NARA INSTITUTE of SCIENCE and 2020 TECHNOLOGY GUIDEBOOK



Message from the President



Science and technology are currently facing a revolutionary, global era where rapid change is being seen throughout diverse fields. NAIST has focused on world-leading research in the three fields of information, biological, and materials science, and their interdisciplinary areas since its foundation. We aim to push forward the forefronts of science and technology, actively producing talented researchers and engineers who respond flexibly to developments in today's fast-evolving world. In order to evolve as a leader in graduate education, NAIST recently transformed its educational structure to strengthen existing programs and stimulate interdisciplinary pursuits.

As President, I believe it is important to encourage all faculty, staff, and students to outgrow their limits with a spirit of challenge. NAIST strives to achieve a brighter future for both the local and global community through new scientific discoveries and technological innovations.

Naokazu Yokoya President

About NAIST

NAIST was founded in October 1991 as a Japanese national university consisting solely of graduate schools in the three areas of information science, biological sciences, and materials science to redefine graduate-level education. In April 2018, to push forward the boundaries of advanced science and technology, the three graduate schools were merged to create the Graduate School of Science and Technology, composed of Education Programs in the original three research areas and the four interdisciplinary areas emerging among them. At present, over 1,000 students—roughly 25% from overseas—are supervised by roughly 200 NAIST faculty. With its cutting-edge facilities and a 5 to 1 student-to-faculty ratio, NAIST's world-leading research and education are a direct result of its rich, global environment and supportive infrastructure. Moreover, the outstanding achievements of NAIST's faculty and students are shared world-wide through patents, licenses, spin-off companies, and active exchange with overseas partners. As a result, NAIST has quickly established itself as a world-class research and education center where young research scientists and engineers become tomorrow's global leaders.

NAIST Numbers

NAIST is an institute focused solely on graduate school education based on its research achievements in the leading fields of science and technology.

(As of May 2019)

NAIST Student Enrollment				
Master's	Doctoral	Research students, etc.		
733 305 93				
Total: 1131 (International students : 24%)				

		(As of May 2019)		
NAIST Faculty and Staff				
Executive administration	Faculty	Staff		
8	197	162		
Total: 367 (International faculty and staff : 12%)				

(1 (11 2010)



NAIST' s Guiding Concept: Education through Research

NAIST pursues research and education in an environment of interdisciplinary and international cooperation. Students and researchers have access to world-class facilities in an exciting atmosphere promoting individual achievements, collaboration across traditional research fields, and flexible course curricula.

Research-Focused Environment: NAIST was established without undergraduate programs to allow the faculty to commit themselves towards achieving superior research results to lead their respective fields.

Research-Based Education: Through the research of our accomplished faculty and collaboration with industry and academic partner institutions, NAIST's students learn both in traditional settings and through hands-on experience at the forefronts of science and technology.

Graduate School of Science and Technology

The Graduate School of Science and Technology was established to remove existing barriers between academic fields to form a flexible educational structure where faculty from related areas may come together to perform education at the forefronts science and technology and to introduce an educational system for basic and specialized knowledge to prepare students for studies in diverse areas, and allow students to reach beyond their specializations by utilizing the knowledge and skills they attained in their undergraduate education.

Additionally, in order to meet the ever-changing needs of society and to achieve real-world application, project-based learning and other practical educational projects led by invited researchers and engineers from private industry, etc. are incorporated into the curriculum. The specific objectives for the graduate education programs are:

Master's Course develops human resources with specialized knowledge and training, a wide understanding of related interdisciplinary fields, and the ability to approach issues and phenomena holistically to lead the application and innovation of science and technology throughout society.

Doctoral Course fosters international awareness, self-reliance, and independence and develops researchers and skilled engineers with high ambitions that will advance the boundaries of science and technology taking leading roles throughout global industry, academia and government.

Multidisciplinary-focused Educational Programs

The seven Education Programs of the Graduate School of Science and Technology span the three original fields of research at NAIST (information, biological and materials sciences) and include the developing interdisciplinary fields that emerge independent of traditional academic divisions to pursue current trends in science and technology. All laboratories belong to one or more Education Program and students choose the type of degree the will pursue depending on their studies and the focus of their research.

- Program of Information Science and Engineering
- Program of Computational Biology
- Program of Biological Science
- Program of Bionanotechnology
- Program of Materials Science and Engineering
- Program of Intelligent Cyber-Physical Systems
- Program of Data Science



Graduate School of Science and Technology

Innovative Research and Education Programs

NAIST constantly strives to renew its research and education programs towards producing science and technology researchers and engineers prepared to meet the demands facing tomorrow's global scientific community. These programs are regularly awarded external funding for their wide-ranging benefits.

Top Global University Project

In October 2014, NAIST was one of 37 universities selected to the Top Global University Project funded by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). For a period of ten years, MEXT supports outstanding universities in their efforts to reform institutional governance and collaborate with top universities worldwide in order to strengthen international competitiveness. Through the Top Global University Project, NAIST has committed to enhancing its international graduate courses by creating a double degree scheme, developing a new model for graduate education based on world-class research, reforming institutional governance and strategic agility, creating a campus environment that supports trans-disciplinary education and cultural diversity, and merging its three graduate schools into a single entity to establishing new, flexible research groups.



Program for Promoting the Enhancement of Research Universities

In October 2013, NAIST was one of the 22 universities selected for inclusion in another prestigious MEXT initiative, the Program for Promoting the Enhancement of Research Universities, which aims to improve the research capabilities of universities and research institutions.

Through this program, NAIST continues to conduct frontier-opening research while expanding into new interdisciplinary fields in science and technology. With the establishment of a university-wide strategic research infrastructure, NAIST endeavors to leverage its resources to attain new research materials and facilities necessary for advanced research, to disseminate its achievements and human resources around the globe, and to further expand its global research and education network in order to contribute to the overall advancement of science and technology. Projects being supported through this program include young researcher and technology exchange programs, international researcher and technology exchange programs and the establishment of joint laboratories both domestically and abroad.

NAIST Global Numbers

International Student Enrollment Total: 284

			-		-			(As of Octob	er 2019)
China	70	Bangladesh	6	Senegal	2	Brazil	2	Russia	2
Malaysia	39	Nepal	2	Tanzania	2	Ecuador	1	UK	1
Thailand	34	Afghanistan	1	Mozambique	2	Guatemala	1	Spain	1
Indonesia	28	India	1	Egypt	1	Columbia	1	Bulgaria	1
Philippines	24	Pakistan	1	Gambia	1	Venezuela	1	Belgium	1
Vietnam	20	Mongolia	1	Kenya	1	Mexico	1		
Korea	9	Ethiopia	2	Tunisia	1	Germany	8		
Taiwan	7	Côte d'Ivoire	2	Burkina-Faso	1	France	5		

NAIST Researcher Exchange



NAIST Students Sent Abroad

- Internships
- Language intensive study abroad
- Research collaboration
- International meetings and symposiums, etc.



NAIST's Global Education and Research Network Offices and Laboratories

In order to fully support NAIST's growing network of researchers, alumni and collaborative partners around the globe, NAIST has established international collaborative laboratories on-campus and overseas, and maintains overseas offices.

Currently there are five collaborative laboratories operating to facilitate research pursuits at a level only made possible by the cooperation of talented researchers on an international scale.

Overseas offices are managed to promote education and research collaboration not only with NAIST partner institutions but also with NAIST alumni who are active throughout Asia. Additionally, the offices have become bases for recruiting efforts to ensure the successful recruitment of talented students from various countries.



Double Degree Programs

Double degree programs are established in order to develop these leaders through an organized curriculum focusing on 'international collaborative research ability' and 'global cooperative skills'. Currently NAIST offers double degree programs in the doctoral course with the following 7 partner institutions.

Partner institution	Country/region	Faculty, colleges, and areas	Research areas at NAIST	Admission capacity
University of Malaya	Malaysia	Centre for Research in Biotechnology for Agriculture	Biological science	Limited
National Chiao Tung University	Taiwan	 College of Science College of Electrical and Computer Engineering College of Engineering 	Materials science	Limited
Paul Sabatier University	France	Physics, chemistry and materials science	Materials science	Limited
University of Paris-Saclay	France	 Biology, biochemistry and biotechnology Communication systems Computer science and informatics Earth sustainability/environment Economics Energy management Materials science and engineering Health Physical and chemical sciences Universe sciences 	All divisions	Limited
Sorbonne University	France	Information sciences	Information science	Limited
Ulm University	Germany	Computer science and engineering science	Information science	Limited
Macquarie University	Australia	 Department of Biological Sciences Department of Molecular Sciences Department of Chiropractic Department of Computing Department of Earth and Planetary Sciences School of Engineering Department of Environmental Sciences Department of Mathematics and Statistics Department of Physics and Astronomy 	Information science	Limited

Agreements on Academic Exchange with 108 Overseas Institutions in 30 Countries/Regions (as of October 2019)

Institution Level Agreements

	Gadjah Mada University		RWTH Aachen University	
	Bogor Agricultural University		Justus Liebig University Giessen	
Indonesia	University of Indonesia	Germany	Karlsruhe Institute of Technology	
	Hasanuddin University		University of Regensburg	
	Bandung Institute of Technology		Coburg University of Applied Sciences and Arts	
	Jenderal Soedirman University		Paul Sabatier University	
	Mahidol University		Ecole Polytechnique	
	Chulalongkorn University		Ecole Normale Superieure Paris-Saclay	
Thailand	Kasetsart University		Science and Technology, University of Lille 1	
manana	Chiang Mai University		University Paris-Est Marne-la-Vallee	
	King Mongkut's University of Technology Thonburi	France	Telecom ParisTech	
	Gwangiu Institute of Science and Technology		Sorbonne University	
Korea	Hanbat National University		University of Paris-Saclay	
Norea	Pohang University of Science and Technology		Universite de Rennes 1	
	National Chiao Tung University		FSIGEI FC	
Taiwan	Southern Taiwan University of Science and Technology	Belaium	University of Louvain	
runnan	The National Taiwan University of Science and Technology	Russia	The St. Petersburg State Polytechnical University	
	Institute of Genetics and Developmental Biology, Chinese Academy of Sciences	Hussia	University of Cagliari	
	Tianjin University of Technology	Italy	University of Trento	
China	Liaoning University		University of Edinburgh	
	Soochow University	UK	Department of Statistical Science, University College London	
	Ateneo de Manila University	North		
Philippines	University of the Philippines Diliman	Macedonia	University of Information Science and Technology "St. Paul the Apostle"	
	Hanoi University of Science, Vietnam National University	Kenya	University of Nairobi	
	University of Engineering and Technology, Vietnam National University	Senegal	Cheikh Anta Diop University	
Vietnam	Hue University of Sciences	5	University of California Davis	
	University of Science and Technology of Hanoi		University of Hawaii at Mānoa	
	Posts and Telecommunications Institute of Technology Ho Chi Minh City Campus (PTITHCM)	USA	University of California, San Diego	
	University of Science, Malaysia		Mississippi State University	
	University of Malaya	Canada	Queen's University at Kingston	
Malaysia	University of Technology, Malaysia	Brazil	Universidade Federal de São Paulo	
	Universiti Tunku Abdul Rahman		University of Technology Sydney	
	Universiti Kebangsaan Malaysia	Australia	Macquarie University	
India	Indian Institute of Technology, Bombay	Australia	The University of Newcastle	
india	Indian Institute of Technology, Jodhpur		University of Adelaide	
Bangladesh	Bangladesh University of Engineering and Technology	New Zealand	Unitec Institute of Technology	

School/Department Level Agreements

Informatio	on Science
Indonesia	Faculty of Industrial Technology, Sepuluh Nopember Institute of Technology
Korea	Graduate School of Culture Technology, Department of Industrial Design, Korea Advanced Institute of Science and Technology
	Graduate School of Electronics Engineering, Kyungpook National University
	College of Computer Science and Electronic Engineering, Hunan University
China	Department of Computer Science, City University of Hong Kong
China	School of Computer Science and Information Technology, Northeast Normal University
	School of Information Science and Engineering, Yunnan University
	Institute of Information Technology, Vietnam Academy of Science and Technology
Vietnam	Faculty of Electronics and Telecommunications, Ho Chi Minh City University Of Science, Vietnam National University
	Department of Electronic and Telecommunication Engineering, University of Science and Technology - The University of Danang, Vietnam
India	College of Engineering, Kalinga Institute of Industrial Technology
	Faculty of Engineering and Computer Science, Ulm University
Germany	Department of Informatics, Technical University of Munich
	Department of Electrical and Computer Engineering, Technical University of Munich
Finland	Department of Information Processing Science, Faculty of Science, University of Oulu
	Faculty of Medicine, University of Turku
	Telecom SudParis
France	École Supérieure d'Ingénieurs en Électrotechnique et Électronique (ESIEE) Paris
	École nationale supérieure d'ingénieurs de Caen

Biological Science

China	College of Life Sciences, Nanjing Agricultural University
Vietnam	Institute of Biotechnology, Vietnam Academy of Science and Technology
Bangladesh	School of Health and Life Sciences, North South University
Singapore	Temasek Life Sciences Laboratory Limited
USA	Biotechnology Institute, University of Minnesota
Canada	Faculty of Science, University of British Columbia

Materials Science

Taiwan	Institute of Biophotonics, National Yang-Ming University
China	School of Chemistry and Chemical Engineering, Nanjing University
Vietnam	Institute of Materials Science, Vietnam Academy of Science and Technology
India	Indian Institute of Science Education and Research, Thiruvananthapuram
Singapore	School of Materials Science and Engineering, Nanyang Technological University
Austria	Institute of Solid State Physics, Graz University of Technology
Switzerland	Faculty of Science, University of Zurich
Germany	Faculty of Engineering, RheinMain University of Applied Sciences
Hungary	Doctoral School of Physics, University of Debrecen
	Faculty of Science, Leiden University
Netherlands	Faculty of Electrical Engineering, Mathematics and Computer Science, Delft
	University of Technology
USA	Macromolecular Science & Engineering Program, University of Michigan

Admission Policy

NAIST eagerly promotes admission of students from both Japan and overseas who have strong basic academic capabilities regardless of their previous academic backgrounds.

Additionally, the university actively admits researchers, engineers and others currently working in society with strong enthusiasm for advanced scientific research and clearly defined aspirations for the future.

Flexible Student Acceptance

• NAIST accepts students from various fields who are enthusiastic to learn and conduct research, and researchers/engineers who are active contributors to society

- · Entrance examinations take place 3 times a year
- April and October enrollment
- No comprehensive written exam, but rather a general assessment based on interviews, survey reports, etc.
- Curriculum is developed to suit students from diverse fields (basic and introductory courses, wide-ranging lectures, seminars, problem-based research, etc.)
- Flexible curriculum management (multiple faculty member guidance, exchange of credits from other universities, research guidance counselors, semester system)

Examination, Enrollment and Tuition Fees

			(d) 01 000001 2019)
	Examination	Enrollment	Tuition
Master's and Doctoral Program Students	¥30,000	¥282,000	¥267,900/semester (¥535,800/year)
Research Students	¥9,800	¥84,600	¥29,700/month
Special Research Students (Short-term Exchange Students)	—	—	¥29,700/month

Note: If tuition is revised, the new fees will be applicable.

Scholarships

Japanese Ministry of Education, Culture, Sports, Science & Technology (MEXT) Scholarship

MEXT offers full scholarships to excellent overseas students and researchers to continue their studies in Japan.

NAIST and Private Scholarships, etc.

There are numerous scholarships and grants offered exclusively to international students by NAIST and other public and private institutions.



Financial Support

Admission and Tuition Fee Exemption

International students who are unable to pay enrollment fees or tuition due to financial difficulty may apply for full or partial exemption. (MEXT scholarship students are exempt from both fees.)

Teaching/Research Assistantships

NAIST actively supports students through teaching and research assistantships where they also gain valuable experience in education and research.

Dormitories

Affordable On-campus Housing

All full-time international students are eligible for on-campus housing with free internet access. Housing fees range from ¥10,000 - ¥15,000/ month for single, couple, or family housing.



NAIST Student Life

While carrying out their research in NAIST's state-of-the-art facilities, students also have many opportunities to practice and improve their communication skills to ensure that they will be able to effectively promote their future research and build global ties that are essential in today's global-ly-linked world. Additionally, interaction between all students and also the surrounding Japanese community is encouraged through annual events that involve the entire campus to develop global leaders adept in interpersonal communication and presentations.



Photonic Molecular Science Laboratory students performing research



Biological Science Summer Camp poster presentation



NAIST International Student Workshop presentation



NAIST Open Campus



The annual Yoshikawa (costume) Relay Race

International Activity Highlights

NAIST is actively engaged in globalization efforts to promote its global standing and to enhance its on-campus international environment. Extensive collaboration with prestigious overseas partner institutions serves as a solid foundation for exchanging researchers, staff, and students worldwide each year. NAIST's Division for Global Education, the office leading our globalization initiatives, coordinates events and activities such as those shown here.



Materials science students in the UC Davis-NAIST English and Science Program



"NAIST Tea Time" Global Campus Community Event



International students making soba noodles on the Tamba-Sasayama Excursion



NAIST Faculty Development Program at UC Davis (USA)



NAIST Staff Development Program briefing session



Location

NAIST is located in Ikoma City, in Japan's historic Nara Prefecture. Home of the first official capital of Japan, Nara Prefecture has an incredibly rich history as a center for international trade and relations. In addition to its prolific ancient heritage, Nara Prefecture is also conveniently located in close proximity to Kyoto and Osaka, and just 90 minutes from Kansai International Airport



Kasugataisha Shrine (Nara)

写真提供:春日大社



Nara Park (Nara)

Reaching NAIST from Domestic Airports

NAIST is only 1.5 hours away from the Osaka International Airport and the Kansai International Airport



Campus Map

NAIST's campus is a compact area constructed to facilitate campus-wide research, education and interaction, where students, faculty and staff connect with each other daily. The campus's location close to Kyoto and Osaka allows for easy domestic and international travel.



Contact information

For inquiries concerning:

NAIST Website



https://www.naist.jp/en/

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International Partnerships

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https://bsw3.naist.jp/eng/

Division of Materials Science



http://mswebs.naist.jp/english/

