

KINDAI UNIVERSITY

In Japan, we believe that the discipline involved in academic and sporting endeavors helps to build personal character. When you commit yourself fully to such pursuits, you gain the opportunity to grow in many different ways. Not only do you develop mental, physical, and technical skills, you also strengthen your sense of integrity and propriety. In valuing this spirit of self-improvement at Kindai University, we seek to foster well-rounded individuals with excellent character.

人格の陶公実学教育

Founding Principles

'Learning for the real world' and 'nurturing intellectual and emotional intelligence'

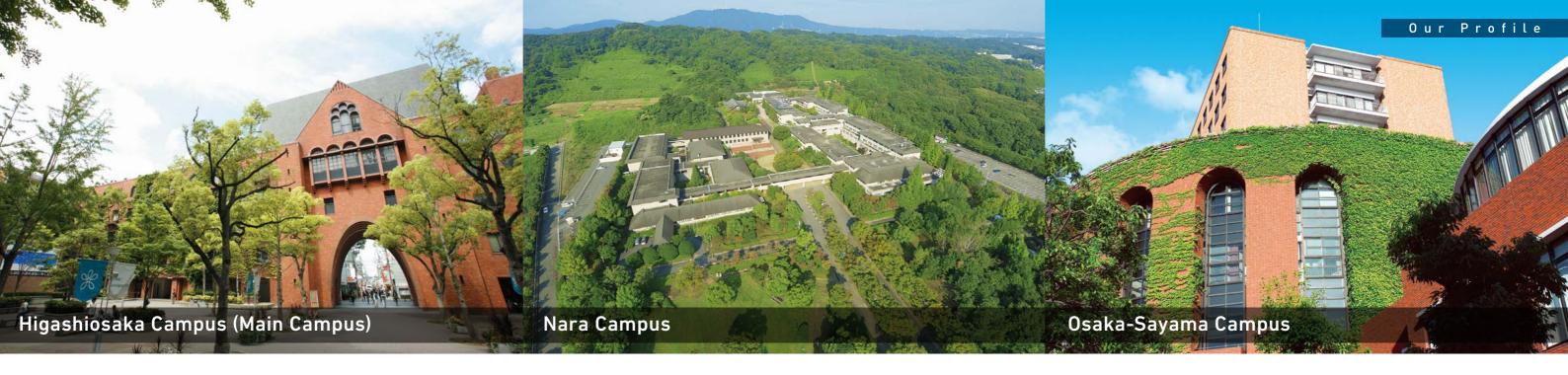
13 Faculty Spotlight
15 Academics
17 Exchange
19 Innovation
21 Medicine
23 Sports

25 President's Message

Educational Goal

To develop caring, trustworthy, and respectable people





At a Glance

Kindai University was founded in 1925. Now one of Japan's largest universities, it has six campuses in western Japan and boasts research facilities across the nation—from Hokkaido in the north to Kagoshima in the south. Currently, Kindai University comprises 15 faculties with 49 departments, 11 graduate schools, 18 research facilities, two junior colleges, 18 associated primary and secondary schools, and two teaching hospitals. The university has over 30,000 students and more than 550,000 alumni.

Kindai University conducts research in a wide range of fields and is making a name for itself as a leader in aquaculture, most notably for its work with bluefin tuna. Dedicated to meeting the needs of today's rapidly changing society, Kindai University will continue expanding its educational programs and facilities.



Our Name

As of April 2016, the official English name of the university was changed from Kinki University to Kindai University. Our new name combines the *kin* from Kinki and the *dai* from *daigaku* ("university"). Kinki is the region in western Japan where the university is located; it covers seven prefectures and encompasses the cities of Kyoto, Kobe, Osaka, Wakayama, and Nara. Along with the name change, we also launched the Faculty of International Studies as part of our effort to broaden our global profile.

Our Logo

The Kindai University logo represents the flower of the Japanese plum tree, the first flower to blossom after Japan's long, cold winter. The flower's five petals resemble both the shape of a person and the Japanese kanji character 大 (dai), the first character in 大学 (daigaku). There is a small gap in one of the petals indicating that the university's goals are not yet fully realized and that there is still potential for improvement and development.















Learning & Growing for the Real World

Kindai University offers learning for the real world—a focus that puts our research programs at the international forefront of addressing some of today's most complex issues. With vibrant campuses, compelling curricula, and practical field studies, Kindai University shapes caring global citizens who can inspire trust and respect.



















Kindai University—Aiming Ever Higher for an Even Better Future



153,697





who are company presidents*2

No. 7 among universities in Japan

No. 1 among universities in Japan



32,665



Number of R&D projects on consignment from private enterprises*3

No. 3 among universities in Japan









Full-time faculty members 2,268 Administrative staff members 3,576 Library books 1,428,445 Times Higher Education World University Rankings 2023 801-1000

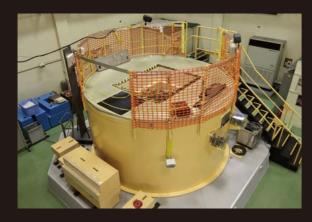
*1: Applied via academic year 2022 general entrance examinations *2: Source: University Rankings 2023, Asahi Shimbun Publications

No. 3 among universities in Japan

^{*3:} According to a 2021 study by MEXT

Leading the Way in Cutting-Edge Research

Kindai University's research centers are equipped with state-of-the-art equipment and facilities and are blessed with an ideal research environment. Our dedicated research teams strive to make meaningful contributions to society and to lead the world in their respective areas of research.



Atomic Energy Research Institute (AERI)

AERI operates the UTR-KINKI research reactor, which has a rated thermal power of 1 W. This reactor is one of only three university reactors operating in Japan. Since its first criticality in 1961, it has been used to educate and train personnel for the nuclear industry. This extremely safe reactor has given hands-on experience of an operating reactor to many people—from members of the public to students specializing in nuclear engineering. Along with domestic users, researchers and engineers from overseas have made use of the facility.



Bio-Coke Research Institute

Bio-coke is an environment-friendly biomass fuel that can be made from almost any photosynthetic plant, including what had been considered waste materials such as used tea leaves. An effective form of waste management, Bio-coke is also seen as a way to counter the over-reliance on fossil fuels. Someday, Bio-coke might replace the coal that industries currently use as a solid fuel for smelting iron, leading to a significant reduction in CO₂ emissions. This institute is working to bring Bio-coke to commercial production. It recently began several projects—both in Japan and overseas—to make Bio-coke from various bio-resources.



Experimental Farms

Kindai University has two experimental farms in Wakayama Prefecture—one named Yuasa, the other Oishi.

Yuasa Farm focuses mainly on the research and cultivation of fruit crops, including citrus and tropical fruits. Kindai-brand *mikan* (mandarin oranges) thrive in Wakayama's warm climate. More than 200 other citrus varieties are grown as genetic resources. Yuasa Farm has also researched mango cultivation and breeding for more than 30 years. In 2008, the farm's Aiko mango cultivar was registered as the first new mango cultivar in Japan. Kindai-brand mangos are popular

in department stores in the Kanto and Kansai regions as well as in high-end fruit shops. Since 2020, the farm has collaborated with a local brewing company in cultivating Yamada Nishiki rice and producing a sake named Kindai Sake.

Oishi Farm is in a highland area with a cool climate, making it ideal for raising ducks and cultivating buckwheat. The farm produces
Oishi-kamo, Kindai-branded duck meat that is commercially available and popular nationwide. And the farm keeps working to improve the yield and quality of its buckwheat.

Other Research Centers and Institutes

Folklore Studies Research Institute

Conducts research on Japanese folklore, with the aim of contributing to the creation and development of new aspects of Japanese culture.

World Economy Research Institute

Conducts active international exchanges and joint research with a focus on globalization of the economy and makes constructive government policy proposals on the Japanese economy.

Fundamental Technology for Next Generation Research Institute

Conducts research on such engineering fields as automotive technology, 3D modeling, architectural environment, biotechnology, and robotics.

Life Science Research Institute

Conducts joint research involving various faculties, such as medicine, agriculture, science and engineering, and pharmacy, with the aim of contributing to the health and welfare of humankind.

Science and Technology Research Institute

Conducts research on the fundamentals of science and engineering as well as their applications, with the aim of contributing to the development of state-of-the-art manufacturing technology and interdisciplinary technologies.

Human Rights Research Institute

Conducts research and investigations into human rights issues overseas and in Japan, such as the international protection of human rights and the social discrimination issue in Japan referred to as down

Pharmaceutical Research and Technology Institute

Conducts unique, interdisciplinary research that includes searches for outstanding medicinal seeds (potentials) and the development of foods with health-promoting benefits.

Japan Cultural Studies Research Institute

Analyzes the current situation of Japanese culture and makes proposals on the direction it should take amid an increasingly globalizing international community.

Creative Management and Innovation Research Institute

Conducts research and investigations into management innovations, with the aim of contributing to the development of business administration.

Advanced Technology Research Institute

Comprises four research centers focusing on bioengineering, robotics engineering, plants, and high-pressure protein.

Oriental Medicine Research Institute

Conducts research on boosting the safety and effectiveness of a new therapeutic approach that merges Oriental and Western medicine.

Joint Research Center

Facilitates the research and education conducted by faculties in the natural sciences by providing various kinds of state-of-the-art scientific equipment. Branch centers are located at each of the university's campuses.

Agricultural Technology and Innovation Research Institute

Facilitates research in agriculture, forestry, and fisheries, with the aim of promoting industry—government—academia collaborations and technological advancements in local communities, while also raising the level of fundamental scientific research

Cyber Informatics Research Institute

This institute comprises five divisions: intelligent systems, real world computing, cyber security, ICT education, and social implementation.

Design, Innovation and Creativity Research Institute

With a focus on education, research, and industry—academia collaborations, this institute fosters highly skilled designers. The institute brings together instructors from across Kindai University who can advance design research. Researchers here conduct R&D on prototypes for next-generation manufacturing applications in Higashiosaka.

See pages 19–20 for examples of Kindai research.











Kindai University's aquaculture program and related research began in 1948. The university was the first organization to successfully establish full-cycle aquaculture of marine fish, including Japanese amberjack and red sea bream. The institute followed a process of raising adult fish from eggs rather than from wild-caught juveniles.

Wild stocks of many marine fish species are depleting fast, because of overfishing. Kindai University has sought a solution by focusing its research on full-cycle aquaculture. In 2002, we successfully completed the world's first full-cycle breeding program for Pacific bluefin tuna. Our breeding technologies have been so effective that we are able to produce tuna without relying

on wild juveniles. Farming technologies like this will play a key role in conserving wild tuna stocks.

Tuna bred at the Aquaculture Research Institute have been trademarked as Kindai tuna. This brand has garnered widespread prestige, both nationally and internationally.

Kindai University will continue to push the boundaries of aquaculture research. The goal is to reduce pressure on wild fish stocks from fishing and capture-based aquaculture, while promoting the conservation of depleting wild resources.

World's First Successful Artificial Production of Over 20 Fish Species

In 1965, the Aquaculture Research Institute became the first in the world to produce hatchery-reared Japanese flounder juveniles. Since then, the institute has succeeded in artificially producing more than 20 fish species—many of which are world firsts. These efforts help prevent the depletion of wild fish stocks and enable mass production of fish species that are in short supply. They also make it possible to bring prized fish to market at more reasonable prices. Responding to global food shortages, the Aquaculture Research Institute pursues sustainable food production by promoting a shift from fishing and capture-based aquaculture to hatchery-based aquaculture.

In Global Media

The achievements of the Aquaculture Research Institute in full-cycle aquaculture of bluefin tuna have been covered by numerous news media, including the New York Times, Bloomberg News, and the Wall Street Journal. They have also been featured in TV programs on NHK (Japan's public service broadcaster) and the BBC, as well as in TV programs in South Korea and Taiwan.



Kindai's World-First Artificially Hatched and Raised Fish Species



itiated aquaculture research alongside the development of the net cage farming system 1960

1970

1975

1979

1980

1995

2002

2004

First harvest of full-cycle



1965

1967

1968

1969

1970

1972

Striped bonito Chicken grunt

1975

1976

1979

1988

1991

1999

Architects of a Better Future

Working in fields that span the realms of science, medicine, engineering, and more, Kindai University's diverse community of dedicated researchers/educators/innovators is united in the pursuit of ideas and applications that



Professor DOTERA Tomonari

Professor Dotera specializes in condensed matter physics and does research on soft matter quasicrystals. He has created several complex Archimedean tiling patterns in polymers, and—in a paper that was later cited in the explanation of the 2011 Nobel Prize in Chemistry he showed evidence of a 'polymeric quasicrystal' tiling for the first time. In 2014, his paper clarifying the origin of unusual non-periodic ordering that quasicrystals was published in Nature.

Associate Professor MORIYAMA Hiroyuki

Associate Professor Moriyama's scientific interest is focused on the basic biology of stem cells. His group investigates the potential value of mesenchymal stem cells in tissue engineering and the utilization of environmental signals, such as oxygen, in modulating stem cells. By combining his extensive technical expertise in stem cell science and dermatological research. his ultimate goal is to reconstitute the perfect skin tissue and to develop personalized regenerative therapy.

NISHIO Kazuto

Professor Nishio's specialty is pharmacotherapy for cancer—particularly the areas of targeted therapy, translational research, biomarkers, and personalized medicine. Using genome and gene analyses as well as an approach grounded in molecular biology, he works to elucidate pathological conditions and conducts research on biomarker development.

Professor Emeritus KUMAI Hidemi

A fisheries biologist, Professor Kumai has long heen involved in aquaculture It was his research team that achieved full-cycle aquaculture of bluefin tuna. In 2003, while serving as the third director of the Aquaculture Research Institute (1991 to 2008), Professor Kumai headed up an aquaculture project that was chosen for the 21st Century COE (Center of Excellence) Program and Global COE Program run by the Japanese government.

Professor SUGIURA Reiko

Professor Sugiura is a pioneer researcher on the identification of regulatory factors of MAPK (mitogen-activated protein kinase) and the elucidation of its control mechanisms. Along with her distinguished work as a scientist and a medical doctor, she is developing a groundbreaking strategy to combat cancer on a molecular-targeted basis. She currently serves as a research project leader for the Strategic Research Foundation which is supported by the Japanese government.

Specially Appointed Professor KYOGOKU Hideki

Professor Kyogoku is a leading researcher in the development of both laser additive manufacturing technology and functional materials, such as shape-memory alloys made via powder metallurgy. He serves as a project leader in TRAFAM (Technology Research Association for Future Additive Manufacturing), an organization that has been commissioned by the Japanese government to develop next-generation industrial 3D printers and ultra-precise 3D modeling systems.

Specially Appointed Professor MITSUDOMI Tetsuya

Professor Mitsudomi's current research interests include surgical treatment, targeted therapy, and biomarker development for lung cancer. He won the Mary J. Matthews Award at the 2013 World Conference on Lung Cancer. He also received the 2014 Kiyoko and Paul Bourdarie-Goto Scientific Prize for his paper on the treatment of lung cancer harboring EGFR (epidermal growth factor receptor)

Professor IDA Tamio

Professor Ida does research on Bio-coke, a biomass fuel that can be used as a coal coke substitute in large-scale industrial processes. Bio-coke technology can help reduce CO2 emissions for the prevention of global warming and can also help control rising coal coke prices. Professor Ida's main research project is on Bio-coke manufacturing methods and devices that would enable fast and efficient production of Bio-coke. He also aims to develop innovative biomass energy technology for building a greener world.

Professor KUDO Masatoshi

Professor Kudo has been a member of the ILCA (International Liver Cancer Association) Governing Board since 2009 and is a past president of APPLE (Asia-Pacific Primary Liver Cancer Expert Association). He has published over 1,100 international scientific peer-reviewed papers in well-regarded journals. He received a Highly Cited Researchers award in the Clinical Medicine category from Clarivate Analytics in 2019, 2020, and 2021,

13 KINDAI UNIVERSITY
KINDAI UNIVERSITY 14



Where Opportunities for **Learning Abound**

Kindai University is one of the largest universities in Japan, boasting 15 faculties with 49 departments and 11 graduate schools. As a comprehensive educational institution, we provide opportunities for learning and research in a wide range of disciplines in the arts and sciences alike.











Graduate Schools

Graduate School of Law Graduate School of Commerce Graduate School of Economics Graduate School of Science and **Graduate School of Pharmacy** Graduate School of Interdisciplinary **Human Studies**

Graduate School of Agriculture Graduate School of Medical Sciences Graduate School of Biology-Oriented Science and Technology

Graduate School of Systems Engineering Graduate School of Humanity-Oriented Science and Engineering

Undergraduate Programs

Indergraduate P	3		
Faculty of Law	Department of Law	Faculty of Agriculture	Department of Agricultural Science
Faculty of Economics			Department of Applied Biological
	Department of Economics		Department of Applied Biological Chemistry
	Department of International Economics		Department of Food Science and Nutrition
	Department of Public Management		Department of Environmental Management
Faculty of Business Administration	Department of Business Administration		Department of Advanced Bioscience
	Department of Business and Marketing Strategy	Faculty of Medicine	Department of Medicine
	Department of Accounting		Department of Medicine
	Department of Career Management	Faculty of Biology-Oriented	Department of Biotechnological Science
Faculty of Science and Engineering	Department of Science	Science and Technology	Department of Genetic Engineering
	Department of Life Science		Department of Science and Technology on Food Safety
	Department of Applied Chemistry Department of Mechanical Engineering		Department of Computational Systems Biology
	Department of Electrical, Electronic and Communication Engineering		Department of Human Factors Engineering and Environmental Design
	Department of Civil and Environmental Engineering		Department of Biomedical Engineering
	Department of Energy and Materials	Faculty of Engineering	Department of Biotechnology and Chemistry
Faculty of Architecture	Department of Architecture		Department of Mechanical Engineering
			Department of Robotics
Faculty of Pharmacy	Department of Pharmacy (6 years)		Department of Electronic Engineering and Computer Science
	Department of Pharmaceutical Sciences (4 years)		Department of Informatics
			Department of Architecture
Faculty of Literature, Arts and Cultural Studies	Department of Literature		
	Department of Arts	Faculty of	Department of Biological and
	Department of Cultural and Historical Studies	Humanity-Oriented Science and Engineering	Environmental Chemistry Department of Electrical and
	Department of Cultural Design	Linginieering	Electronic Engineering
Faculty of Applied			Department of Architecture and Design
Faculty of Applied Sociology	Department of Applied Sociology		Department of Information and Computer Science
Faculty of International Studies	Department of International Studies		Department of Management and Business
Faculty of Informatics	Department of Informatics	Junior College Division	Department of Business and Economics

Note: As of academic year 2022

Linked for Learning

Kindai University currently has partnerships with 267* worldwide universities, where over 500 of its students study. In addition to exchanges of faculty members and students, Kindai and these universities cooperate in conducting and publishing research in a range of fields.

* As of September 2022

Partner Universities Overseas

Haute Ecole EPHEC

- The Higher Education Institution of the Province of Liège
- Thomas More University of Applied
- UC Leuven-Limburg

• Technical University of Sofia

Algebra University College

Czech University of Life Sciences Prague

JAMK University of Applied Sciences

France

- Ecole Nationale Supérieure d'Architecture de Paris La Villette
- EDC Paris Business School
- Université de Franche-Comté
- Universite Le Havre Normandie

- Baden-Wuerttemberg Cooperative State University, Ravensburg (DHBW)
- Clausthal University of Technology Cologne University of Applied Sciences
- FH Münster University of Applied
- Frankfurt University of Applied Sciences
- Free University of Berlin
- Harz University of Applied Sciences
- Hochschule für bildende Künste Hamburg
- Ludwig-Maximilians-Universität Miinchen (LMU)
- Technische Hochschule Ingolstadt
- Trier University of Applied Sciences

Budapest Metropolitan University University of Pécs

- Dublin City University
- University College Cork • University College Dublin
- University of Limerick

- Sapienza University of Rome
- Sculoa Internazionale Superiore di Studi Avanzati (SISSA)
- University of Siena

University of Prishtina

• Riga Technical University

Lithuania

Vilnius University

- Avans University of Applied Sciences
- Fontys University of Applied Sciences • Hanze University of Applied Sciences
- HZ University of Applied Sciences
- Rotterdam University of Applied Sciences
- The Haque University of Applied Sciences

North Macedonia

International University of Struga

- Adam Mickiewicz University
- Warsaw School of Economics

- The Portuguese Institute for the Ocean and the Atmosphere
- University of Algarve

 Romanian-American University Transvlvania University of Brasov

- Don State Technical University Dubna University
- Far Eastern Federal University
- Financial University
- ITMO University Kazan Federal University
- Lomonosov Moscow State University
- Moscow City University Moscow Institute of Architecture - State
- Academy MARKHI • National Research Nuclear University
- National Research University Higher School of Economics Saint Petersburg
- Novosibirsk State University
- Saint Petersburg State University Skolkovo Institute of Science and Technology (Skoltech)
- University of Tyumen

- Autonomous University of Barcelona
- La Salle Universitat Ramon Llull • The Catholic University of Saint Anthony de Murcia
- University of Almeria
- University of Malaga University of Valencia

Karlstad University

• Luleå University of Technology

while having fun.

Village.

- London Metropolitan University
- University of Essex
- University of Nottingham
- University of Sussex University of Winchester
- York St John University

Jahangirnagar University

• Universiti Brunei Darussalam

Cambodia International University

Royal University of Agriculture

- Changzhou University China Pharmaceutical University
- Dalian University of Technology
- Hangzhou Normal University Hong Kong Baptist University
- Hong Kong Shue Yan University
- Liaoning University Lingnan University
- Macau University of Science and
- Nanjing Forestry University
- Northeastern University Northeast Forestry University
- Peking University
- Shanghai Maritime University Shanghai Normal University
- Shanghai University
- Shenyang Pharmaceutical University Xiamen University
- Xi'an University of Technology

• Georgian American University

- Amity University
- Chandigarh University Chitkara University
- Jawaharlal Nehru University

Middle East and Africa

• The American University in Cairo

• College of Management Academic

- Studies (COMAS)
- Bezmialem Vakif University
- Halic University Istanbul University
- Karabuk University

Marmara University

- Andalas University
- Binus University
- Bogor Agricultural University

Syiah Kuala University University of HKBP Nommenser

Kazakhstan

• Eurasian National University

Malaysia

- Taylor's University
- Universiti Malaysia Sabah University of Malaya
- Universiti Putra Malavsia • Universiti Teknologi MARA

- Silliman University
- University of Perpetual Help University of the Philippines

- South Korea Busan University Of Foreign Studies
- Chonnam National University • Chung-Ang University
- Donaseo University Hankuk University of Foreign Studies
- Hansung University
- Hanyang University Honam University
- Inha University
- Kookmin University
- Korea University Kyung Hee University
- Kyunsung University National Institute of Fisheries Science
- (NIFS) Seoul Theological University
- Sogang University • The Cyber University of Korea
- University of Seoul Yonsei University

Bond University

Deakin University

Griffith University

Macquarie University

Southern Cross University

University of Canberra

University of Tasmania

Queensland University of Technology

University of Southern Queensland

Oceania

Australia

- Asia University • Chang Jung Christian University
- Chung Yuan Christian University
- CTBC Business School • Feng Chia University

Taiwan

- Fu Jen Catholic University
- Kainan University Kaohsiung Medical University
- Ming Chuan University
- Nanhua University
- National Central University National Cheng Kung University
- National Formosa University National Ilan University
- National Taipei University
- National Taipei University of Business
- National Taipei University of Technology National Taiwan University
- National University of Kaohsiung National Yang Ming Chiao Tung University

Soochow University Tamkang University

- Chiang Mai University Chulalongkorn University Rajamangala University of Technology
- Ramkhamhaeng University
- Thai-Nichi Institute of Technology

- FPT University • Thai Nguyen University

Thammasat University

- Ton Duc Thang University Vietnam National University, Hanoi
- Viet Nam National University Ho Chi Minh

The University of Fiii

New Zealand

• University of Western Sydney

University of Wollongong

University of Otago University of Waikato

North America

Canada

- McGill University
- Saint Mary's University • St. Thomas University
- University of Calgary
- University of Prince Edward Island University of Regina

University of the Fraser Valley

- Aguinas College
- Augsburg University Augustana University
- Barry University Bluffton University
- Boise State University Boston University

• Chatham University

University

• Coastal Carolina University

Dakota State University

Davenport University

• Dominican University

Eckerd College

• Fisher College

• California Lutheran University

California State University, Long Beach

• California State University, Los Angeles

California State University, Monterey Bay

• College of Saint Benedict & Saint John's

Dominican University of California

• Fairleigh Dickinson University

- California State Polytechnic University,
- California State University, Channel Islands Trinity University
- California State University, Dominguez Hills University of Bridgeport
 - University of California, Davis
 - University of Central Florida
 - University of Cincinnat
 - University of Hawai'i at Hilo
 - University of La Verne
 - University of St. Thomas University of Tampa

Central and South America

Colombia

University of Mendoza

• School of Economics, Business Administration and Accounting at Ribeirão

• Universidad del Rosario

Preto, University of São Paulo Universidade de São Paulo

Panama

• Universidad San Ignacio de Loyola

The Village E³ [e-cube]

The Village E³ [e-cube] opened on the Higashiosaka Campus in November 2006 as a unique place to learn and brush up English skills. The three Es-English, Enjoyment, and Educationrepresent the facility's concept of learning practical English

Only English is allowed at this first-of-its-kind facility for universities in Japan. English-speaking staff members are on hand for practical conversation, and a variety of activities, mini lectures, and events are held in English. It's a great place to go to make friends who want to practice English and learn about

As of April 2022, over 1.5 million people had visited the

at Kindai University

This center is in charge of all services related to Japanese-language education and international exchange. Please contact us if you have any questions. We welcome all inquiries.

• Johnson & Wales University-Charlotte

Hawaii Pacific University • Indiana University-Purdue University Indianapolis

Florida Institute of Technology

Grand Valley State University

- Kent State University
- Lewis University
- Marquette University
- Miami University (Oxford) Middle Tennessee State University
- Northern Illinois University Oklahoma City University
- Pacific University • Queens College, City University of New
- San Francisco State University
- Santa Rosa Junior College
- St. Joseph's University
- Temple University

- University of Hartford
- University of Hawai'i at Manoa
- University of Missouri-St. Louis • University of North Carolina Wilmington
- West Chester University West Virginia University

• Universidad La Salle Laguna

Universidad Popular Autónoma del Estado

International Students

Approximately 500 students from around the world study at Kindai University, supported in their studies, everyday life, finding employment, and other areas by the Global Education Center. The university also has a system for partnering international students with Japanese students, who provide support with academia and adapting to life in Japan.

Each year is seeing an increasing number of exchange

students coming to Kindai University. Hailing from Asia, Europe,

the US, and other world regions, these students contribute to the

Global Education Center

global atmosphere of the campus.

Universidad Tecnológica de Panamá

Uruguay Catholic University of Uruguay

Global Education Center Contact Info Address: 3-4-1 Kowakae, Higashiosaka City, Osaka 577-8502, Japan

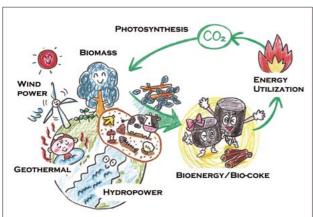
Tel: +81-6-4307-3081 Fax: +81-6-6729-2387 URL: https://www.kindai.ac.jp e-mail: isc@itp.kindai.ac.jp

KINDAI UNIVERSITY 18

World-Leading Research

Kindai University has long been a hub of research. Our broad-based coverage of both the sciences and the humanities means we can take an interdisciplinary approach to collaborative research projects. We have a track record of success in joint research, contracted research, technical guidance, and technology transfer. Here are some recent examples of the university's high-profile research.

Bio-Coke—A Next-Generation Recycling-Based Biofuel





A peaceful society is built on protecting the environment and avoiding inter-state conflicts over energy. Future solutions must involve sustainable and renewable energy sources—and solid biofuels are

one such source that's drawing particula attention.

Bio-coke is a new type of solid biofuel that can be made from any photosynthetic plant. Bio-coke has the potential to replace the coal and coal coke consumed in the steel and electric power industries as well as in glass production. There are high hopes that it will be used widely. Bio-coke can boost development and add value in manufacturing industries in the form of zero-emission waste disposal and zero-carbon manufacturing processes.

The Bio-Coke Research Institute at Kinki University is actively

engaged in R&D to lead Japan and the world toward achieving carbon-neutral societies.

of 28,000-Year-Old Mammoth

Using Cloning Technology to Reactivate Cell Nuclei



Remains of the woolly mammoth named Yuka

A collaborative research group led by Kindai University has succeeded in observing biological activity in cell nuclei collected from a 28,000-year-old fossil. The fossil came from a Siberian mammoth dubbed "Yuka" that was discovered in permafrost. Cell nuclei from the fossil were transplanted into mouse oocytes—a method of nuclear transfer that is used to produce cloned animals. After nuclear transfer, mouse proteins were loaded onto the mammoth cell nucleus. Part of the mammoth cell

nucleus then started to form a new nucleus-like structure. Such events are often observed when animals are cloned using this method. This study shows that the 28,000-year-old fossil still contained at least partially active nuclei. The results of this research were published in the online international scientific journal Scientific Reports.







Time-lapse images of oocyte injected with mammoth cell nucleus

Kindai University Changed How the World Treats Primary Liver Cancer



Professor Kudo speaks at an international symposium

Kindai University's Liver Cancer
Treatment Group, led by Professor
Masatoshi Kudo, conducted clinical trials
of liver cancer therapies, including
TACTICS, TACTICS-L, a proof-of-concept
study of lenvatinib, and ABC conversion.
Results clearly showed that upfront
systemic therapy followed by curative
conversion improved overall survival

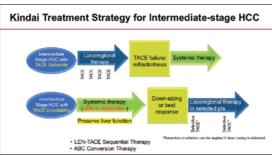
rates in patients with intermediate-stage hepatocellular carcinoma (HCC).

Following these results, the Japan Society of Hepatology and the Asia-Pacific Primary Liver Cancer Expert Association adopted this treatment strategy into their respective clinical practice guidelines. The

Kindai treatment strategy
was also included in the
clinical practice
guidelines of the
American Association for
the Study of Liver
Diseases, the European
Society for Medical
Oncology, and the

Barcelona Clinic Liver Cancer.

Kindai University effectively changed global clinical practice guidelines for the treatment of HCC. This achievement led to Professor Kudo being recognized as one of the world's leading experts in the treatment of HCC.



Research outline

Kindai and Toyota Tsusho Ramp Up Tuna Farming



At a July 16, 2014 press conference

Kindai University is collaborating with Toyota Tsusho Corporation, a Toyota Group trading firm, in developing a tuna-growing aquaculture business. The business uses full-cycle aquaculture technologies developed by the university's Aquaculture Research Institute and the Aquaculture Technology and Production Center.

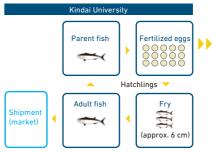
Fertilized tuna eggs supplied by Kindai are hatched and grown into fry in

land-tanks at a Toyota Tsusho subsidiary

in Nagasaki Prefecture. The fry are then transferred to offshore nets, where they grow into larger juveniles that are shipped to tuna farmers around Japan. Kindai provides technical guidance to these fish farmers.

This joint venture has expanded in recent years to include the production of red sea bream. Kindai madai is a new strain of red sea bream with a significantly faster growth cycle. It was

Outline of the Full-Cycle Aquaculture Project



cultivated at the university using selective

TOYOTA TSUSHO

breeding technology. Kindai and Toyota
Tsusho cooperate in other areas, too.
Examples include the development of fish
feed and a new juvenile sorting technique
using Al technologies.





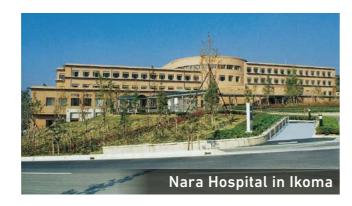


Providing Advanced Medical Education and Treatment

The Kindai University Faculty of Medicine has two affiliated teaching hospitals that provide clinical education and training to current and future health professionals, while also delivering advanced medical care to patients. One of them, Kindai University Hospital, plays a vital role as the core medical institution in southern Osaka. It is renowned for its use of cutting-edge treatments and diagnostic tools, such as PET-CT scans. The other is Nara Hospital, which also contributes to the local community by offering prompt and precise diagnosis and treatment in a wide range of specialties.

The Faculty of Medicine campus and Kindai University Hospital (both located in Osaka-Sayama city) are being transferred to Izumigaoka in Sakai city. The transfer, which is scheduled for completion in 2025, will enhance the provision of education and advanced medical care in southern Osaka.

The Faculty of Medicine also has two research centers that actively pursue research projects of real-world significance.



Kindai University Hospital

Kindai University Faculty of Medicine

Kindai University Nara Hospital

Kindai University Hospital Emergency and Disaster Center

In December 2013, Kindai University
Hospital bolstered its position as
southern Osaka's core medical
institution by opening its Emergency
and Disaster Center. The new center
consolidates the hospital's emergency
departments—including the ER,
Cardiovascular Center, and Stroke
Center—in a new five-floor,
earthquake-proof building equipped
with state-of-the-art medical facilities
and equipment. With this center, the
hospital can provide efficient and
appropriate treatment as well as the
best in emergency medical care.

Designated by the Japanese government as a key disaster-response base hospital, Kindai University
Hospital will make its Emergency and
Disaster Center available as a base for treating severely ill or injured patients during disasters, such as large-scale earthquakes.







Da Vinci Surgical System



In keeping with its reputation of being one of Japan's best hospitals for cancer treatment, Kindai University Hospital has introduced the da Vinci Surgical System. This robotically assisted surgical platform facilitates complex surgery and uses a minimally invasive

approach, giving patients a safe and less burdensome surgical option. Kindai University Hospital uses da Vinci mainly for prostatectomies but is increasing its use in the treatment of gynecologic and stomach cancers.

Making Advances in Cancer Research

The Department of Medical Oncology is the first university department in Japan dedicated to medical oncology. Part of the Faculty of Medicine, this department played a central role in the development and clinical trial of gefitinib (trade name Iressa), a drug used in targeted therapy for lung

First approved in Japan, gefitinib inhibits tyrosine kinase, an enzyme that causes cancer cells to grow. Though gefitinib does produce side effects, it is highly effective in certain types of patients when properly administered.

In March 2006, a clinical trial for gefitinib got underway, with Kindai University and medical institutions in nine Asian countries taking part. Called IPASS (Iressa Pan-Asia Study), this joint study lasted a year and seven months. The results, announced at international academic conferences, have made an impact on the medical world. The wealth of detailed data collected through IPASS was instrumental in

paving the way for the appropriate and effective usage of gefitinib as a new treatment for lung cancer.

Kindai University is a key player in the research and treatment of cancer in Japan and Asia. It is also one of the few universities in Japan focusing on fostering oncologists who are also pharmacotherapy specialists.

Our Athletes Aim for the Highest

Kindai University is home to varsity athletic teams ranked among the highest in Japan, including the swimming, baseball, and archery teams. These teams have produced top-caliber athletes who have made their mark in both the national and international arenas. Here we introduce Kindai University's lineup of Olympic medalists and its history of participation in the Olympic Games.

Kindai University Olympic Medalists

Mexico 1968: Bronze

MORIOKA Eiji

- Boxing (bantamweight)
- · Graduated 1969:
- Faculty of Commerce-Economics

Morioka fought Valerian Sokolov of the USSR in the semifinals but was defeated by Sokolov, who went on to win the gold medal. Morioka later said that he had been happy to hear booing from the audience in response to the questionable call that determined his defeat.



Athens 2004: Bronze

NAKANISHI Yuko

- Swimming (200-meter butterfly)
- · Graduated 2004: Faculty of Commerce-Economics

Nakanishi competed in her first Olympics in Sydney in 2000. She earned a medal during her second by beating out her opponent for third place by just a hair in an intense race that came down to the last 50 meters.



NAKAO Miki

Sydney 2000: Bronze

- Swimming (200-meter backstroke) • Graduated 2001:
- Faculty of Commerce-Economics

Nakao was a student at Kindai University High School when she competed in her first Olympics in 1996 in Atlanta. In 2000, her years of hard training paid off when she became the first Kindai University medalist since Eiji Morioka in 1968.



Athens 2004: Bronze

OKUMURA Yoshihiro

- (4x100-meter men's medley relay) Graduated 2006:
- Faculty of Commerce-Economics

Okumura competed in the 100- and 200-meter freestyle events and made it to the semifinals in the latter. He served as anchor in the 4x100-meter men's medley relay, helping his team win a bronze medal.



Athens 2004: Silver and Bronze

YAMAMOTO Takashi

- · Swimming (200-meter butterfly, 4x100-meter men's medley relay)
- Graduated 2001;
- Faculty of Commerce-Economics

Yamamoto was captain of Japan's national swimming team when he competed in his third Olympics and earned two medals. One of those medals was in the 4x100-meter men's medley relay—Japan's first medal in that event in 44 years.



London 2012: Bronze

TERAKAWA Aya

- · Swimming (100-meter backstroke, 4x100-meter women's medley relay)
- Graduated 2007; Faculty of Law

In her second Olympics (after Athens 2004), Terakawa won her first medal when she broke her own Japanese record in the 100-meter backstroke. She also medaled as a member of Japan's 4x100-meter women's medlev relay team.



London 2012: Silver and Bronze

IRIE Ryosuke

- Swimming (100-meter backstroke 200-meter backstroke. 4x100-meter men's medley relay)
- · Graduated 2012; Faculty of Law

Irie missed out on a medal at the 2008 Beijing Olympics but made up for it in London with a total of three medals: a bronze in the 100-meter backstroke and a silver in both the 200-meter backstroke and the 4x100-meter men's medlev relay



London 2012: Bronze

KANIE Miki

- Archery (women's team)
- Graduated 2011: Faculty of Law

KAWANAKA Kaori

- Archery (women's team)
- Graduated 2014;
- Faculty of Business Administration

Kindai University graduate Kanie (left) and then-student Kawanaka joined forces as two thirds of the Japanese women's team to earn their country its first medal in the men's and women's team event.



London 2012: Silver Tokyo 2020: Bronze (2)

FURUKAWA Takaharu

- Archery (men's individual). London Archery (men's individual, men's team), Tokyo
- Graduated 2007; Faculty of Business Administration

At the Tokyo Olympics—his fifth Olympics in a row since Athens in 2004—Furukawa won a bronze medal in the men's individual archery event and another one in the men's team event. Along with his silver medal in the London Olympics, Furukawa has three medals-he still dreams of winning gold.



Kichijiro Hamada competes in boxing, making him Kindai University's first Olympic athlete.

1968

Eiji Morioka wins a bronze medal in boxing.

Munich Olympics 1972

Shiro Maruyama competes as a member of the men's fencing team.

1984 Los Angeles Olympics

Takemi Ise competes in swimming.

1988

Yukinori Tanaka and Shigemori Maruyama compete in

Calgary Winter Olympics

Atsushi Egawa competes in cross-country skiing.

1992

Barcelona Olympics
Five Kindai University students compete in swimming, archery, and sailing.

Albertville Winter Olympics Kiminobu Kimura competes in alpine skiing.

1994 Lillehammer Winter Olympics

Kiminobu Kimura competes in alpine skiing. Atlanta Olympics

Hisato Yasui and Ryuji Horii compete in swimming.

1998 Nagano Winter Olympics

Kiminobu Kimura competes in alpine skiing.

2000

1996

In swimming, Takashi Yamamoto and Yuko Nakanishi finish as finalists, and Miki Nakao wins a bronze medal In archery, Masafumi Makiyama and Yuji Hamano

2004 Athens Olympics

In swimming, Takashi Yamamoto and Yuko Nakanishi win a silver and a bronze medal, respectively; Yoshihiro Okumura and Aya Terakawa also compete.

2006 **Turin Winter Olympics**

Five Kindai University graduates compete in skiing

2008

In swimming, Ryosuke Irie, Misaki Yamaguchi, Yoshihiro Okumura, and Yuko Nakanishi finish as finalists.

2010 Vancouver Winter Olympics

Hiroomi Takizawa and Yuichi Onda compete in skiing

2012 London Olympics Medals go to Ryosuke Irie and Aya Terakawa for

swimming and to Miki Kanie, Kaori Kawanaka, and Takaharu Furukawa for archery. Sho Sotodate competes in swimming and Hideki Kikuchi in archery.

Sochi Winter Olympics 2014

Yuichi Onda competes in cross-country skiing.

Rio Olympics and Paralympics 2016

Four Kindai University graduates compete in swimming and archery. Mei Ichinose finishes as a finalist in swimming at the Paralympics.

Tokyo Olympics and Paralympics Two graduates compete in archery and two in 2020

swimming. Five students compete in swimming, diving, and Paralympics swimming. One graduate finishes in fifth place in karate, and a graduate/student team places fourth in artistic swimming.

23 KINDAI UNIVERSITY KINDALUNIVERSITY 24

Greetings from the President of Kindai University



Kindai University was established in 1949 with the goal of developing graduates that are "caring, trustworthy, and respectable." Our founding principles are "learning for the real world" and "nurturing intellectual and emotional intelligence." The university was formed from the amalgamation of Osaka Technical College, founded in 1925, and Osaka Science and Engineering University, which was established in 1943. Our founder Koichi Seko's philosophy—"instilling teachings in those that yearn to learn"—is at our core, and we aim to nurture students into people that contribute to society, drawing on their teachings and research performed while at our university—in a wide range of fields from medicine to arts and literature, and even by

correspondence learning.

The world is currently undergoing a period of major transformation. Japan must be a first mover, making Society 5.0 a reality by implementing the technological innovations of Industry 4.0 into all walks of life and industries, solving a variety of social issues. We must develop innovative technologies, utilizing artificial intelligence and the Internet of Things in many different fields to encourage economic and social progression. Kindai University undertakes numerous industry-academia collaboration projects; students and teaching staff come together to combine expert knowledge and skills across fields—an example of our "learning for the real world."

Kindai University is responding to

globalization by establishing our Faculty of International Studies. We have partnership agreements with 250+ overseas universities, and the number of exchange students on campus is increasing. As well as student exchange programs, we will promote collaborative research with overseas institutions, and as a world-class university, we will further improve our facilities to develop an educational and research environment that attracts teaching staff and students from overseas.

With a view towards the centennial anniversary of the establishment of Kindai University in 2025, we are carrying out our large-scale construction projects at the main campus in Higashiosaka. Our new academic hub, Academic Theater, which opened in April 2017, features

facilities that go against conventional wisdom—housing a distinctive Bibliotheater with approximately 70,000 books including about 22,000 comics, and multiple 24-hour fully equipped self-study rooms, including one accessible only to women.

Into the future, we will continue to stay true to our founding principles, as we create an even better environment for learning and conducting research—and all of our staff will do their best to ensure the diverse potential of students is reached.

Yoshihiko Hosoi

News Focus

Informatics Faculty Opens—Kindai's 15th Faculty

Kindai University opened its 15th faculty—the Faculty of Informatics—in April 2022 at the Higashiosaka campus. The world is undergoing what some call a fourth industrial revolution, involving technological innovations such as IoT, big data, and Al. These

innovations will underpin a super-smart society that Japan has called "Society 5.0."
Against this backdrop, the new faculty aims to develop highly skilled IT experts who can handle technology in Al applications, data analysis, cyber security, and other in-demand areas.



Faculty of Informatics building

Kindai Restaurants Cultivate an Appetite for Lab-Bred Fish

Kindai University Aquaculture Research Institute in Wakayama Prefecture is putting the fruits of research to tasty use at the university's own seafood restaurants in Osaka and Tokyo. The restaurants serve tuna, red sea bream, and other kinds of fish cultivated at the fisheries lab as well as vegetables and other produce from Wakayama.

Following the April 2013 launch in a bustling business and commercial complex known as Grand Front Osaka, the first Tokyo outlet opened in December 2013 in the upscale Ginza shopping district.

A second Tokyo location opened in 2020 in the prestigious business district of Marunouchi. While the Osaka and Ginza restaurants serve fish that is cultivated and shipped by Kindai under the concept "Kindai-graduate fish," the Marunouchi location serves fish grown and shipped by fish farmers who are supplied juveniles cultivated through full-cycle aquaculture by the university. Kindai has dubbed these fish

"Kindai-born fish" with the aim of expanding the full-cycle aquaculture process.

With the Marunouchi location continuing to fuel the public's appetite for Kindai fish the three restaurants combined to reach a customer milestone of 1,480,000 in August 2022.



ndai University Aquaculture Research Institute restaurant in Osak

Kindai Opens Academic Theater at Higashiosaka Campus

On April 6, 2017, Kindai University's Higashiosaka Campus opened the Academic Theater, an innovative, five-building hub for practical, real world learning in the arts and sciences. It includes the Bibliotheater, a next-generation library stocked with approximately 70,000

titles, including about 22,000 manga (comic books). There's also the CNN Café—a first for a university in Japan—providing the world news so important for today's globally informed students. Study rooms, including a portion set aside for women only, are conveniently open 24/7.



Bird's-eye view of the Academic Theater