Located in the northern part of Ibaraki Prefecture, Hitachi City is the leading core city in the prefecture. With five beautiful swimming beaches facing the Pacific Ocean to the east and the gentle mountains of the Abukuma Mountain Range to the west, Hitachi is richly endowed with nature and well known as a major cherry blossom-viewing spot. With streets extending from Hitachi Station lined with modern shops, the downtown area and suburbs are home to such prominent companies as Hitachi, Ltd., as well as public research institutions. The vista of the city that includes the campus of Ibaraki University reflects the image of a high-tech city. The city's proximity to Tokyo, which makes a day-trip to Tokyo possible (90 minutes to Ueno Station by Super Hitachi Limited Express on the JR Joban Line), is also a major advantage. In addition to educational and research facilities, including a library, Center for Information Technology, and the College of Engineering, the Hitachi Campus has Venture Business Laboratory and Center for Conperting P&D ellowing and the college of Engineering the Hitachi Campus has Venture Business Laboratory and Center

for Cooperative R&D, allowing students to enjoy the privilege of feeling closer to research on most advanced technologies. Trees line all the

Ami Campus

Ibaraki Prefecture

Transportation to Campus

● Joban Expressway

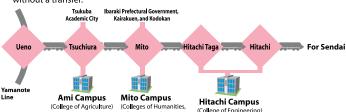
About two hours by JR Highway Bus from Yaesu Gate at Tokyo Station. There are a number of bus stops in the city. Direct bus service to the airports at Narita and Haneda is also available.

facilities on campus, thus allowing people on campus to enjoy delicately changing seasons.



●JR Joban Line (Super Hitachi Limited Express)

The Super Hitachi train connects Ibaraki University to downtown Tokyo without a transfer.





Access Map

A From JR Hitachi Station

From JR Hitachi Station (central exit), take a central line bus of the Hitachi Dentetsu Transportation Service bound for "Heiwadai" (bus No. 3) or "Kosakidai" (bus No. 4) and get off at the "Ibadai-

B From JR Hitachi Taga Station

From JR Hitachi Taga Station, take a central line bus of the Hitachi Dentetsu Transportation Service bound for "Hitachi Station" (bus No. 3 or 4) and get off at the "Ibadai-mae" bus stop.

Ibaraki University, College of Engineering

4-12-1 Nakanarusawa, Hitachi, Ibaraki 316-8511, Japan Phone:+81-294-38-5004

http://www.eng.ibaraki.ac.jp/





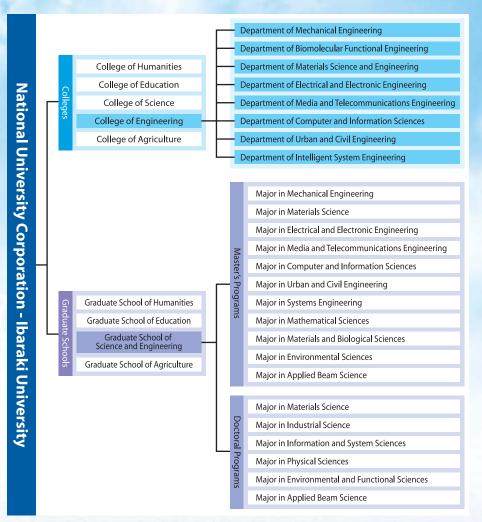
Implementing Advanced Science and Technology in Harmony with People and the Natural Environment

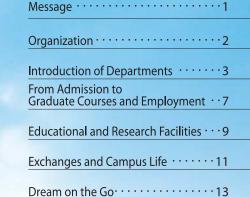
Since the founding of its predecessor, Taga Technical College, the College of Engineering at Ibaraki University is backed by tradition of nearly 70 years. The history of Japan's postwar growth and development as a technology-based country also encompasses that of Ibaraki University's education and research in the field of science and technology. We are proud that, during the past seven decades, the University has sent out to the world many engineers and researchers who have contributed to modern scientific technologies. The College of Engineering, being proud and confident of its glorious history and yet transforming itself in line with the changing demands of the age, has never stopped growing.

Given the advances made in science and technology and the rapid dissemination of leading-edge technologies these days, the University must now foster human resources who support next-generation technology and are capable of discerning its future development in depth, as well as creating and disseminating unique scientific technologies that ensure harmony between people and the natural environment. The College of Engineering at Ibaraki University is determined to make ceaseless headway as a basis to create scientific technology that blazes a new path to the future with a global view.

The College of Engineering at Ibaraki University is looking for students who possess the following traits:

- Have basic academic and communications skills, and desire to master professional scientific technology
- Have interest in social involvement including international activities, wish to acquire professional knowledge of scientific technology, and enhance logical thinking
- Aspire to become professionals with sophisticated engineering expertise in order to help create a sustainable society

























Mechanical Engineering

www.biochem.ibaraki.ac.ip

"Monotsukuri", that supports the ICT and Sustainable Society

Department of Materials Science and Engineering

www.mse.ibaraki.ac.jp

aircraft. The department offers the

students a curriculum that includes

environmental studies, nanotechnology,

and computational materials science. The

graduates of the department are playing

important roles as materials technical

expert and leaders in "Monotsukuri".



Creating Ubiquitous Society Expands Your Dreams

Department of Electrical and Electronic Engineering

www.ee.ibaraki.ac.ip



To train students in new manufacturing technologies for developing machines that coexist with humans, such as lowemission engines and biocompatible products, the Department of Mechanical Engineering trains 1st year students in mechanical engineering fundamentals and 2nd and 3rd year students in advanced technical knowledge. Students are also given training to enhance their physical mindedness and application skills to develop them into international engineers thorough Manufacturing Practice II that supply creative experience in manufacturing. 4th year students engage in graduation study in cutting-edge researches such as new technology of numerical fluid analysis, structural analysis technology, highlyefficient engines, next-generation fuels, medical and welfare apparatus, and functional materials. The educational program has been accredited as an Engineering Program Leading to Bachelor's Degree (2006-2010) by the Japan Accreditation Board for Engineering Education (JABEE).



Main Class Subjects

Dynamics of Machinery, Strength of Materials, Fluid Dynamics Design Engineering of Mechanical Machine, Control Engineering, Mechatronics, New Materials, Biomechanical Engineering, Heat Engine, Manufacturing Practice, Experiments in Mechanical Engineering,



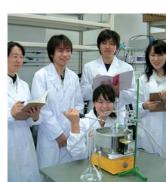
Discovering Dreams and Working to make them Reality

Takamasa Kondo (From Fukushima Pref.) 2nd year

In the Department of Mechanical

Engineering we comprehensively ment, design, production, others aspects related to manufacturing. During the first three years we study a wide range of subjects to specialized courses to allow you to discover the field you are interested in. In the Manufacturing Practice I and II during the 2nd year we receive machining technology instruction and skills training and work in teams to produce original machines. This allows us to experience the joy and difficulty of manufacturing and polish the presentation skills we need to communicate our ideas and opinions. In addition, many class subjects make us to raise our awareness of environmental problems.

Would you like to discuss with dreams for the future at the Department of Mechanical Engineering? The Department of Biomolecular Functional Engineering seeks to nurture researchers and engineers who can explore the complex functions of living organisms at molecular level and apply their expertise to diverse industrial fields. The department offers basic education, such as chemistry, physics, and biology in the 1st and 2nd years. From the 3rd year onwards, students are divided into the applied functional chemistry course and bioelectronic information course, and provided with education programs based on curricula that allow them to acquire more specialized knowledge and expertise about technology. The department is looking for students having a strong will to learn about the various functions of biomolecules and apply them to engineering.



Main Class Subjects

Basic Physical Chemistry Basic Molecular Biology. Instrument Analysis Chemistry. Polymer Functional Science, Simulation, Protein Engineering, Biomolecular Process, Bioinformatics and Applied Electronics I and II



Infinite Possibilities in

Hitomi Takeuchi



a New Department

(From Iwate Pref.)3rd year

The Department of Biomolecular Functional Engineering is a new department that was established in 2005. We are learning a variety as biotechnology, based on a fundamental understanding of chemistry, physics, and biology. can really expand your potential. In addition, since we can take subjects we did not study in high school from the introductory study physics, for example, have the comfort of knowing when we study them here. Now, which a grasp of the fundamentals, I am gaining knowledge and skills through biology and chemistry experiments as a group, which increases everyone's knowledge and strengthens our friendships. Come join us to open up unlimited possibilities.



Engieers

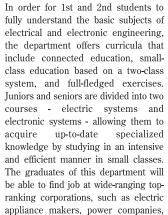
(From Indonesia) 3rd year

Science and Engineering was established in 2005 to give students a deep and enjoyable with Japanese friends?" But the instructors have provided friendly guidance and my help me. This department gives you much knowledge and many skills that we can to join us in aiming to be "high-tech manufacturing"



For "High-tech Manufacturing"

Materials are the stuff things around us are made from. The to allow us to directly apply we obtain from the lectures. As a foreign student, my first concern was, "Will I be able to keep up with the classes? Will I be able to associate well Japanese friends are kind and apply in a wide range of fields in the future, so I invite you



auto manufacturers, and in information

industries.



Main Class Subjects

Control Theory, Semiconductor Devices. Telecommunication Engineering Application of Electromagnetic Waves, Plasma Engineering, Programming, Power Electronics, Optical Information Electronics, Large Scale Integrated Circuit, Electric Machinery, Digital Signal Processing, High Voltage Engineering



Learning the Essence of Electrical and Electronic Engineering

Shuta Kumagai (From Miyagi Pref.) 3rd year

engineering technology is used in a wide range of fields from the home appliances robotics. This makes electrical and electronic engineering one of the important society and the Department of Electrical and Electronic Engineering gives students the opportunity to learn about the fundamentals to applications. The first two years the program is divided into an Electronics Course to allow level of specialized knowledge. Come be part of the exciting Department of Electrical and acquire a wide range of knowledge to expand the

Main Class Subjects

Ecomaterials, Materials Microstructure, Corpuscular Beam Applied Structural Analysis, Strength of Materials, Crystal Plasticity, Solid State Physics, Materials Science for Electronic and

Observing the nano and micro worlds through

Information Devices. Computational Materials Science Ceramic Materials, Nanomaterials Engineering,





www.dmt.ibaraki.ac.jp

sport games are played on personal computers or mobile phones. To realize such multimedia communication, both communication and information technologies are necessary. For instance, to play motion pictures on personal computers we need broadband communication lines, storage with large capacity and software. As consumers request multimedia communication with low cost and high quality, the demand for engineers whose strength lies in those technologies has become great. The mission of the Department of Media and Telecommunications Engineering is to help our students to acquire comprehensive knowledge of those technologies and we believe that they will contribute technological innovation in those fields.



Exercise using a compute

Main Class Subjects

Information Physics, Electromagnetism, Electric Circuit Theory, Semiconductor Electronics, Computer Systems, Programming, Optical Communications, Digital Transmission and Systems, Communications Networks, Laser Engineering, Media Devices.

Man-machine Systems Engineering. Biological and Artificial Information Processing

Today live programs like concerts or



Want to Do

Naohumi Ueta (From Ibaraki Pref.) 4th year

The Department of Media and opportunity to engage in a wide Braille that is the pattern of dots curriculum, but that is just the place where you can find your wishes and freely realize them. I have any visions of what they should be in the future and those who already have rough visions can seize an opportunity to make chances are equally given to us and you may find your own chances in your daily life.

Contemporary society would not be conceivable without computers and related networks. Both are now indispensable in wide-ranging fields such as distribution, financing, and manufacturing. The students of the Department of Computer and Information Sciences must study and research broad-ranging fields to become "professional computer and network experts." In our lectures, exercises, experiments, and graduation research projects, which are centered on academic basics, the students acquire not only cuttingedge knowledge but also ways of blazing the cutting edge of everevolving information technology. Therefore, people who want to enroll in this department are expected to possess a disposition toward logical thought and expression.



Main Class Subjects

Programming. Computer Architecture, OS, Compiler, Algorithms and Data Structures, Program Design, Software Design Practice, CG. Information Networks. Information Security

Professional Computer and Network Experts

Department of Computer and Information Sciences

www.cis.ibaraki.ac.ip



oracticums, and laboratories.

reports and exercise problems required by the Department makes it hard, but doing them

Ensuring Urban Safety, Environment, and Comfort

Department of Urban and Civil Engineering

www.civil.ibaraki.ac.ip



Computer x Mechanism = Realizing "Dream Technology"

Department of Intelligent System Engineering

www.ise.ibaraki.ac.ip



Why don't you help re-create our environment? The Department of Urban and Civil Engineering. focusing on creating and regenerating social and urban environment for a bright future, is committed to fostering civil engineers with a wider sense of balance. It offers diverse subjects encompassing broad-ranging fields of interest, as well as field studies, lectures by experts in the working world, internships allowing students to master the latest issues, knowledge, and technologies. 4th **Information Engineering** year students will grapple with graduation research, working one-onone with teachers while getting detailed supervision. Let's build cities and societies of the future together!



Main Class Subjects

Structural Engineering, Coastal Engineering, Foundation Engineering and Environmental Geotechnics. Transportation Planning. Global Environment Engineering Urban and Regional Engineering Landscape Engineering, Remote Sensing and Environment Measurement

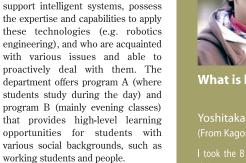


Civil Engineering

(From Ibaraki Pref.) 4th year

and Civil Engineering you fundamentals and specialized knowledge acquired through laboratories and exercises, and while doing this I came along coastal areas, which is enthusiastically doing my belief that it will be useful to society in the future.







Scene of students studying in an 'intelligent

Main Class Subjects

Introduction to Intelligent Systems, Complex Mechanical Systems. Micro/Nano Systems, Applied Information Systems, Computer Systems, Programming Exercises, Robotics, Control Engineering, Visual Information Processing



What is knowledge?



By establishing a flexible educational system allowing students to acquire highly sophisticated expertise, resourceful ideas, and deep insight, the College of Engineering supports your day-to-day research and study, as well as future challenges.

Admission to graduate school



University entrance



Examination for Admission in 3rd Year

For people who want to enter university after graduating from a junior college or technical college, or those who wish to transfer to the College of Engineering at Ibaraki University from other universities, examinations for admission in the 3rd vear are held

Selection by recommendation: May

For students who want to change departments or courses after admission, we may hold examinations for admission to transfer classes or courses. (October to December)

Diversified Entrance Examination Choices To welcome students with diverse educational backgrounds, the College of Engineering at Ibaraki University is prepared to offer, in addition to the general selection method, special selection methods as follows: **General Selection** Individual scholastic achievement test (first period): February

(second period): March **Special Selection**

Admission by recommendation: November Special selection for working people: November Special selection for expatriate Japanese students: November and February Special selection for privately-financed

overseas students: February

Hitachi Campus

Mito Campus Program B students study at the Hitachi Campus from the freshmen year.

General selection: June **Examinations for Transfer Classes and Courses**

Graduation

Graduation Research

4th year students conduct research using their knowledge acquired at the university and complete a graduation thesis.

Diverse Learning Choices

3rd year

- Students may take courses outside of their major and courses from other universities and colleges that are signatories to the Credit Recognition Agreement
- Students may take subjects offered by other departments or nearby universities with whom credit is transferable.
- We offer an overseas education program through which our students can study at overseas universities, such as the University of Alabama in the U.S., Chungbuk National University in Korea, and Xi'an Jiaotong University in China, with whom we have an academic exchange agreement. Please see "Exchanges and Campus Life" on page 11 for more information on transferable credit and the academic exchange agreement.
- Using our internship system offered during summer recess, students will be able to experience business practices at corporations.

Master's program **Doctoral program**

Employment

We have five times as many job offers as iob seekers and most of our graduates are employed by the companies that they target. For more information, see the pamphlets of each department.

Entrance Examination for Graduate Schools

To acquire advanced and specialized knowledge, more students are entering master's programs after graduating from the university. Our graduate schools provide master's programs that confer a master's degree and doctoral programs for those seeking to acquire higher education and obtain a doctorate

Grade-skipping Entrance Examination for Master's Programs

January in the 3rd year

Selection by recommendation: July in the 4th year General selection: August in the 4th year Special selection for working people: August Special selection for overseas students: August

General selection: January in the 4th year Special selection for working people: January Special selection for overseas students: January

Degrees, Licenses, and **Qualifications**

Students can receive bachelor's, master's, and doctor's degrees in engineering satisfying the course requirements for graduation. In addition, taking educational instruction courses will qualify students of all majors to receive the Senior High School Teaching License Level 1 (Engineering). Further, graduates are exempt from being required to take the Professional Engineer Preliminary Examination (Engineering Section). Also, after obtaining practical experience for a set time after graduation will qualify graduates to sit for licensing exams for Safety Manager and other licenses.

Certification and Qualifications You Can Earn

Common to all

Certification for consulting engineer, safety manager, boiler and turbine licensed engineer, and first-class high-school teacher (specialized in industry)

Class A hazardous materials officer

Licensed electrical engineer

CCNA (Cisco Certified Network Associate) and first-class commercial radiotelephone

Land surveyor, water technical manager, construction managing engineer. construction machine managing engineer, concrete engineer, chief concrete engineer, concrete maintenance engineer and licensed architect and builder

> Some certifications or qualifications may require business experience.

Hitachi Campus Educational facilities

N8, N9 Extracurricular Activity and Sports Facilities

Facilities include athletic fields, tennis courts, a gymnasium, martial arts hall, and Japanese archery range for use for physical education classes and club activities.



S5 Manufacturing Education & Research Support Lab

A wide range of machine tools is available for producing the parts required by students for practical training and research. In addition, as part of the creative manufacturing education, students participate in design contest and robot competitions to give form to their ideas.



E5 Center for Information Technology

The center provides educational computing environment that includes various servers, specialized workstations, and personal computers, and it also operates the campus information network. The computers in the open study rooms can be used late into the night.



E4 Library

The approximately 880,000 volumes housed by Ibaraki University can be searched using an online catalog on the University's website. Students can also quickly obtain the publications, documents, and information they need using CD-ROM online searches or through mutual cooperation among university libraries nationwide.



N5 Center for Cooperative Research & Development

The objective of the Center is contribution to the advancement of the educational and research activities of Ibaraki University and promotion of technical education in local communities by promoting joint R&D with private enterprises and other organizations.



Bldg. N8 (Extracurricular Activities Shared Facility)



N5 Venture Business Laboratory (VBL)

This Laboratory promotes the innovative R&D that becomes the seeds for venture businesses while also developing graduate students and young researchers with advanced specialized abilities and the spirit of venture businesspeople.



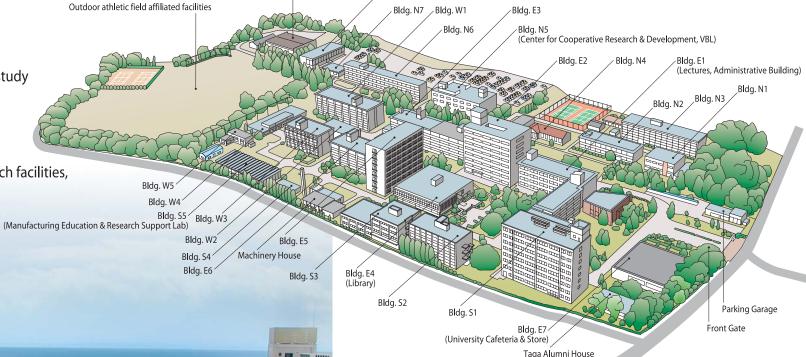


Hitachi campus

The Hitachi Campus, where students of the College of Engineering study from their 2nd year, offers diverse sports and welfare facilities such as the University Cooperative Union, in addition to facilities for conducting specialized research and learning about technologies.

Along with the nearby beaches, mountains, and world-class high-tech facilities,

the Hitachi Campus offers a most stimulating environment.



Departments

Department of Mechanical Engineering · · · · · Bldg. W1, E5, W2, W4, W5

Department of Biomolecular Functional Engineering · · · · · Bldg. N2, N6

Department of Materials Science and Engineering · · · · · · Bldg. W3

Department of Electrical and Electronic Engineering · · · · · · · · Bldg. E2, E3, E6

Department of Media and Telecommunications Engineering · · · · Bldg. E3, E5, E6, S1

Department of Computer and Information Sciences · · · · · Bldg. S1

Department of Urban

and Civil Engineering · · · · · · · · · · · Bldg. S2, S3

Department of

Intelligent System Engineering · · · · · · Bldg. E2, E3

Others

Center for Information Technology · · · · · · · · Bldg. E5

Administration Office · · · · · · · · · Bldg. E1





E1 Scene of a lecture

Regular lectures are given in this building. It features a classroom that can provide remote online education through a network connected to each campus.



E7 University Cafeteria & Store (Co-op)

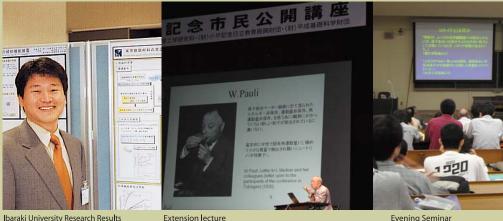
Run by the University Cooperative Union, this welfare facility includes a service shop selling books, stationery, lunches, and tickets, and a cafeteria.



In cooperation with universities worldwide, the College of Engineering promotes educational institutions. While satisfying the increasingly complex requirements to foster engineers and researchers who pursue more prosperous human life.

exchanges with local communities and of the modern age, it will continue



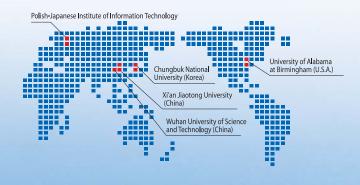




Scene at Ibaraki Christian University

International Exchanges

The Faculty of Engineering enjoys strong ties with the University of Alabama at Birmingham in the U.S., Chungbuk National University in Korea, and Xi'an Jiaotong University in China through an academic exchange agreement under which we accommodate their students and researchers, while dispatching our students to their schools. At the Faculty of Engineering, there are about 100 overseas students from China, Malaysia, Taiwan, and Korea at all times.



ersary of establish

(May 31)

Entrance ceremony and orientation

Start of first semester

Regular health checkup



Exchange with the Local Community

Evening seminars invite local researchers as speakers to encourage attendance by residents to promote interaction with the local community. There are also special introductory level lectures offered for working people.

The regional feature of having many research organizations and private companies involved in advanced technologies is utilized to conduct many joint research projects. Visiting professors are invited from the Hitachi Research Laboratory of Hitachi Ltd., Japan Atomic Energy Agency, NTT, National Institute of Advanced Industrial Science and Technology, and other organizations. These organizations also provide educational and research opportunities to graduate students through an affiliated graduate school system.



Corporatization Promotional Exchange at the Hitachi Regional Technical Support Center

New encounters and many experiences await you at the Hitachi Campus. Technical internship at enterprises **Entrance examination for** master's programs First-semester final examina doctoral programs Summer holidays

Start of second semester

Hitachi Research Institute, Hitachi, I td

Exchange with Educational Institutions

The University and the Ibaraki Christian University, University of Tsukuba, Utsunomiya University, Fukushima University, Ibaraki National College of Technology, and Fukushima National College of Technology have concluded a mutual credit recognition agreement whereby some of the courses offered by the other universities and colleges are mutually recognized for credit by the other universities and colleges in an effort to achieve broad human education. The interaction between humanities and science students in particular has been praised as an innovative experiment. Another activity actively pursued by the College of Engineering to raise the level of education in the local community is holding get-togethers and offering extension classes for high schools and colleges

> Second-semester final examination Graduate research presentation Master's thesis and doctorate dissertation committee **Entrance examination**

Graduation ceremon Spring holidays

Study and Living Information School Expenses and Scholarship

School expenses

Entrance fee: 282,000 yen (141,000 yen for Program B) Tuition: 535,800 yen/year (267,900 yen for Program B)

Entrance fee and tuition exemption system

There is an entrance fee and tuition exemption system under which students who have difficulties in paying the entrance fees for special reasons and those of good academic standing who find it difficult to pay the tuitions for economic or other special reasons will be exempt, subject to our assessment, from payment of the full or half the entrance fee or tuition.

Scholarship system

12

The Japan Student Services Organization offers a scholarship system available at Ibaraki University for students of outstanding character, good academic standing, and good health who find it difficult to enter the school for economic reasons.

First-class Scholarship (interest-free loan)

Monthly loan amount: 45,000 yen for live-at-home students and 51,000 yen for others

Scholarship ("Kibo" Plan 21) (interest-bearing loan)

Monthly loan amounts: 30,000 yen, 50,000 yen, 80,000 yen, or 100,000 yen as requested (The loan amounts above are for fiscal 2007.)

Health Management and Counseling Room for Students

Our health-care room provides regular health checkups as well as medical treatment for injuries and sickness. In addition, our full-time staffers provide counseling on students' mental and physical well-being, nutrition, and other matters.

Welfare Facility

Exchange party with

overseas students

University Cooperative Union

This facility is open from 9:00 a.m. through 7:30 p.m. and sells books and daily necessities for your college life. It also has a cafeteria serving hot meals.

Dormitory

The Koyo Dormitory is located a 15-minute walk from the College of Engineering and features 168 individual rooms (room fee of ¥4,300 plus utilities) in which students can stay after a check to verify a student's qualification to stay there

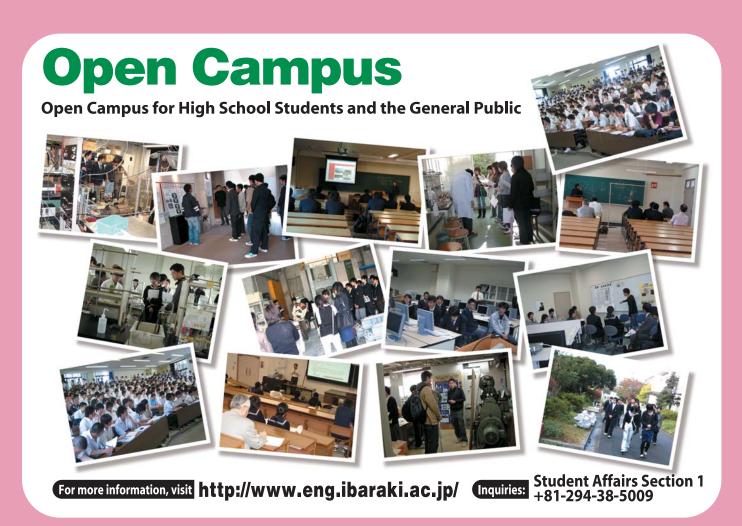
11

Chungbuk National University

Dream on the Go







13



Ibaraki University Racing

The Formula-SAE Club made its debut at the 3rd Student Formula SAE Competition of Japan under the team name of "Ibaraki University Racing."

What is the Student Formula SAE Competition of Japan?

Hosted by the Society of Automotive Engineers of Japan (JSAE), this is a competitive event inwhich students design, modify, and manufacture formula-style race cars under the theme of 'monotsukuri.'









IUTE-01 Vehicle Specifications

Wheelbase/tread (Fr/Rr): 1,685mm/(1,300mm/1,360mm)

Min. ground clearance: 50mm

Body weight (dry weight): 320kg

Brakes: F&R: Outboard; Caliper: One-side braking with single piston **Suspension type: F&R:** Different length A arm double wishbone

Tire wheels: Bridgestone/13 inch

Engine: Honda CBR600RR (Race base model)

Total displacement: 599 cc

Transmission : Six-speed return (1-down, 5-up)

Drive system: MR chain drive **Shifter:** Electric sequential **Fuel tank capacity:** 4.05 liters

14