



National Institute of Technology Kisarazu College

Message from the President

National Institute of Technology, Kisarazu College (Kisarazu KOSEN) is located in Kisarazu City, Chiba Prefecture, where the completion of highway networks to Tokyo and the international airports, Haneda and Narita, provide us a convenient access to domestic and international cities. With a beautiful view of Tokyo Bay from our campus, around 1,100 students majoring in science and engineering in five-years regular course from the age 15 and two-years advanced course, which are equivalent ages to Japanese high school and university.

KOSEN's primary mission is to foster creative and practical engineers, and vocational education is a feature that integrates general and professional education and practical training based on theoretical background. Especially for the globalization of Japanese higher-level education, our mission now is to provide the engineers with intellectual, refined and being-broad mind, liberal and engineering-based spirit to face any challenge, and with a wide perspective, which means thinking globally. Our system is widely admired for its high-level vocational education, and was evaluated both in industrial and academic sectors because of our graduates' success as engineers, managers and researchers for the past half century.

Our academic program for diploma covers five programs of engineering, namely mechanical engineering, electrical electronic engineering, control engineering, information and computer engineering, and civil engineering, together with three advanced bachelor courses of mechanical and electrical, control and information, and civil and environment. Every year about half of our graduates find industrial employment as engineers, while the other half of them transfer to four-year university from the diploma course, and progress to graduated master's program from our advanced course.

In Kisarazu Kosen, we have accepted international students to the third year so far, and recently we have also enhanced short-term student exchanging programs between overseas universities and polytechnics to nurture a diversity environment. In addition to the academic learning, we have also encouraged students to participate in sports and cultural activities as their individuality-building up opportunities.

Among over 120 staffs of Kisarazu KOSEN, many educational and technical members are active in their specialty researches to collaborate with industry and other social services. As compared to most Japanese universities, we have relatively satisfactory instruments and facilities in related fields of engineering. Through Kisarazu KOSEN's activities, we wish to contribute to Japanese society and to have partnership with worldwide organizations.



Kazuo MAENO, Dr.
(Prof. Emeritus of Chiba Univ.)

Characteristics of KOSEN

Regular Course (Associate Degree Program)

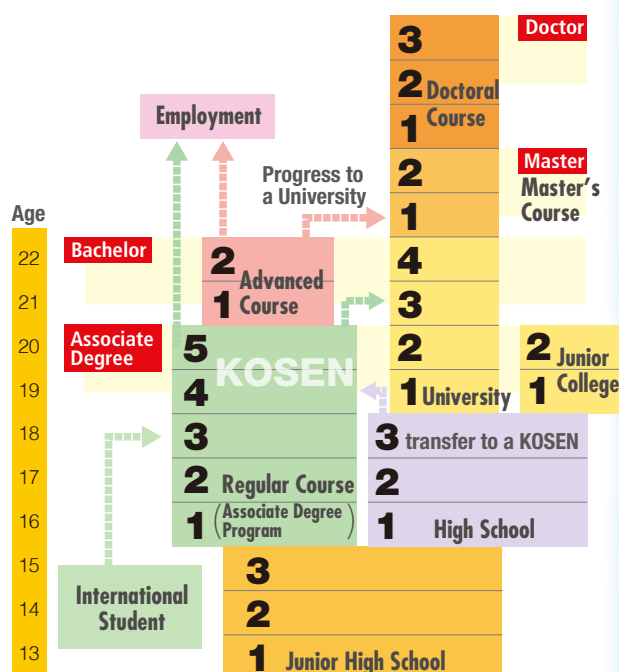
- Five years of consistent engineering education from 15 years old.
- Possibility of continuing further study in the two-year advanced course.
- Curriculum emphasizing scientific experiments, workshop training and practical manufacturing skills.
- Small classes, allowing close attention to students. Detailed teaching and assistance by dedicated teachers.
- Student dorming service.
- Inter-college competitions, such as the Robot Contest, Programming Contest, Design Competition and so on.
- International activities, such as teacher and student exchange (470 International students).
- Accreditation by JABEE as a qualified engineering education program.
- A wide variety of career courses are available after graduation, from employment to advancing to higher level education.
- A very good reputation both in industry and in academia.

Advanced Course (Program for Bachelor Degree)

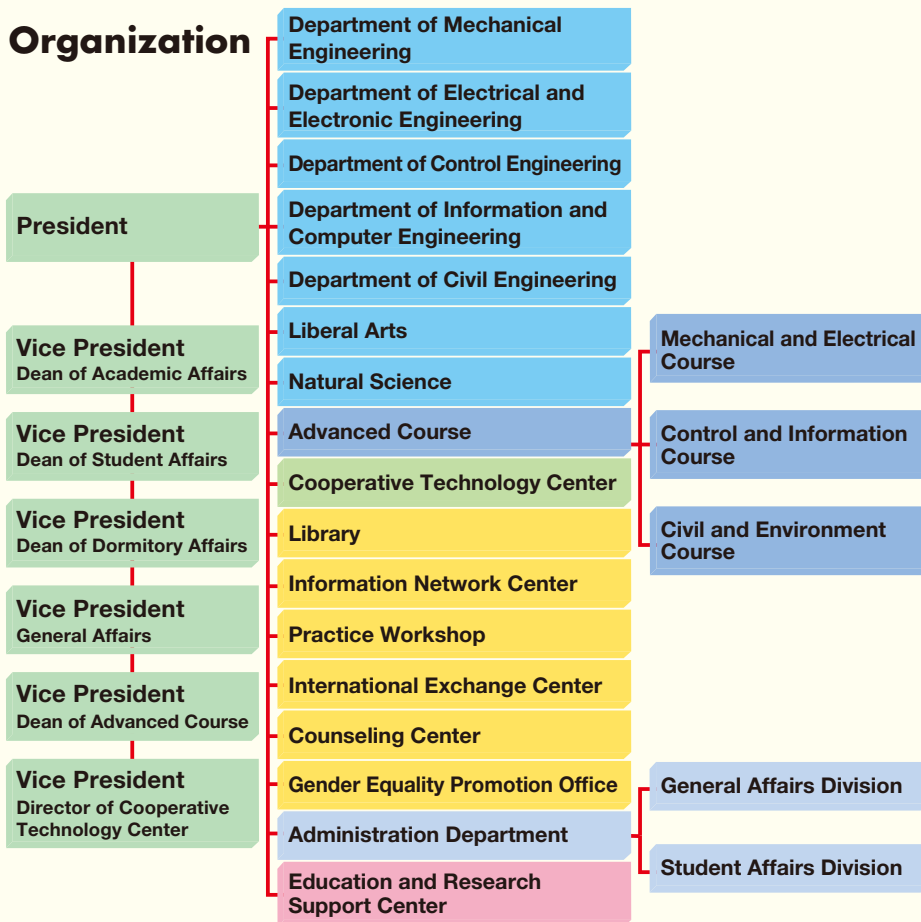
- PBL(Project-Based Learning) on practical engineering tasks.
- A long-term internship (over a month) and COOP (cooperative education).
- Accreditation by JABEE as a qualified engineering education program.

College of Technology System

KOSEN-five-year engineering education from 15 years old. After graduating from KOSEN, most students go to advanced universities or Advanced Courses of Colleges, while the others find employment.



Organization

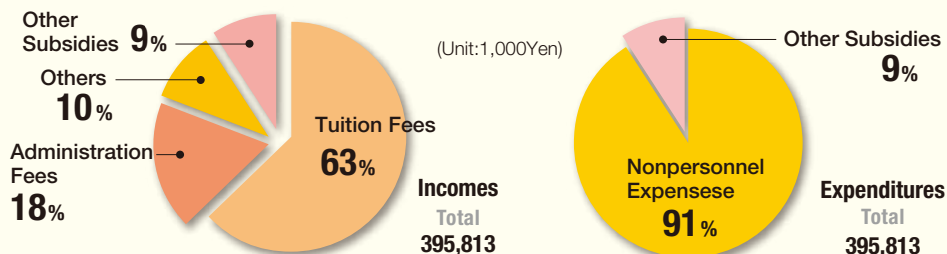


Number of Staff Members

	Present Number	Number by Sex		Number by Age				
		Male	Female	Sixties	Fifties	Forties	Thirties	Twenties
President	1	1		1				
Professor	32	31	1	6	20	6		
Research Professor								
Associate Professor	29	26	3		1	15	13	
Lecturer	7	6	1				6	1
Assistant Professor	6	6					5	1
Subtotal	75	70	5	7	21	21	24	2
Administrative Personnel	30	20	10		9	10	2	9
Technical Personnel	14	12	2		4	6	4	2
Total	119	102	17	7	34	37	30	11

As of April 1, 2015

Incomes & Expenditures



Program accreditation by JABEE

JABEE (Japan Accreditation Board for Engineering Education) Since 2005, JABEE has been a member of the Washington Accord, an agreement which provides a mechanism for mutual recognition between signatory bodies of engineering education accreditation processes. KOSSEN have been eager to get JABEE accreditation in order to engender an internationally recognized quality assurance. Accredited programs of KOSSEN correspond to the level of undergraduate engineering program at a university.

*65 educational programs of 47 KOSSEN (from a total of 51 schools) have obtained JABEE accreditation.

Advanced Course 2nd year
Advanced Course 1st year
5th year
4th year
3rd year
2nd year
1st year

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Regular Course (Associate Degree Program)

Department of Mechanical Engineering

The application field of mechanical engineering has spread to not only conventional factory production but also to various fields, such as information technology, automatic control and electronics dependent on the technical innovation of an advanced information society.

In our mechanical engineering department, the students mainly learn the foundations of designing and manufacturing mechanical hardware. In addition, the curriculum of this department introduces the application of computers and electronics.

In this way, our department aims to train the students to become creative engineers in more fields than ever before, corresponding to the social demands of new technological development.

Subjects »

Machine Design, Kinematics of Machinery, Thermodynamics, Measurement and Instrumentation, Strength of Material, Computational Fluid Dynamics, etc.



Experiment on an Internal Combustion Engine

Department of Electrical and Electronic Engineering

This department offers a wide variety of subjects, including electrical and electronic engineering, control, communications, materials, computers, measurements and energy engineering.

This department offers a wide range of subjects, along with optional subjects.

The curriculum is carefully structured to ensure that all students acquire the necessary skills to use up-to-date techniques.

Subjects »

Electric Circuits, Electronic Circuits, Electromagnetics, Semiconductor Engineering, High Voltage and High Current Engineering, Power Electronics, etc.



Experiment on an Three-Phase Induction Motor

Department of Control Engineering

This department aims to develop a comprehensive knowledge and skills to construct control systems that support the industrialized world.

Because of the interdisciplinary nature of control technology, students study various categories of subjects, such as electric and electronic engineering, mechanical engineering and computer engineering, from fundamentals to applied.

The research themes of the faculty cover many fields including plastic forming, intelligent robots, electronic devices, communication engineering, instrumentation and measurement, vibration control, embedded systems and so on.

Subjects »

Control Engineering, Electronic Circuits, Mechanics of Materials, Computer Technology, Electronics, Actuator Technology, Robotics, etc.



Robot Arm Control Based on Electromyogram

Department of Information and Computer Engineering

This department provides education in both computer hardware and software, including artificial intelligence, systematic programming, design and analysis of data structures, computer architecture and information communication networks.

The curriculum focuses on practice, experiments and research to train future engineers to be able to solve problems creatively and independently.

Subjects »

Programming Language, Intelligent Systems, Signal Processing, Operating Systems, Computer Interfaces, Programming Training, etc.



Hardware Systems Laboratory

Department of Civil Engineering

The curriculum of this department covers issues concerning urbanization and environmental problems, as well as traditional civil engineering.

Civil engineering contributes to industrial development, for example in the construction of bridges, roads, and parks, and to the enrichment of public facilities, which are the basis of civil life. As the field develops, however, more attention is now focused on urban and environmental problems.

In response to this demand, the department aims to train engineers who seriously consider the safety and maintenance of the landscape and environment in constructing public facilities.

Subjects »

Surveying, Structural Mechanics, Hydraulics, Soil Mechanics, Urban Design, Remote Sensing, Bridge Structure, etc.



Field Practice in Surveying

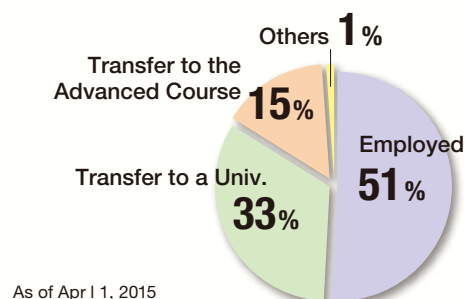
Number of Students

As of April 1, 2015
The numbers in indicate female students/The numbers in indicate foreign students

Dept. of	Classification	Capacity Statutory Total	Present Number																	
			1st			2nd			3rd			4th			5th			Total		
	Mechanical Eng.	200	41	1	43	8	47	5	2	45	2	1	42	2	1	218	18	4		
	Electrical and Electronic Eng.	200	42	4	42	7	49	9	1	40	1	1	37	7	1	210	28	3		
	Control Eng.	200	45	5	43	6	48	1	0	43	4	0	36	3	0	215	19	0		
	Information and Computer Eng.	200	43	5	43	5	51	7	1	38	11	0	37	5	0	212	33	1		
	Civil Eng.	200	42	12	43	16	45	16	2	43	16	2	39	11	1	212	71	5		
	Total	1,000	213	27	214	42	240	38	6	209	34	4	191	28	3	1,067	169	13		

Graduates from the Regular Course

Dept. of	Graduates	Employed	Continue Studies	Others
Mechanical Eng.	36	27	9	0
Electrical and Electronic Eng.	33	14	19	0
Control Eng.	27	15	12	0
Information and Computer Eng.	39	17	22	0
Civil Eng.	38	15	22	1
Total	173	88	84	1



Advanced Course (Program for Bachelor Degree)

Established in 2001, the Advanced Course of Kisarazu KOSEN provides two-year higher level technology education, based on the five-year Regular Course education.

The bachelor degree is obtained by earning the required credits at the Advanced Course and passing the evaluation of the learning outcomes by the National Institution for

Academic Degrees and University Evaluation. This also means the graduates are qualified to go on to graduate school.

This course has three fields: Mechanical and Electrical Course, Control and Information Course, and Civil and Environment Course.

Mechanical and Electrical Course

This advanced course aims at cultivating creative and practical engineers with skills from both the mechanical and electrical fields, who thereby have the flexibility to research and develop new technologies.

Subjects »
Production Engineering, Tribology, Systems Control, Microwave Circuit Engineering, Energy Engineering, etc.

Control and Information Course

This advanced course aims at providing a wide variety of subjects including decision support, software, communication, and mechatronic and control technologies, on the basis of information processing engineering, and aims at training students to be core and leading engineers capable of dealing with creative and practical control systems.

Subjects »
Learning Control Engineering, Control System Engineering, Semiconductor Devices, Human Interface, Simulation and Modeling, etc.

Civil and Environment Course

This advanced course aims at training creative and imaginative engineers who can carry out research and development (R&D) and can flexibly cope with problems related to the environment and urbanization, which have become more serious and widely spread.

Subjects »
Environmental Biotechnology, Applied Structural Engineering, Preservation Engineering, Applied Geotechnical Engineering, Applied Material Engineering, etc.

Number of Students

The numbers in indicate female students indicate foreign students

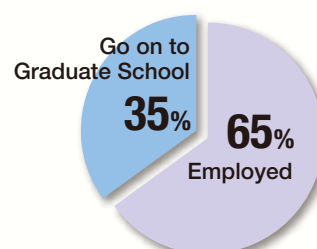
Course	Classification	Capacity Statutory Total	Present Number								
			1st			2nd			Total		
Mechanical and Electrical Course		8	11	1	1	15	0		26	1	1
Control and Information Course		8	10	2	0	15	2		25	4	0
Civil and Environment Course		4	7	0	0	7	0		14	0	0
Total		20	28	3	1	37	2		65	5	1

As of April 1, 2015

Graduates from the Advanced Course

Course	Graduates	Employed	Go on to Graduate School	Others
Mechanical and Electrical Course	13	4	9	0
Control and Information Course	8	8	0	0
Civil and Environment Course	5	5	0	0
Total	26	17	9	0

As of April 1, 2015



Facilities & Equipment



- 1 Administration Building
- 2 General Research Building
- 3 Science Laboratory
- 4 Education Building



Education Building

- 5 Research Building No.1
- 6 Research Building No.2
- 7 Research Building No.3
- 8 Cooperative Technology Center



Cooperative Technology Center

- 14 Gymnasium No.1
- 15 Gymnasium No.2
- 16 Martial Arts Gymnasium
- 17 Swimming Pool
- 18 Extra-Curricular Activity Facility

9 Manufacturing Building/Practice Workshop



Manufacturing Building



Practice Workshop

- 10 Lecture Building A
- 11 Lecture Building B
- 12 Lecture Building C
- 13 Library & Information Technology Center



Library & Information Technology Center



Information Technology Center

19 Students' Hall



Students' Hall

- 20 Boys' Dormitory (Yuhō-Ryō)
- 21 Girls' Dormitory (Nanohana-Ryō)
- 22 Gatekeeper house

Staff & Student

I received my bachelor's degree in electrical engineering from Tribhuvan University, Nepal in 2001 and my masters and doctoral degree in information systems engineering from Osaka Sangyo University, Japan in 2006 and 2009 respectively. I worked as a postdoctoral research associate at Shanghai University, China from 2009 to 2010, and at Nihon University, Japan from 2010 to 2011.

I was in Chiba University, Japan as a JSPS postdoctoral fellow and Assistant Professor from 2011 to 2015 before joining the National Institute of Technology, Kisarazu College in April, 2015. My research area is biological and medical informatics. Currently, I am working on thrombosis (blood clotting) management in patients with cardiovascular diseases, particularly for those who use extracorporeal circulation devices. Thrombus formation is one of the major concerns in extracorporeal circulation systems, such as the hemodialyzer, or the heart-lung machine.

To reduce the risk of thrombus while using these devices, medical personnel routinely administer large amounts of anticoagulant drugs.

However, the excessive use of anticoagulants triggers various side effects including excessive bleeding during injury. My research is focused on the development of a point-of-care device to monitor the risk of thrombosis in real time. I am collaborating with various academic research institutes in Japan and abroad.



With students conducting electronic circuits experiments

Dr. Achyut Sapkota

Our research group develops and applies wastewater treatment technology for the protection of the earth hydrosphere. Currently, we mainly focus on the development of an innovative wastewater treatment system, namely DHS (down-flow hanging sponge) as a core technology. The concept of this technology is based on the well-known biological trickling filter, except the polyurethane sponge packing material, which was originally designed and tested by collaborative research teams. The full-scale DHS system, capable of treating wastewater for a population of 28,000, will be installed at the sewage treatment plant in Agra, India. The demonstration tests will be conducted by the international joint research consortium between India and Japan. Therefore, design and O&M guidelines will be prepared for the dissemination of government-funded technology throughout India and the world. In addition, the establishment of an international R&D center for innovative sewage treatment technologies for agricultural reuse in arid regions is also promoted in collaboration with Egypt-Japan University of Science and Technology (EJUST). We will continue our research on the proposed DHS technology to improve the freshwater environment.



Lecture at a High School in Egypt

Dr. Tsutomu OKUBO

The objective of the Education and Research Support Center is to support educational and research activities in the college and to improve the proficiency level of each staff member.

The center supports the following activities:

1. Students' experiments and practices
2. Graduate research and advanced research
3. The preparation of educational materials
4. Teachers' educational and research activities
5. School events
6. Open classes, contributions to local industries, and cooperative research
7. The maintenance of machines and equipment in laboratories



Explanation in Open Class by Mr. YUJI TATEISHI, Who is Technical Head in this Center

Education and Research Support Center Staff

Hello, everyone. My name is Satoshi Hatori. I am a 5th year student at the National Institute of Technology, Kisarazu College. Let me tell you about my school life.

When I was a child, I liked making things. At that time, I watched "KOSEN ROBOCON" on television. "KOSEN ROBOCON" is a robot competition where many robots made by KOSEN's students from all over the country compete. I also wanted to make cool robots! So, I decided to go to KOSEN.

After admission, I joined a ROBOCON team immediately. At first, I didn't have any skill and knowledge. However, senior students politely taught me many things. Finally, I became able to design cool robots. Furthermore, making robots with my teammates was a good experience for me. Making a robot on a team that is composed of several members from different fields is difficult. However, in doing so, we can make excellent robots packed with various ideas.

I learned a lot of things like the above mentioned through the KOSEN ROBOCON. If you are interested in the KOSEN ROBOCON, please check it out.



We are making new robots each year by team

Satoshi HATORI

Hello everyone, my name is Chung Ming Yao. I come from a unique country, Malaysia. I'm very glad to have been given this golden opportunity to introduce myself. First of all, I'm a 3rd year mechanical engineering student in Kisarazu Kosen. I've been very interested in building with dominos and creating some amazing new things since I was a kid. I want to explore more in the mechanical engineering field and become a prodigious engineer in the future.

Additionally, my classmates and tutor are very kind and friendly. They are always willing to help and guide me whenever I face any problems or troubles in my new life in Japan. Last but not least, by staying in the dormitory, I've had more chances to know more Japanese friends and other people that come from all around the world. They are just like my family in Kisarazu. We always joke around and hang out during the weekends. I feel very blessed that I have the chance to study in such a wonderful place like Kisarazu Kosen. Lastly, I hope I can make more friends and enjoy my college life in Japan.



Foreign students celebrating Hari Raya together

Chung Ming Yao

Hi everyone! My name is Shimizu Lee Yumi. I entered Kisarazu National College of Technology in April of this year as a foreign student from Malaysia. I'm currently studying as a 3rd year student, majoring in civil engineering.

As a foreign student, I was really lucky that things started off pretty smooth for me. With helpful advice and guidance from my lecturers, seniors and friends, it didn't take me long to get used to and soon learn to enjoy my new dorm and college life. As for studies, besides Mathematics and Physics, there are several other major subjects that could turn out to be quite challenging for not only the foreign students but also the local Japanese students. Japanese lessons are provided for foreign students throughout their time spent studying. What makes this college different from the rest is that German lessons are taught as a compulsory subject to all students (elective subject for foreign students).

Just like the local high schools, this college also offers a wide range of extra-curricular activities. I'm currently a member of the dance team.

I will continue my hard work and hopefully graduate happily from this college in a few years time.

Shimizu Lee Yumi

Third year Admission Test For privately funded international students

This new admission system is intended to recruit privately funded students eager to study at KOSEN based on the standard examination, in addition to international students publicly funded by the Japanese government and a foreign government.

Applicants who have completed an academic curriculum equivalent to upper secondary school enter the third year of KOSEN (equivalent to the third year of high school) at age 18 in Japan's school system.

For more details, please refer to this website: <http://www.kosen-k.go.jp/english/index.html>

International Exchanges

There are two types of international students in Kisarazu Kosen.

1. Third grade enrollment students

International students enter KOSEN in their third year after they finish preparatory school.

2. Short-term international students based on agreement.

International Exchange Programs

PASCH

In 2008, Kisarazu KOSEN became the first school in Japan to be authorized as a PASCH (partner school) by the German government. The PASCH Program is an international exchange program sponsored by the German government for schools that offer German language classes.



German Exchange Program

German Exchange Program

For the biggest event of the PASCH Program, Kisarazu KOSEN sends students to Germany for three weeks of German language lessons during summer vacation. The German government bears most of the expenses.

International German Youth Camps

This program aims for students from Asian countries to be immersed in the German language under PASCH. The German government bears most of the expenses.

Exchanges with the National United University in Taiwan

We have implemented 3-week internship exchanges.

Exchanges with the Nanyang Polytechnic in Singapore

We have implemented three-month student acceptance and one-month student dispatch.

Exchanges with the Sekolah-Sultan-Alam-Shah in Malaysia

We have implemented 1-week exchanges.

Exchanges with the Heinrich-Hertz-Berfuskolleg in Germany

We have implemented 1-2-week exchanges.



Exchange with NYP

Scholarships

Privately financed international students can apply for scholarships provided by the Japan Student Services Organization (JASSO).

Number of Students who participated in Exchange Programs

School Year	2010	2011	2012	2013	2014
German Exchange Program	3	4	3	2	3
International German Youth Camps in Asia	10	25	2	7	3
Taiwan Exchange Program	9	20	16	14	12
Singapore Exchange Program				3	4
International conference / International symposium		6	6	15	11

Number of Foreign Students

As of April 1, 2015
The numbers in indicate female students

Dept. of Nation	Mechanical Eng.			Electrical and Electronic Eng.			Control Eng.			Information and Computer Eng.			Civil Eng.			Advanced Course		Total
	3rd	4th	5th	3rd	4th	5th	3rd	4th	5th	3rd	4th	5th	3rd	4th	5th	1st	2nd	
Malaysia	1		1		1	1	1						2	1	1	1		9
Ethiopia									1									1
Cambodia														1				1
Indonesia	1																	1
Vietnam										1								1
Taiwan																1		1
Total	2	1		1	1	1	1			1			2	1	1	1	1	14

List of Partnership Agreements

We are proactively pursuing cooperation with domestic and foreign universities and academic organizations, and non-academic organizations such as self-governing bodies and the like, with the aim of regional development and nurturing personnel for an international market.

Domestic Partner	Agreement date (renewal date)	Agreement contents
Waseda University Graduate School of Information, Production and Systems	May 26th, 2015	Memorandum regarding admission by recommendation, concluded in 2005
Yamagata University, Faculty of Engineering	March 4th, 2009	Agreement regarding education and research exchange
Chiba University	February 16th, 2010	Comprehensive agreement regarding education, research and contributions to society
Japan Advanced Institute of Science and Technology	December 8th, 2014	Agreement regarding admission by recommendation, concluded in 2008
Kisarazu City	February 6th, 2015	Agreement regarding comprehensive cooperation
Chiba Institute of Technology	February 24th, 2015	Agreement regarding comprehensive cooperation
Chiba University, Graduate School & Faculty of Engineering	March 24th, 2015	Agreement regarding education and research exchange
Kisarazu City Education Department	July 6th, 2015	Agreement regarding comprehensive cooperation
Chiba Bank, Ltd.	October 27th, 2015	Agreement regarding comprehensive cooperation
Graduate School of Media Design, Keio University	November 10th, 2015	Agreement regarding comprehensive cooperation

International Partner	Agreement date (renewal date)	Agreement contents
The National United University (Taiwan)	December 13th, 2006	Agreement regarding mutual exchange of educational and research activities
Sekolah Sultan Alam Shah (Malaysia)	September 17th, 2014	Cooperative Exchange Agreement
Goethe Institut (Germany)	December 4th, 2014	Partner Agreement for building the future, concluded in 2008
Nanyang Polytechnic (Singapore)	August 5th, 2015	Cooperative Exchange Agreement
Herinrich-Hertz-Berufskolleg (Germany)	September 28th, 2015	Partnership agreement

Student Dormitory



Nanohana-Ryo for female students

Dormitory Name	Yuho-Ryo Nanohana-Ryo
Capacity	313 male students 60 female students
Amenities	Living quarters, Common rooms, Cooking rooms, Laundry rooms, Dining Hall, Bathroom, Office rooms, etc.
Monthly Dormitory Fee	¥700 (¥800: single room)
Monthly Charge for Board	about ¥44,000

Kisarazu KOSEN provides a dormitory room for students who cannot commute to school because of long distance. International students are also welcome at the dormitory. Each international student is assigned a tutor who is in same class and lives at the dormitory. Teachers or staff stay throughout the night in the dormitory and look after the students.

Further, the dormitory for female students has special security features such as an electronic door gate, a security camera and an alarm.

Dormitories have catering facilities which provide meals for both domestic and international students. They are not, however, designed for Islamic students or vegetarians. Therefore, each dormitory has made communal kitchen-dining facilities available for these international students.

During school vacation, international students are able to stay in the dormitory and use these facilities.

Students will quickly adjust to living in a dormitory, increasing their sense of cooperation and independence and enjoying their dormitory life.



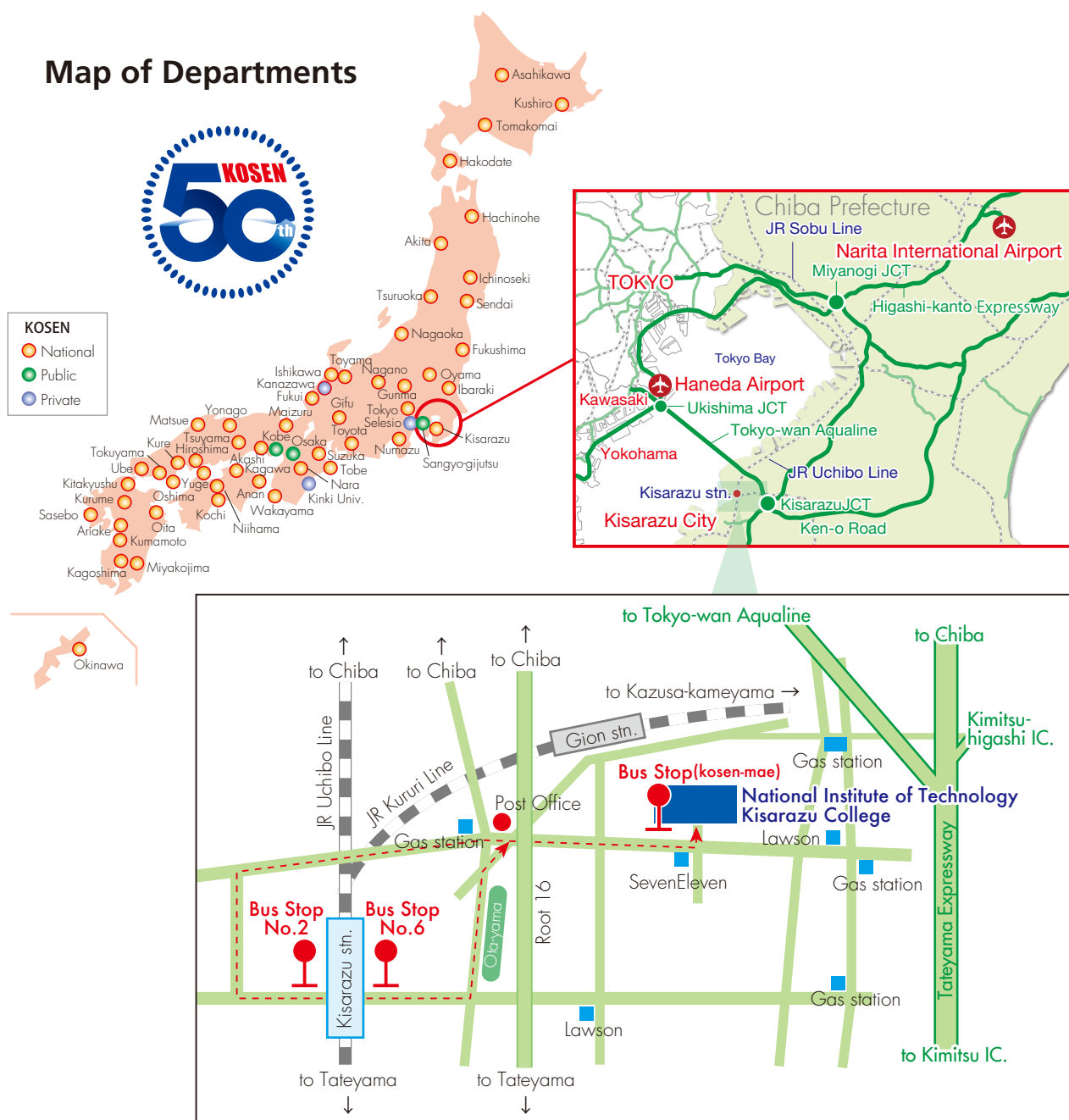
Yuho-Ryo for male students

ACCESS 15 minutes from Kisarazu Station by bus

Access to Kisarazu Station

From Tokyo Station	55min (JR Limited Express) 85min (JR Rapid Train) 60min (Highway Bus)
From Haneda Airport	40min (Highway Bus)
From Narita International Airport	100min (Highway Bus) 2hours (JR Train)
From Yokohama Station	60min (Highway Bus)

Map of Departments



National Institute of Technology Kisarazu College

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