been maintained, although everyone knows that it is highly probable that an earthquake will eventually occur somewhere in Greater Tokyo, with the epicenter directly below the urban center. Now that this infectious disease is raging especially in urban centers, we should turn the trend around by restoring dignity to living in provincial regions. It is extremely important to get provincial regions to reinforce their dignity and attractiveness through their own efforts, in addition to stopping overconcentration in and around Tokyo. For example, you can entice Tokyoites to move and settle in rural towns by advertising the advantages and benefits of provincial living, such as charming traditional houses renovated to attract new residents who work from home, short food supply chains of delicious local produce, a rich and spacious natural environment that is ideal for raising children, and so on and so forth.

Ochi: I totally agree. At HU, we have submitted to the mayor of Higashi Hiroshima, where our main campus is located, a proposal for constructing a city-wide 5G network, ahead of other municipalities in Japan. Moreover, in October 2020, we are starting a "campus in campus" project with Arizona State University (ASU), which is opening an overseas campus at HU. The two universities are jointly operating the Hiroshima University global branch of the Thunderbird School of Global Management of ASU. This is the first project of its kind for a Japanese national university. We will start with about 25 students. Some ASU professors will teach at HU, and HU faculty members will also teach in English for inter-university exchange. We are hoping to develop it into a scale involving about 1,000 students. Centering on this initiative, we are planning to promote a "Town & Gown" project in which HU and the city of Higashi Hiroshima work together toward mutually beneficial development. This concept is modeled after ASU and the city of Tempe, its home base. When Higashi Hiroshima becomes a smart city with the 5G network, this feature with the city's proximity to an airport and its surrounding verdant environment will greatly enhance the attractiveness of this provincial town. I think that in the post-COVID era, a 70-to-30 division of work and life between provinces and Tokyo would be ideal.

Iokibe: I see that you have grand projects at HU. If we can add to that the provision of medical care, support for child rearing, and nursing care for the elderly, it will be a powerful magnet. I am looking forward to hearing about the future developments of all your projects.

Ochi: I am hoping that the university will continue growing in harmony with the local community. Thank you very much for your time and your thought-provoking talk today.

After the recording of his lecture, Dr. Iokibe received from President Ochi a certificate with the title "Specially Invited Professor".



KOBAYASHI Shinichi
Professor (Special Appointment)

Prof. Kobayashi was born in 1956. He left the doctoral program at the Graduate School of Social and Economic Planning, University of Tsukuba, after obtaining the required credits. He has an MA in Policy Science. His special field is higher education policy. In 2018, he was appointed the Director of the HU Research Institute for Higher Education. He assumed the current position in 2020.

Reorganization of humanities, social sciences and interdisciplinary branches of postgraduate education and research

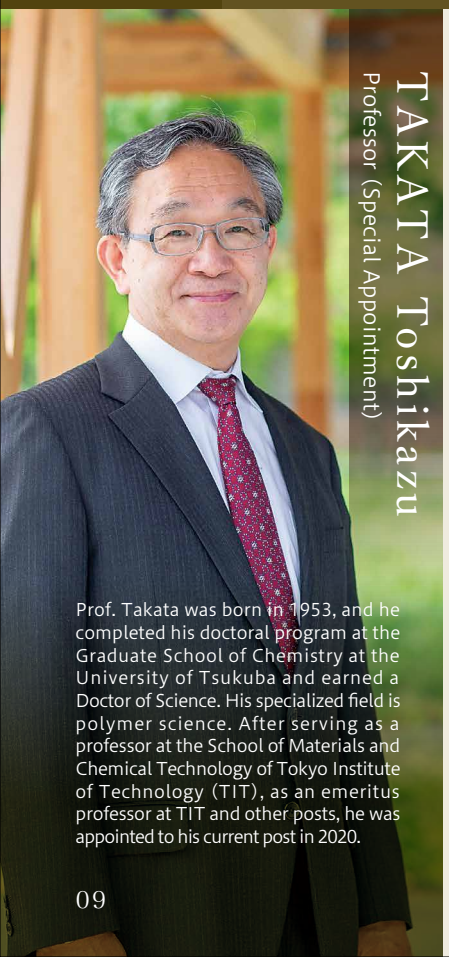
Graduate School of Humanities and Social Sciences

Tackling real-world problems by bringing together diverse fields of knowledge and experience in the humanities

The Graduate School of Humanities and Social Sciences is an integrated humanities graduate school, established based on the graduate schools and departments in the fields of letters, law, economics, education, integrated arts and sciences, international development and cooperation, and on the law school. It is rare for a single graduate school to encompass such a wide range of fields. In the past, science and technology contributed to solving problems through the division of labor between different academic disciplines. In this approach, a problem was decomposed into elements and each element was solved independently in an efficient manner within each discipline. However, real-world problems are not separated into isolated disciplines, nor do they occur under controlled conditions like a lab. In the real world, problems occur under each locality's unique conditions with different cultures, histories, customs and social values. These are the areas that humanities disciplines are good at. If you have diverse knowledge and experience in the humanities fields, you can enter a "real" society and collaborate with stakeholders and experts of other fields in clarifying problems and exploring solutions. In addition to advancing research in traditional academic fields, our graduate school has a critical mission to ensure that once a problem arises, researchers in relevant fields rise up and tackle it together to realize a sustainable society. Fortunately, our graduate school has divisions related to international development and education. We will promote research activities to explore society and education, not only in Hiroshima and other parts of Japan but also in developing countries, and sublimate those activities into higher academic pursuits. Furthermore, as Dean, I will strive to pursue wellbeing for all members and create a better education and research environment.

Deans' aspirations for the future of Hiroshima University Graduate Schools

Aiming to establish "Science for Sustainable Development"



TAKATA Toshikazu
Professor (Special Appointment)

Prof. Takata was born in 1953, and he completed his doctoral program at the Graduate School of Chemistry at the University of Tsukuba and earned a Doctor of Science. His specialized field is polymer science. After serving as a professor at the School of Materials and Chemical Technology of Tokyo Institute of Technology (TIT), as an emeritus professor at TIT and other posts, he was appointed to his current post in 2020.

Reorganization of science and engineering branches of postgraduate education and research

Graduate School of Advanced Science and Engineering

Taking on the challenge of solving resource, energy and environmental problems by concentrating the potential power of science and technology

The Graduate School of Advanced Science and Engineering was established by reorganizing the five existing graduate schools for science and engineering at Hiroshima University. The new graduate school is one of Japan's largest education and research organizations covering a wide range of science and engineering fields. The world today is facing a variety of challenges, including those related to resources, energy, disasters, the environment and food. Our graduate school's scientific and technological potential is attractive in solving these global issues. Our graduate school is committed to the mission of contributing to and playing a leading role in achieving SDGs by establishing and implementing "Science for Sustainable Development" through the most efficient use of its comprehensive capabilities in diverse science and engineering fields.
Our graduate school was the first in Japan to adopt an organizational structure comprising a single division, to which 350 faculty members belong. Many internationally recognized researchers are actively conducting research activities in a wide range of science and engineering fields. This environment enables students to learn and research whatever they are interested in. We welcome highly motivated students with high aspirations and a challenging spirit, develop them into promising graduates, and send them out as capable human resources who can play leading roles in various arenas, whether in Hiroshima or anywhere else in the world. By taking advantage of our economy of scale, we aim to be a graduate school full of energy where faculty and students tackle complex challenges together and keep moving forward and play a central role in Hiroshima University's efforts to become a university ranked among the top 100 universities worldwide.

Reorganization of biological/life science branches of postgraduate education and research

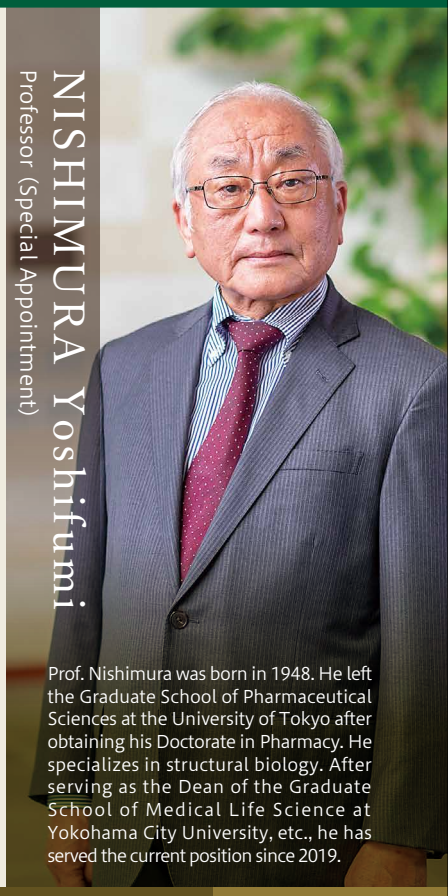
Graduate School of Integrated Sciences for Life

Exploring the universality and diversity of organisms and translating research findings into applied research, including drug discovery

The Graduate School of Integrated Sciences for Life is a new graduate school established by integrating biology and life sciences, which are fragmented in science, agricultural science, engineering, environmental science, and medical science. We aim to understand a broad range of fields comprehensively and create the next generation of life sciences and biology.

Life science and biology fields are advancing rapidly, and modern studies have revealed a universality that all living organisms have basically the same mode of inheritance. Rational drug development targeting proteins involved in various diseases is also progressing. The novel coronavirus, which caused a pandemic across the world, has survived, after all, by parasitizing the genetic mechanism of a host cell. With the collective wisdom of mankind, who has evolved while coexisting with viruses, it should be possible to overcome this COVID-19 pandemic. Since there are still many unknowns in our research fields, we hope that young people will boldly take on challenges to elucidate the diversity of organisms based on fundamental universal knowledge.

The history of science tells us that the knowledge acquired from basic research—as long as it aims to find the truth—develops over time into applied research and that applied research, which is growing rapidly, is founded on steady efforts on basic research. We aspire to be a graduate school which boldly pursues scientific endeavors to search for truth, without boundaries of basic and applied research. Our hope and intention is to help young people learn to play leadership roles in new and multidisciplinary research fields, aiming to create a brighter and more sustainable future.



NISHIMURA Yoshifumi
Professor (Special Appointment)

Prof. Nishimura was born in 1948. He left the Graduate School of Pharmaceutical Sciences at the University of Tokyo after obtaining his Doctorate in Pharmacy. He specializes in structural biology. After serving as the Dean of the Graduate School of Medical Life Science at Yokohama City University, etc., he has served the current position since 2019.

In April 2020, the 11 existing graduate schools at Hiroshima University were reorganized into four new graduate schools. Embracing all academic disciplines in the humanities, social sciences and natural sciences, Hiroshima University Graduate Schools have been launched as a research and education center to create knowledge that leads to a diversified, peaceful and sustainable global society.

for Sustainable Development”

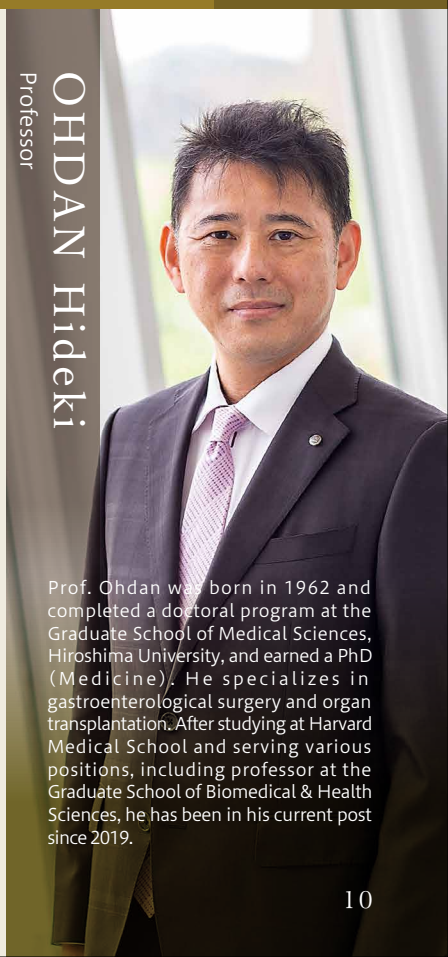
Reorganization of the healthcare branch of postgraduate education and research

Graduate School of Biomedical and Health Sciences

Becoming an education, research and clinical center in the Chugoku/Shikoku region through close collaboration between the four disciplines of medicine, dentistry, pharmacy and health science

The Graduate School of Biomedical and Health Sciences was established as part of Hiroshima University’s graduate school reform. Our predecessor, the Graduate School of Biomedical & Health Sciences, was distinguished as the first educational and research center with a fusion of medicine, dentistry, pharmacy and health science established in Japan. Our graduate school features a flexible educational and research system, which enables us to promote interdisciplinary education and research activities, invigorate laboratory work responding to advanced and complex scholastic pursuits, and enhance and implement inter-professional education through the integration of different disciplines while closely collaborating with the University Hospital and the Research Institute for Radiation Biology and Medicine.

I believe that it is important to develop an even more flexible research system to ensure that in ordinary times, research laboratories collaborate organically with one another to enhance their research and educational capabilities so that they can respond together to emergency situations. Our mission is to nurture capable researchers and educators who can be leaders in research and education in the field of biomedical and health sciences. An ongoing research project named the “Hiroshima University CoV Peace Project” is an excellent example of interdisciplinary collaboration. Under this project, laboratories in different disciplines of medicine, dentistry, pharmacy and health science are working collaboratively on a variety of research and development projects related to COVID-19. In a post-coronavirus society, structural changes—from a centralized society to a decentralized society—will be required. In a society with a multipolar structure where small- and medium-sized cities are scattered across the country, our graduate school aims to serve as a medical education, research and clinical center in the Chugoku/Shikoku region. In keeping with Hiroshima University’s aspiration to become a “University of World-wide Repute and Splendor for Years into the Future,” we will strive to continue to turn out individuals who are able to create a happy future by unleashing their creativity without being bound by preconceived ideas.

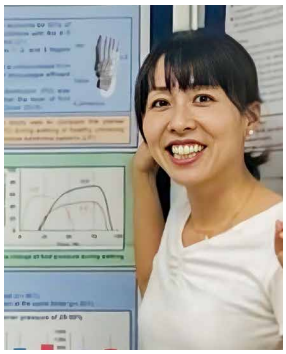


OHDAN Hideki
Professor

Prof. Ohdan was born in 1962 and completed a doctoral program at the Graduate School of Medical Sciences, Hiroshima University, and earned a PhD (Medicine). He specializes in gastroenterological surgery and organ transplantation. After studying at Harvard Medical School and serving various positions, including professor at the Graduate School of Biomedical & Health Sciences, he has been in his current post since 2019.

Associate Professor
School of Education
Graduate School of Humanities and Social Sciences
KUROSAKA Shiho

Major research fields
Health sciences, health promotion



Health exercise workshop for elderly people in Hiroshima Prefecture

Developing and implementing GENKI Exercise through industry-government-academia collaboration, aiming to realize a healthy society

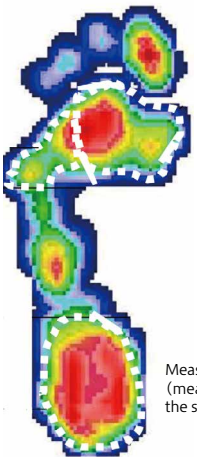
Health promotion workshop
at Jakarta Institute of the Arts

Japan is experiencing rapid aging at a faster speed than any other country in the world. Everyone knows that doing exercise is good for your health, but many find it difficult to continue good-quality exercise that fits their body. Recently, amid the COVID-19 pandemic, I have felt the need to tackle the infection as well as lifestyle-related diseases, and I have been thinking if it is possible to boost immunity by increasing bone strength. Specifically, focusing on "strengthening bones" and "softening muscles," my team has developed a fun exercise program that is easy to continue to help people stay active and healthy, and we are conducting research to contribute to promoting the health of people in Japan and abroad.

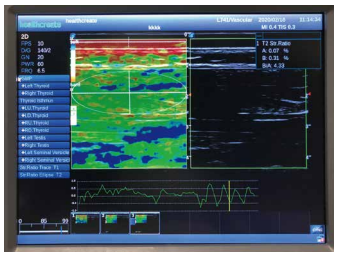
An impetus that led me to the current research theme was my own experience. I was devoted to swimming in my school days, but my health condition was not so good. From this experience, I learned that physical activities do not always help improve health. Hiroshima Prefecture is the worst prefecture in Japan with regard to healthy life expectancy of women aged 65 years and older. It is also known that elderly people affected by disasters tend to withdraw from society, leading to further functional decline. To address these problems, we have developed "Hiroshima GENKI Exercise®" through academia-industry-government collaboration (Co-op Hiroshima, Hiroshima prefectural government and Hiroshima University), and we have been working to disseminate this exercise in various areas and evaluate its effects. Some of my research results have been published in international journals, and my activities have been covered by a variety of media. Thanks to all these, I have become able to conduct similar activities in other countries. However, my biggest motivation is to hear participants say happily, "I like exercise classes very much" or "My body feels lighter and I often go out now."

With age, muscles become increasingly rigid, making it difficult to move smoothly. But, many older people in my classes move lightly and energetically. I am very happy to share with many people a refreshing feeling by doing the exercise program we have developed. Speaking of research projects, researchers are highlighted. However, no research is possible without the cooperation of participants. I also feel that the relationship of trust between researchers and participants is essential.

We are now living in uncertain times due to various issues, such as climate change and COVID-19. I think that the importance of being healthy will be increasingly significant in the future. I will actively conduct research and promotion activities to help realize a healthy society where as many people as possible can enjoy good health.



Measurement of plantar pressure distribution (measuring the bodyweight distribution on the sole of the foot during walking)



Measuring muscle flexibility by ultrasound

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

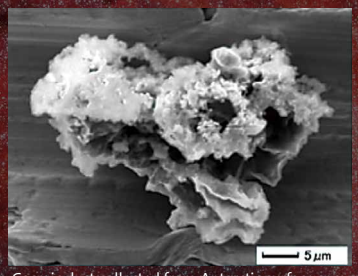
- Research Institute for Nanodevice and Bio Systems
- Research Institute for Higher Education
- Information Media Center
- Natural Science Center for Basic Research and Development
- Morito Institute of Global Higher Education
- Center for the Study of International Cooperation in Education
- Health 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

Unveiling the chemical evolution of life's building blocks in space


Organic macromolecular solid isolated from carbonaceous meteorites

Professor
School of Science
Graduate School of
Advanced Science and Engineering
YABUTA Hikaru

Major research fields
Geochemistry/Cosmochemistry, Astrobiology



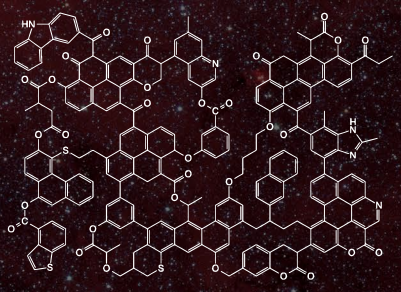
Cosmic dust collected from Antarctic surface snow

My research focuses on investigating the origins, formation, and transport of the building blocks of life in the Solar System. We analyze organic molecules in extraterrestrial materials, such as meteorites and cosmic dusts, using a number of techniques.

Organic molecules consist of carbon (C), hydrogen (H), oxygen (O), nitrogen (N), and sulfur (S). These are the primary elements that make up living organisms and the most abundant elements in the universe. About 4.6 billion years ago, in interstellar molecular clouds, chemical reactions occurred in gas phase and on dust surfaces at very low temperatures, producing various molecules. Afterward, the first molecules produced in the interstellar clouds chemically evolved through repeated synthesis and decomposition into complex organic molecules in the protoplanetary disk and planetesimals, and they were then incorporated into primitive small bodies such as asteroids and comets. Thus, these primitive small bodies are "time capsules" which retain the pristine materials in the early Solar System. Organic molecules in the small bodies are one of the important materials that formed the planets and life.

Meteorites and cosmic dust are pieces of asteroids or comets that have fallen to Earth. Carbonaceous meteorites with high organic carbon content (2-5 weight-percent) contain a significant amount of organic macromolecular solids as well as a low amount of biochemically relevant molecules of extraterrestrial origin, such as amino acids, carboxylic acids, and sugars. For many years I have been intrigued by the question of how these macromolecules were formed in the history of the Solar System and how it could have contributed to the origin of life. A number of previous studies of carbonaceous meteorites have revealed that the chemical compositions of organic macromolecules are modified by aqueous alteration and thermal metamorphism on the meteorite parent body, that is, the macromolecules sensitively record the chemical history of the early Solar System. In addition, a comparison of the molecular compositions of organics in meteorites (asteroids) and cometary dust has enabled tracing back the origin and evolution of organic matter in space.

The asteroid explorer Hayabusa2 is scheduled to return to Earth with samples collected from the asteroid Ryugu at the end of 2020. Detailed observations by the spacecraft have found that Ryugu does not perfectly match any meteorites that have been investigated to date. I expect that the unknown type of extraterrestrial matter brought back by Hayabusa2 will give us a new clue for unveiling the questions on the origins of life. In the Hayabusa2 initial analysis team, I will serve as a leader of the organic macromolecules analysis sub-team. I hope we will discover something new that will help future planetary explorations undertaken by next-generation scientists.


Molecular structure model of organic macromolecule (Glavin, Yabuta et al. 2018)

supporting world-class research

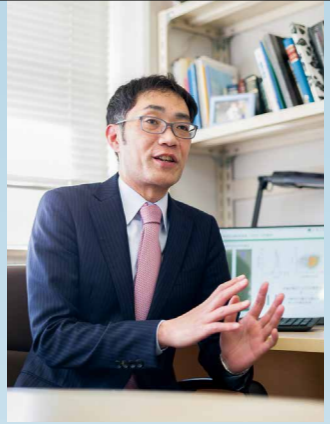
- Institute of Sport
- HiSIM* Research Center
- The Center for Contemporary India Studies at Hiroshima University
- Research Center for Diversity and Inclusion
- Amphibian Research Center
- Translational Research Center
- Resilience Research Center
- Center for Brain, Mind and KANSEI Sciences Research
- 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

*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. Research findings from the Center are published in the world's top journals, such as Nature and Science.



Professor
School of Applied Biological Science
Graduate School of Integrated Sciences for Life
SHIMADA Masayuki

Major research fields

Basic research on sperm and eggs, Development of reproductive technologies

Discovered the protein "TLR7" (red portion), which is found only in a spermatozoon bearing an X chromosome (X-sperm) (Umehara et al., PLOS Biology, 2019)

Contributing to the world's food problems by elucidating the mechanisms of genes that determine sex

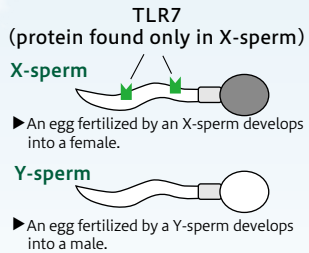
I have been conducting research to elucidate the mechanisms of mammalian fertilization and reproduction, with an interest in "why the number of pups per delivery differs among species" and "why the male/female ratio is 1:1" The sex of mammals is determined depending on whether a Y-chromosome-bearing sperm (Y-sperm) or an X-chromosome-bearing sperm (X-sperm) fertilizes the ovum. In 2019, for the first time in the world, we identified the protein that is found in X-sperm, but not in Y-sperm, and discovered that the sex ratio can be changed by utilizing functional differences of Y- and X-sperms.

Y-sperm and X-sperm are produced in equal numbers, so the sex ratio is 1:1 in most mammals. However, Y- and X-sperms have partially different genes (not bearing the other sex chromosome). We hypothesized that Y- and X-sperms might have potential functional differences to express specific proteins. To verify this hypothesis, we collected all RNAs in mouse sperm and then the sequences were analyzed. By narrowing down genes expressed from X-chromosomes or Y-chromosomes, we discovered a protein present only in X-sperm, "TLR7."

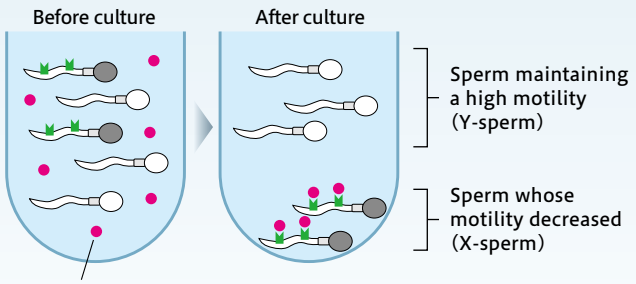
We then investigated conditions under which functional differences are demonstrated between X-sperm having TLR7 and Y-sperm not having TLR7. As a result, it has been found that under TLR7-ligand condition, the production of adenosine triphosphate (ATP), which is the primary energy carrier in all living organisms, was decreased only in X-sperm. Furthermore, the motility of X-sperm decreased and X-sperm sank to the bottom, whereas Y-sperm showed no effect and swam up to the upper layer, exhibiting high motility. We have succeeded in the selective production of a male or female in mice and cattle by applying this method of "easily separating X- and Y-sperms" to in vitro fertilization.

This research result can be summarized very simply as follows: We discovered functional differences of X-sperm and Y-sperm and succeeded in the selective production of a male or female by separating X- and Y-sperms. However, this achievement was not easily obtained. We repeated over and over the process of developing a hypothesis, creating a story to prove the hypothesis, and then executing that story. Our achievements are the result of our hard and steady research efforts over five years. In my opinion, the best part of research is the joy that we feel when we can neatly prove phenomena that surpass our hypothesis, by examining unexpected results without being disheartened by failures.

Our research results have received a huge response from across Japan and abroad. In beef cattle production, the demand for male calves is higher. It is because male cattle or bulls grow bigger than females and can be sold at higher prices. In short, economic efficiency is higher for livestock farmers. The method we have developed does not require large-scale equipment. Therefore, in the future, it may become possible for individual livestock farmers to selectively produce males or females. We wish to contribute to livestock production by promoting the practical application of this technique so that it can be used at livestock production sites.



Succeeding in producing male cattle by applying the technique developed using mice to cattle (Photo provided by Oita Prefectural Agriculture, Forestry and Fisheries Research Center)



Succeeding in separating X- and Y-sperms by stimulating only X-sperm (Umehara et al., PLOS Biology, 2019)

Creating World Top-level

Network-type Research Center

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

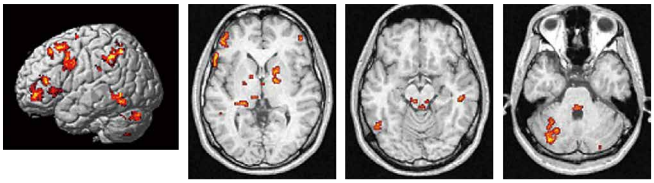
NERPS aims to become an education and research center with three features: (1) an internationally competitive research hub for issues related to peace, the global environment and the SDGs; (2) a hub for problem-solving based on education and research activities involving researchers in humanities and social sciences; and (3) an education and research hub where a diverse range of actors, including individuals, NGOs, companies, governments and international organizations, collaborate on a global scale.

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 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
- Research Center for Innovative Diagnosis and Treatment of Depression
- Research Center for Nitrogen Recycling Energy Carrier
- HiSENS Research Center
- Research Center for the Mathematics on Chromatin Live Dynamics
- Research Center for Hepatology and Gastroenterology

Diagnosis of psychiatric disorders using brain functional images and AI
～ paving the way for new treatment approaches



Functional magnetic resonance imaging (fMRI) is a noninvasive imaging technique for measuring brain activity using the blood-oxygen-level-dependent (BOLD) signal based on the principle of nuclear magnetic resonance (NMR).

Professor
School of Medicine
Graduate School of
Biomedical and Health Sciences
OKAMOTO Yasumasa

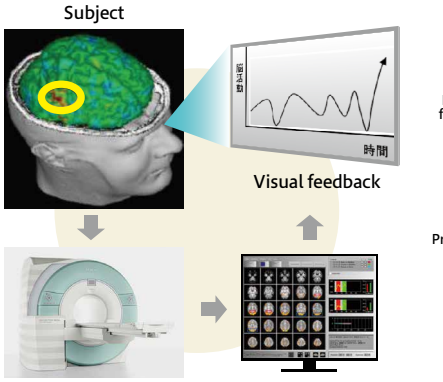
Major research fields
Psychiatry, Brain Sciences

Psychiatric diagnosis is based on doctor's observation of clinical symptoms and signs. Therefore, objectivity and reliability of such psychiatric diagnosis have been questioned. As other reasons of difficulty in diagnosis, there are wide variety of patients' clinical courses and treatment response patterns.

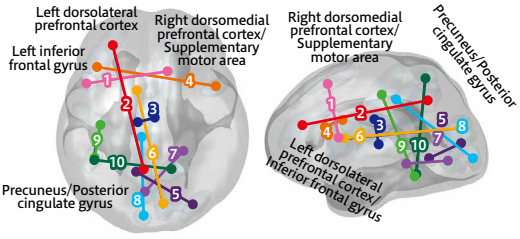
To overcome these challenges, it is important to develop brain biomarkers using simple measurements, in order to categorize psychiatric disorders and to evaluate treatment effects even when several disorders have similar symptoms. In addition, if psychiatric disorders may be caused by abnormal brain activity, it would be the most efficient treatment to modulate or change the brain activity directly towards that of healthy people.

As an example, we have shown for the first time that it would be possible to diagnose whether or not the patient is one major subtype of depression (with melancholic features) with high accuracy, based on specific abnormal brain activity using techniques of artificial intelligence (AI). It is expected that these results would make it possible to diagnose some depression subtypes with 10-minute fMRI assessment in the future.

Furthermore, we have been working on development of treatment methods using neuroimaging techniques. The fMRI neurofeedback is a learning method for participants to monitor and learn how to modulate their own brain activity during real-time feedback of target brain activation patterns. Because of its usefulness as a self-regulation method, it has attracted increasing attention as a new treatment approach. Development of these approaches would make it possible to offer individually-optimized treatments based on individual brain activity.



Participants learn self-regulation strategies by trial and error to modulate their own brain activity in the desired direction during real-time neurofeedback of visualized their own brain activity.



Ten brain functional connections that contribute to the diagnosis of major depressive disorder with melancholia were identified from about 10,000 connections.

Understanding brain functions, it is not enough to accumulate knowledge about associated location and materials. More and more collaboration projects have become common among computational brain sciences and experimental brain sciences. The biomarker and neurofeedback studies mentioned above are also one of the results of those research projects. These days, many brain scientists and researchers are interested in higher brain functions including decision making, emotion, attention, and consciousness. It would be critically meaningful to take psychiatric disorders as disorder models to elucidate the mechanism of higher brain functions. We hope that such understanding would be a boon to people suffering from psychiatric and mental disorders.

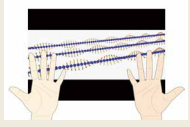
Research Centers

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)
- Center for Next Generation Photovoltaics
- Developing science and technology for diversity and inclusion
- Consolidated research for biogenic nanomaterials
- MBR Center
- Hiroshima Drug-Delivery Research Center Using Photoirradiation
- Educational Vision Research Institute
- The Research Core for Plant Science Innovation
- Integrated Research Center for Smart Biosensing
- The Research Center for Japanese Foods
- Center for Regenerative Therapy for Immediately Responsive to Radiation Emergency Medicine

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.

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.

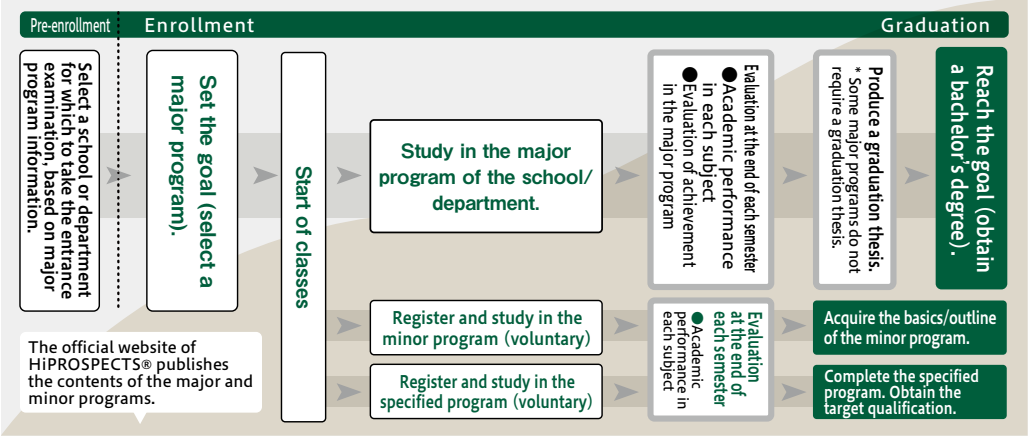
Major program
Students work toward a bachelor's degree in this specialization.

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

Upon admission and just before graduation, all students take the TOEIC® L&R IP Test. Scores in this socially and internationally recognized test enable the students to check their own English language proficiency. The scores are also used to place students in classes based on their proficiency levels and improve Hiroshima University's English language education.

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 seminars and the program Introduction to University Education.

matching students' motivation

POSTGRADUATE EDUCATION

Reorganization of postgraduate courses for interdisciplinary and integrated research

Doctoral Program

Completed in AY 2020

- Graduate School of Humanities and Social Sciences
- Graduate School of Advanced Science and Engineering

Completed in AY 2019

- Graduate School of Integrated Sciences for Life
- Graduate School of Biomedical and Health Sciences

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 in which students engage in most advanced research projects under the supervision of highly qualified academic 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 Innovation and 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.

● 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)

Leading Graduate Education Programs

Training next-generation leaders for global activities

Hiroshima University has inaugurated the Leading Graduate Education Programs, 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)

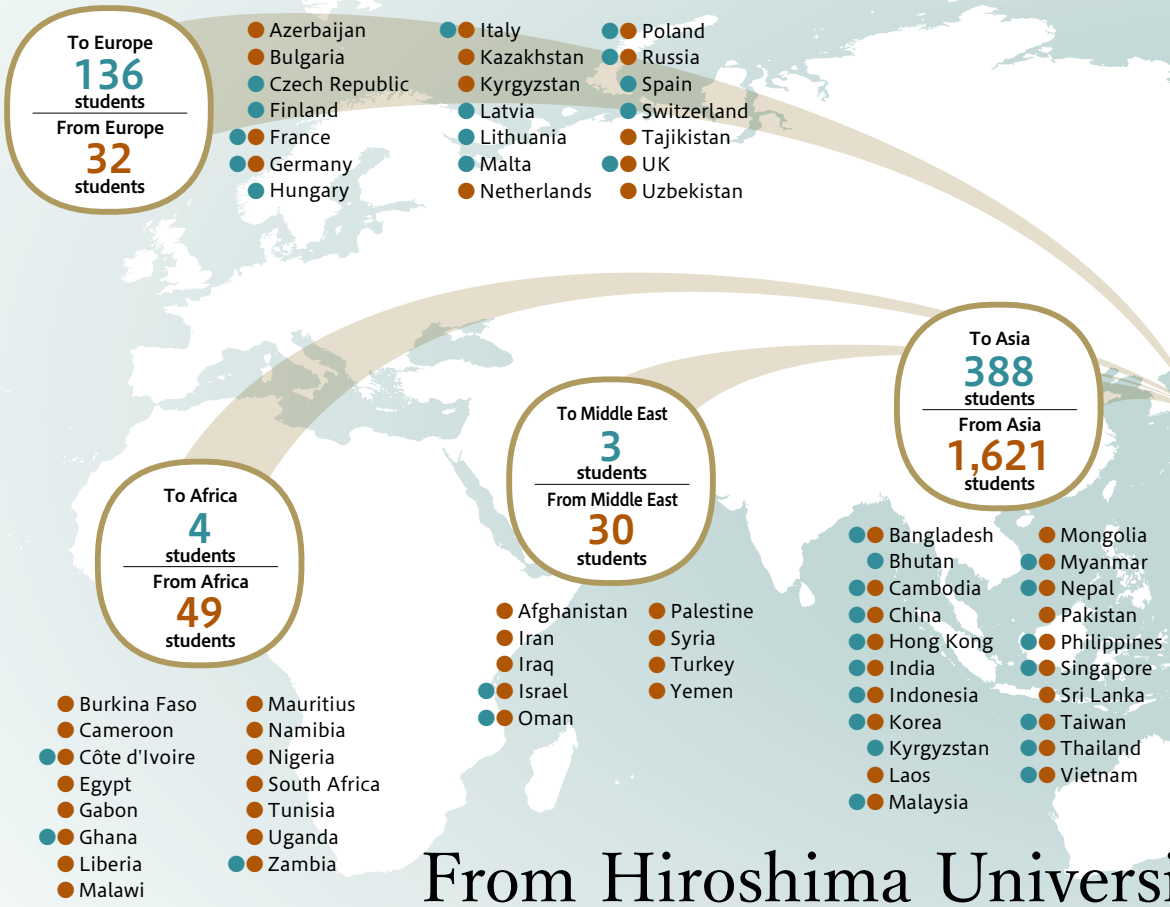
● TAOYAKA Program for Creating a Flexible, Enduring, Peaceful Society

(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)

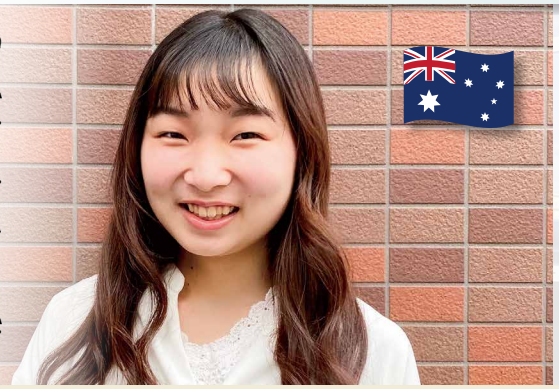
The World Is International



From Hiroshima University to the World

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

Studying in Australia through the START Program



By participating in the START Program, I was able to learn real-life English, which can only be learned by actually living in an English-speaking country. I was stimulated a lot by meeting and interacting with people from different cultures and lifestyles. This experience made me more interested in overseas countries and realize clearly what I want to do in the future. The START Program provides a meaningful experience, benefiting your college life and your future career.

Second-year student, School of Education, Cluster 3
(Program in Teaching Japanese as a Second Language)
ONO Mei

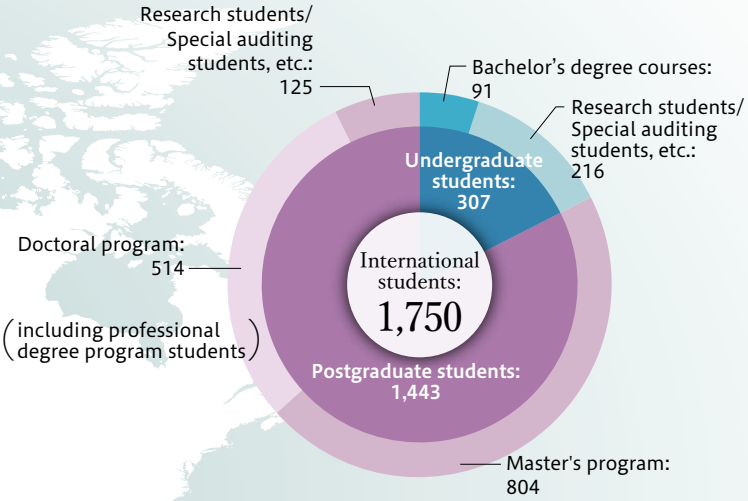
Studying in China through the HUSA Program

I started to study Chinese after I entered HU, and I participated in several Study in China programs. During my studies abroad, every single day was meaningful, full of encounters, discoveries and learning that I had not expected before entering the university. After studying abroad, I began actively organizing or participating in international exchange events. I encourage new students to participate in study-abroad programs and discover something new and meet new people.

Fourth-year student, Department of Economics, School of Economics
KITAMURA Yusuke

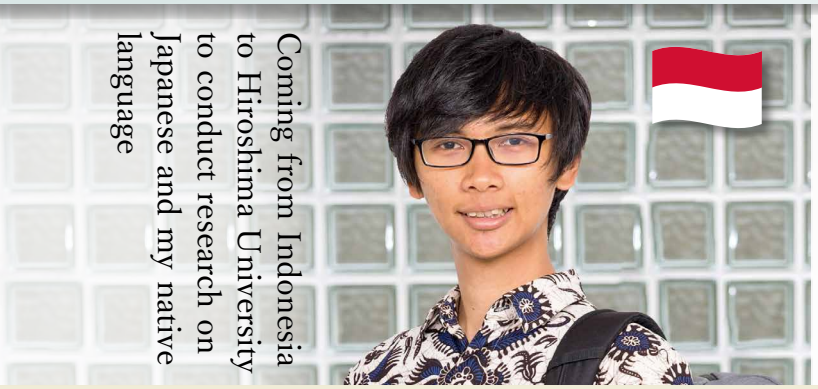
Your Campus

At Hiroshima University, the whole world is your campus.
As an international education and research center,
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.



From the World to Hiroshima University

A total of 1,750 students from 63 countries and regions are studying at HU (as of May 1, 2020)



Coming from Indonesia to Hiroshima University to conduct research on Japanese and my native language

I have many pleasant memories from the first time I studied at Hiroshima University in 2016. I interacted and shared housing with Japanese students, as well as other international students from various countries. HU is very active in organizing cross-cultural events, providing international students with many opportunities to encounter Japanese people and culture. In the autumn of 2018, I came back to HU as a graduate student to conduct contrastive analysis between Japanese and Indonesian, especially in expressions of request in the two languages.

Second-year Master's program student, Department of Integrated Humanities, Graduate School of Letters
Zulfikar Rachman (Indonesia)

Coming from France to study at the School of Education as a special auditing student

I am using both Japanese and English at HU. I am really happy to be in an environment where I can improve my practical language skills in both Japanese and English, which I studied in France. I have quickly gotten used to life in Hiroshima. I have also fit into the university very quickly. The classes are interesting, but what I like best about HU is that I have plenty of opportunities to engage in exchange with other students. I have met many Japanese students and other international students through university events and club activities. The time at HU will be a wonderful memory in my life.

Special Auditing Student, School of Education
Rey Celine Marie Amandine (France)

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, returnees, 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), Japanese returnees (educated abroad), 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 ("Hometown quota")**

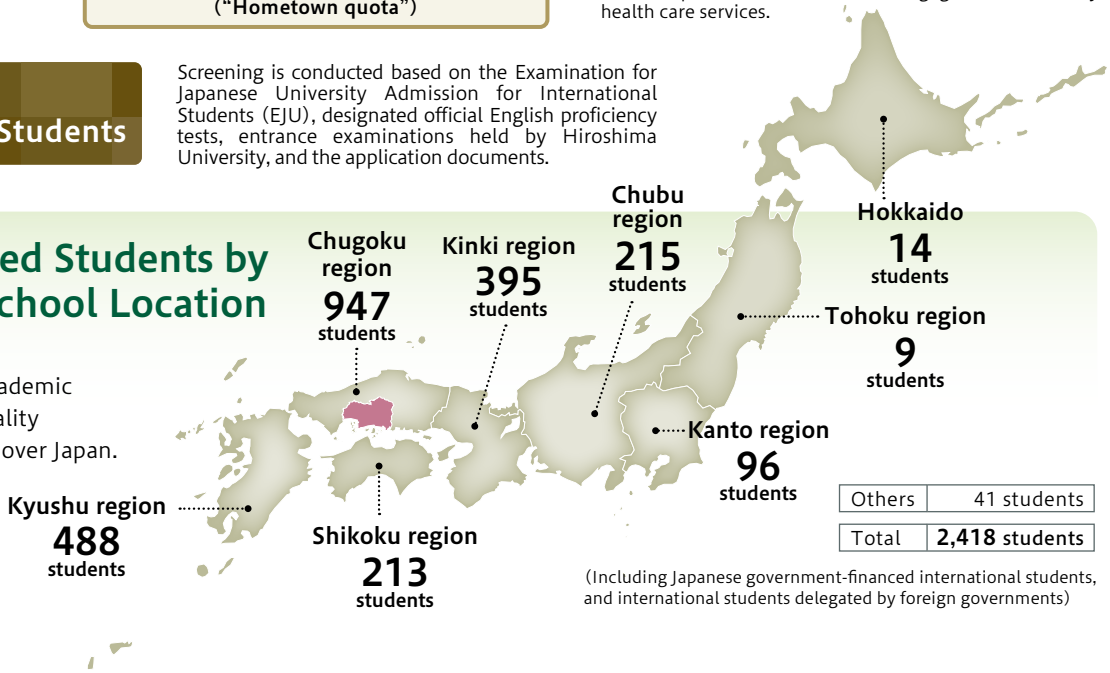
A "Hometown quota" is set up for applicants from Hiroshima Prefecture for the purpose of developing future medical professionals who will engage in community health care services.

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 2020)

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



Others	41 students
Total	2,418 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

Job Search Support Programs for Second-from-Last Year Students

- Employment search guidance and seminar
- Job search support tour
- Distribution of handbooks on employment search
- Career development and job search counseling
- Support through the orientation and employment search system (via the student information portal MOMIJI)

Human Resource Development Support Programs for Young Researchers

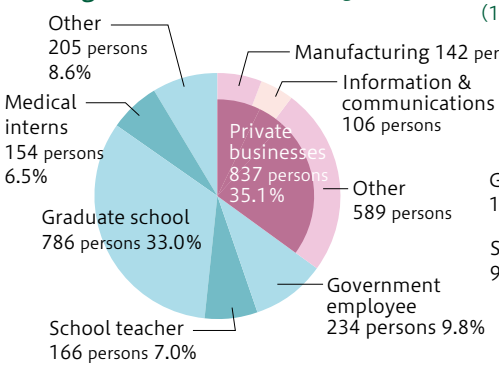
- Practical Program for career and skill development
- Career development counseling for doctorate holders and candidates
- Core IT system, HIRAKU-PF (Young Researchers' Portfolio)

Global Career Design Center

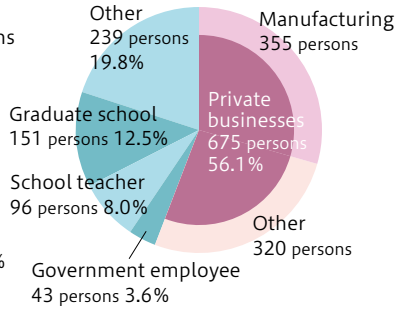
Staffed by academic faculty members and advisors who have worked in the divisions of personnel affairs, recruitment, education, and overseas operation of private businesses, the Center provides all students (domestic and international) and young researchers with comprehensive support for their career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

Employment Status (students graduating/completing in AY 2019)

Undergraduate School (2,382 graduates)



Graduate School (1,204 students completing)



Main Employers

〈Private sector〉 Mazda; The Chugoku Electric Power Company, Incorporated; Nippon Telegraph and Telephone West Corporation; Micron Memory Japan, G.K.; The Hiroshima Bank Ltd.; Mitsubishi Electric Corporation; NEC Corporation; Japan Broadcasting Corporation; Tokio Marine & Nichido Fire Insurance Co., Ltd.; Fujitsu Limited; TOTO LTD.; Canon Inc.; Japan Tobacco Inc.; Meiji Co., Ltd.; Mynavi Corporation

〈Public sector〉 Hiroshima Prefecture; Hiroshima City; Hiroshima Regional Taxation Bureau; Chugoku Bureau of Economy, Trade and Industry; Chugoku Regional Development Bureau; Hiroshima Labor Bureau; Chugoku Local Finance Bureau

〈Teaching posts〉 Hiroshima Prefectural Board of Education; Hiroshima City Board of Education; Aichi Prefectural Board of Education; Gifu Prefectural Board of Education; Nagasaki 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.

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 2019, ALP has produced 1,792 accessibility leaders at 19 universities, including HU, three corporations, and two government agencies in Japan.

Health Service Center

Healthcare professionals provide physical and mental health consulting services, medical check-ups, and first aid.

Financial Support

Hiroshima University Phoenix Scholarship Program

Hiroshima University Splendor Scholarship Program

Hiroshima University's original scholarship to assist students demonstrating excellent academic results while experiencing difficulty in starting or continuing university education due to economic reasons.

There are also various other financial support systems to allow students to pursue their studies regardless of their economic situation:

- Hiroshima University Excellent Student Scholarship
- Learning Support System for Higher Education

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 | 365 projects

Sponsored Research | 271 projects

* Including projects not generating research expenses (AY 2019)

Operating on-campus research bases jointly with corporate partners

Collaborative Research Laboratory | 24 laboratories (as of April 1 2020)

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)

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)

Enhancing research capabilities through organizational collaboration

Comprehensive Research Agreements | 87 agreements (as of April 1 2020)

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)

Conducting a range of support projects

Venture Business Startup Support | 64 companies (cumulative) (as of April 1 2020)

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)

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 2020)

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 Conducted in 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 using neuroscience A new academia-industry-government collaborative program

Center of KANSEI Innovation

Working in collaboration with local private businesses, universities, and research institutions, the Center endeavors, by applying the latest findings of neuroscience, to develop Brain-Emotion Interfaces (BEIs) that connect people to people and people to things with KANSEI, toward the goal of realizing a spiritually rich society. The BEI technology is expected to visualize and quantify KANSEI such as excitement, liveliness, admiration, and the like, which have been considered nearly impossible to objectively evaluate. Such research findings will then be applied to the development of products and services that better respond to human and personal needs and sensibilities. The BEI technology will then revolutionize society in many diverse areas, including food, clothing, housing, mobility, education, and medicine.

Collaboration in developing genome editing technology for unlimited possibilities

Japan Science and Technology Agency (JST) Program on Open Innovation Platform with Enterprises, Research Institute and Academia (OPERA) Consortium for Industry-University Cooperation in Genome Editing Technology

The Consortium works on genome editing technology, seamlessly linking basic and applied research. Genome editing technology is expected to lead to innovative value creation in such areas as bioindustry, animal and plant breeding, health, and life sciences.

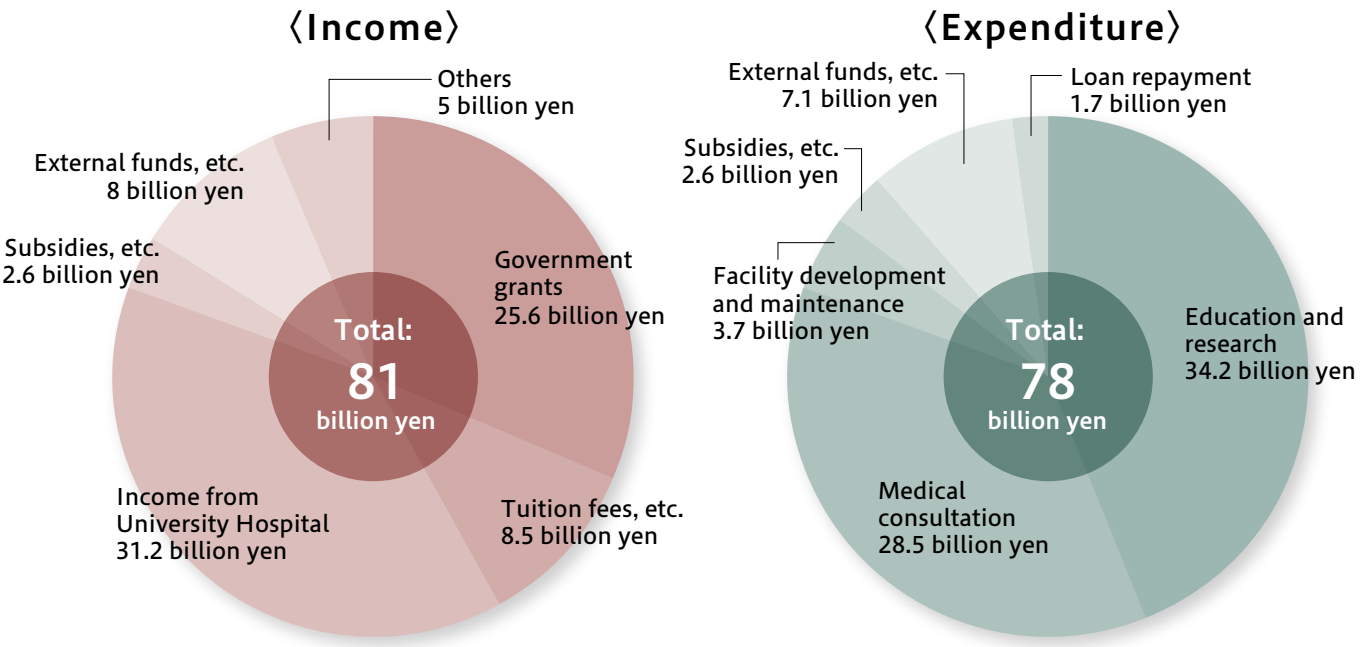
Tackling synergistic torrential rainfall-induced disasters, which are intensifying due to climate change

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 2019)



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. On this occasion, the University has set up a fund for uplifting Hiroshima University and energizing the local communities of Hiroshima (for the 75 + 75 year anniversary of Hiroshima University). It will ask for donations to cover projects that create innovations in Hiroshima. 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 2008-2020)
112 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 2010-2019)
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 2011-2019)
1,817 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

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 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

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

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

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 2017-2020 》

Dr. IOKIBE Makoto
Chancellor, University of Hyogo

Dr. IKEGAYA Yuji
Professor, Faculty 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. 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. 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.

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.

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 Law | 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 2.5million m² is situated in Higashi-Hiroshima City, located in the center of Hiroshima Prefecture. It is the main campus of Hiroshima University, housing nine faculties and three graduate schools, such as the School of Integrated Arts and Sciences. The on-campus buildings are distributed in four separate zones: North, South, East, and West.

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

For more detailed information on the location of the buildings, please visit the website.

Hiroshima University Official Website

Access ▸

Higashi-Hiroshima Campus Campus Map

As from January 2020, Hiroshima University adopts a total ban on smoking.

In order to prevent second-hand smoking and promote anti-smoking education, all three campuses of Hiroshima University have been smoke-free from January 2020.

Visit the link for more information!
https://www.hiroshima-u.ac.jp/en/about/initiatives/kinen

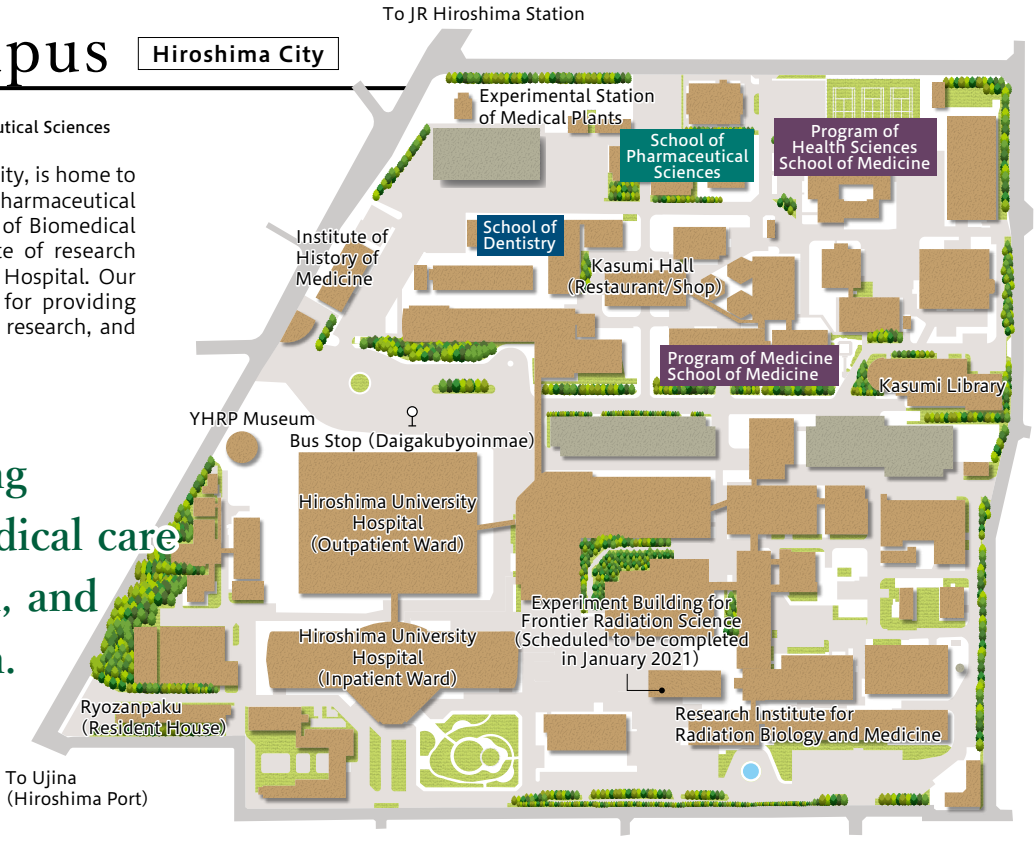
Kasumi Campus

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 Science, 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 Evening Program
School of Economics Evening Program

Higashi-Senda Campus is situated in Hiroshima City, and is in the area where Hiroshima University was located prior to the merger and relocation to Higashi-Hiroshima City. In addition to the School of Law and the School of Economics evening programs, liberal arts education for students from the School of Medicine, Dentistry, and Pharmaceutical Sciences has been offered in the new Higashi-Senda Innovative Research Center since 2016.

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

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. As a center for creating bustle (*nigiwai*), Hiroshima University will use the pavillion to enhance the learning environment for students and support their voluntary activities. This building was constructed by Yamane Holdings Co., Ltd. through generous donations from Fukuyama Transporting Co., Ltd. and the Shibuya Ikueikai Foundation.

la place (Mermaid Café Hiroshima University Branch)

〈Higashi-Hiroshima Campus〉

Fondly nicknamed "la place" which roughly translates from French to "the plaza", the North Welfare Center #3, is home to the Mermaid Café. Its glass ceiling and walls let in plenty of natural sunlight, creating a bright interior that also has somewhat of a Scandinavian atmosphere. This Café is equipped with Wi-Fi.

Libraries

The Hiroshima University Library comprises five libraries and holds approximately 3.47 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)


East Library (Higashi-Hiroshima Campus)


West Library (Higashi-Hiroshima Campus)


Kasumi Library (Kasumi Campus)


Higashi-Senda Library (Higashi-SendaCampus)

Facility Outline (as of 2020)

Library/location		Surface area	No. of seats for reading	No. of volumes	Main categories in the collection
Central Library	Higashi-Hiroshima Campus	16,116㎡	992 seats	Approx. 2.28 million	Books and periodicals in the fields of education, other human and social sciences, and natural sciences
East Library		1,745㎡	27 seats	Approx. 0.28 million	Books and periodicals in the fields of engineering, biology, and other natural sciences
West Library		6,102㎡	375 seats	Approx. 0.65 million	General books, study guides, periodicals in all subjects and books on natural sciences
Kasumi Library	Kasumi Campus	2,382㎡	327 seats	Approx. 0.19 million	Books and periodicals in the fields of medicine, dentistry, pharmacology, and public health
Higashi-Senda Library	Higashi-SendaCampus	685㎡	81 seats	Approx. 0.06 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

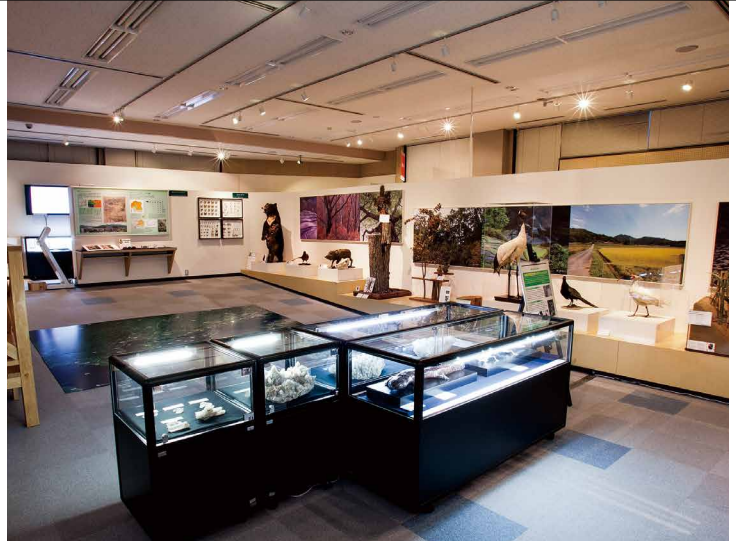
Satake Memorial Hall 〈Higashi-Hiroshima Campus〉

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〉

Here, liberal arts classes are held for students in medical and related schools based in Kasumi Campus. The Center is also designed to house joint educational and research projects in collaboration with other universities, industries and governments.

Legal Service Center 〈Higashi-Senda Campus〉

The Center was established in 2005 for the Hiroshima University Law School to fulfill the role of social contribution. 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 reuses bricks and stones used in the original construction at the time of the bombing.

Hiroshima University Hospital 〈Kasumi Campus〉

With the philosophy to "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.

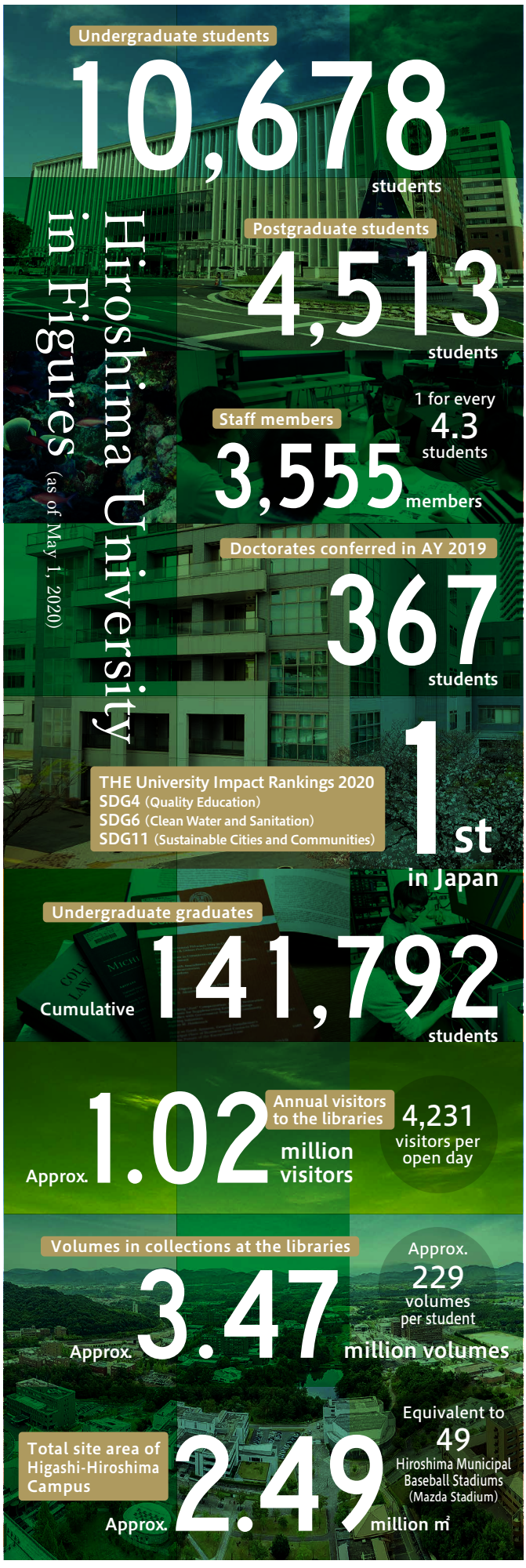
Partnership with Local Professional Sports Teams

Hiroshima serves as a base for professional sports teams, including Hiroshima Toyo Carp and Sanfrecce Hiroshima F.C. 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.

Disaster Response

When a disaster happens, the Disaster Medical Assistance Teams (DMAT) are mobilized to provide medical assistance in affected areas. During the 2018 massive flooding in western Japan, the staff at Hiroshima University Hospital were dispatched to disaster-affected areas to lend their expertise. Health care staff were divided into the following teams: DMAT, Japan Medical Association Team (JMAT), Infection Control Team, Disaster Psychiatric Assistance Team (DPAT), Japan Disaster Rehabilitation Assistance Team (JRAT), and disaster relief nursing and oral health care team. Around 260 staff members, mainly doctors and nurses, were involved in medical relief activities in disaster-hit areas.

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 Higher Normal School (established in 1902), Hiroshima University of Literature and Science (established in 1929), Hiroshima Higher Technical School (formerly Hiroshima High Institute of Technology, established in 1920), Hiroshima High School (established in 1923), Hiroshima Women's Higher Normal School (formerly Hiroshima Girls' High School, established in 1887), Hiroshima Normal School (formerly Hakushima School, established in 1874), and 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). 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

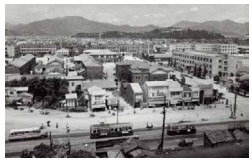
1950
- Opening ceremony of Hiroshima University
- Declaration by the first President Tatsuo Morito: Hiroshima University will be "a single unified university, free and pursuing peace"

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

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)

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	50min. 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	50min. 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 | TOP GLOBAL UNIVERSITY JAPAN | HIROSHIMA UNIVERSITY

Hiroshima University
Public Relations Group, Department of Public Relations, Financial and General Affairs Office

1-3-2 Kagamiyama, Higashi-Hiroshima City, Hiroshima, Japan 739-8511
TEL.082-424-6781　FAX.082-424-6040
E-mail　koho@office.hiroshima-u.ac.jp
Official website　https://www.hiroshima-u.ac.jp/en