Located in the northern part of Ibaraki Prefecture, Hitachi City is the leading city in the prefecture. With five beautiful swimming beaches facing the Pacific Ocean to the east and the scenic mountains of the Aizu Mountains Range to the west, Hitachi is richly endowed with nature and well known as a major cherry blossom viewing spot. With waterfront dining at the Hitachi Station Hotel, and shops providing a range of products, the downtown area is also home to hitachi, Ltd., as well as Hitachi, Ltd., as well as numerous research institutions. The site of the city also includes the campus of Ibaraki University, which is a sprawling city. The city's proximity to Tokyo, which makes a daily commute to Tokyo possible (90 minutes to Tsurumi 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 Cooperative R&D, allowing students to enjoy the privilege of leading their own research on state-of-the-art technologies. These, along with the facilities on campus, thus allowing people on campus to enjoy delicious changing seasons.

**Transportation to Campus**

● **Juban Expressway**
  About two hours by JR Joban Line from Tsurumi Station at Tsurumi Station. There are a number of bus stops in the city. Direct bus service to the airport at Narita is also available.

● **JR Joban Line (Super Hitachi Limited Express)**
  The Super Hitachi train connects Ibaraki University to downtown Tokyo within 24 minutes.

**Access Map**

- **From JR Hitachi Station**
  From JR Hitachi Station (central exit), take a central bus of the Hitachi Transportation Service bound for “Sakuragaoka” (bus No. 41) and get off at the “Sakuragaoka” bus stop.

- **From JR Hitachi Taka Station**
  From JR Hitachi Taka Station, take a central bus of the Hitachi Transportation Service bound for “Hitachi Station” (bus No. 41) and get off at the “Kak handwritten” bus stop.
Implementing Advanced Science and Technology in Harmony with People and the Natural Environment

Since the founding of its predecessor, Tsukuba 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
**New Manufacturing Technology: Mechanical Engineering Course**

**Department of Mechanical Engineering**

www.mech.ibaraki.ac.jp

To train students in new manufacturing technologies for developing machines that interact with humans, such as low-entropic engines and bio-compatible products, the Department of Mechanical Engineering trains 3rd year students in advanced mechanical technology and 2nd year students in advanced mechanical technology. Students are also given training to elaborate their physical interactions and application skills in developing into internationally competitive engineers through Manufacturing Practice. It will supply creative engineers in manufacturing: 6th year students in production study in cutting-edge research such as new technology of numerical field analysis, structural analysis technology, high-efficiency engines, operation technologies, and medical and welfare apparatus, and functional materials. The educational program has been accredited as an Engineering Program by Japan Accreditation Board for Engineering Education (JABEE).

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**Exploring a New Field in Biotechnology with Chemistry**

**Department of Biomolecular Functional Engineering**

www.biochem.ibaraki.ac.jp

The Department of Biomolecular Functional Engineering reviews the knowledge and skills that students have acquired in the first two years and their expertise in diverse fields, and conducts specialized courses for the second year as part of the biotechnology program. The students are divided into the applied fundamental chemistry and biotechnology course, and provided with education programs based on methods that allow them to acquire more specialized knowledge and expertise about technology. The department is looking for students who are engaged in various fields of biochemistry and apply them to engineering.

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**Infinite Possibilities in a New Department**

Hirono Takeuchi (from biochem plug 3rd year)

The Department of Biomolecular Functional Engineering is a new department that was established in 2009. We areInputting a variety of molecules, fields, such as biochemistry, based on a fundamental understanding of chemistry, physics, and biology. This is a program in which we can truly expand your potential. In addition, since we can take students who are studying high school, we can take advantage of the existing high school network and not only high school curriculum, but also classes on chemistry, physics, and biology. In this program, students are trained in areas such as cutting-edge technology and industrial research and development. This allows us to experience the joy and difficulty of manufacturing and expand the knowledge base that we need to communicate our ideas and opinions. In addition, many students aim to raise our awareness of environmental policies. Would you like to discuss with your classmates about your future and dream for the future at the Department of Mechanical Engineering?

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**“Monozukuri”, that supports the ICT and Sustainable Society**

**Department of Materials Science and Engineering**

www.mse.ibaraki.ac.jp

Materials science and engineering embody the scientific approach to creating and researching materials that support our sustainable society. It involves innovative and creative science and technology and social infrastructure essential to material science. The Department of Materials Science and Engineering aims to help students engage in research and development, such as ceramics and next-generation materials. The department offers a curriculum that includes environmental studies, nanotechnology, and computational materials science. The Department of Materials Science and Engineering was established in 2009 to give students a deep and enjoyable learning experience with “Materials and Manufacturing.” The course of study includes experiments as well as lectures to allow you to directly apply what you have learned through the advanced lecture materials. As a foreign student, we want you to enjoy the knowledge we obtain from the lectures. Our department offers a variety of courses in fields from natural science to social science. The opportunity to learn about electrical and electronics from the fundamentals to applications.

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**Creating Ubiquitous Society Expands Your Dreams**

**Department of Electrical and Electronic Engineering**

www.ee.ibaraki.ac.jp

In order for Lee and Ito students to fully understand the basic subjects of electrical engineering, the department offers courses that include: computer science, micro computer course, and several optional courses. In the first and second years, students are divided into two courses - electric machines and electronic systems - allowing them to acquire update specialized knowledge by studying in a small and efficient group. The graduates of this department will be able to find work at major electronics and equipment companies, either in Japan or overseas, and companies manufacturing, and in information industries.

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**Learning the Essence of Electrical and Electronic Engineering**

Shota Kagami (from kayogo plug 3rd year)

Electrical and electronic engineering is used in a wide range of fields, from home appliances and industrial machinery to digital cameras. The department of Electrical and Electronic Engineering not only provides students with the opportunity to learn about electrical and electronics from the fundamentals to applications. The first two years of study concentrate on acquiring fundamental knowledge, followed by years on acquiring specialized knowledge. Come be part of the exciting Department of Electrical and Electronic Engineering and acquire a wide range of knowledge to expand the future possibilities.
Today live programs like concerts or sport events are played on personal computers or mobile phones. To realize such multimedia communication, both communication and information technologies are necessary. For instance, to play music pictures on personal computers we need broadband communication lines, software with large capacity and software. As consumers require multimedia communication with low cost and high quality, the demand for engineers who strengthen line in those technologies has increased. The mission of the Department of Media and Telecommunications Engineering is to help students to acquire comprehensive knowledge of those technologies and we believe that they will contribute technological innovation in those fields.

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

Why don’t you help recreate 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 corresponding broadening fields of interest, such as civil studies, lecture for experts in the working world, internships allowing students to master the latest issues, knowledge, and technology. At year 4 students will progress with graduate research, working side-by-side with teachers while getting detailed supervision. Let’s build cities and societies of the future together!

Welcome to Urban and Civil Engineering
Pitow Dao
from Xian University of Architecture and Technology
In the Department of Urban and Civil Engineering you study “Civil engineering,” which is indispensable to daily life. You study a wide range of subjects: from civil engineering to infrastructure, such as roads and structures, to the environment of cities and the entire globe. In the 4th year you concentrate on senior research, based on the fundament and specialized knowledge acquired through laboratories and exercises, and while doing this I came to realize that civil engineering is the foundation of society. Currently I am analyzing the disaster risk along coastal areas, which is important research for protecting the safety and livelihoods of people. I am enthusiastically doing my senior research with the belief that it will be useful to society in the future.

What is knowledge?
Yoshitaka Torikama
from Nagoya University 4th year
I think the key to our society is knowledge. However, I am conducting my own research in an attempt to understand and evaluate the information processing mechanisms of the brain. I am conducting research to develop a computer that can model the brain's neural circuits and synapses, to transfer the information processing mechanism of the brain. But this is where I think the key to our society is knowledge. However, I am conducting my own research in an attempt to understand and evaluate the information processing mechanisms of the brain. I am conducting research to develop a computer that can model the brain's neural circuits and synapses, to transfer the information processing mechanism of the brain.
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.

Diversity in Education
- **International Students**: By the 2nd year, 70% of students are international.
- **Technical Proficiency**: Students are exposed to advanced technologies.

Entrance Examination
- **Eligibility**: Graduating from junior high school.
- **Dates**: November 1st and 2nd.

Graduation and Employment
- **4th Year**: Graduation and entrance to employment.
- **Placement Services**: Assistance in finding employment opportunities.

Certification and Qualifications
- **Programs**: Quality assurance, standard engineering design, project management.
- **Graduates**: Competent engineers, capable of independent work.

Admission to Graduate School
- **Master's Program**: For those who wish to advance their education.
- **Doctoral Program**: For those aiming for higher education.

Employment
- **Starting Salaries**: Competitive based on qualifications.
- **Career Development**: Ongoing support for professional growth.

Degrees, Licenses, and Qualifications
- **Graduate Degrees**: Master's, Doctorate.
- **Professional Certifications**: Specific certifications for engineering.

From Admission to Graduate Courses and Employment
- **Curriculum**: Integrated with industry needs.
- **Practical Experience**: Hands-on learning in real-world settings.

Certification and Qualifications You Can Earn
- **Programs**: Professional, technical, and managerial.
- **Applications**: Various fields, including manufacturing, construction, and management.

University Entrance
- **Entrance Exam**: Held in November and February.
- **Selection**: Based on academic performance.

Examinations for Transfer Classes and Courses
- **Eligibility**: Graduates of junior high school.
- **Dates**: January 1st and 2nd.

Entrance Exam for Graduate Schools
- **Selection**: Based on academic performance.
- **Dates**: In the 4th year.

Secondary Recruitment for Students Abroad
- **Eligibility**: International students.
- **Selection**: Based on academic performance.

Certifications and Qualifications You Can Earn
- **Professional Certifications**: Necessary for specific industries.
- **Managerial Skills**: Essential for leadership roles.

Graduation Research
- **Students**: Conduct research under the guidance of university faculty.
- **Projects**: Varied, focusing on innovation and development.

Entrance Exam for Graduate Schools
- **Selection**: Based on academic performance.
- **Dates**: In the 4th year.

Entrance Exam for Graduate Schools
- **Selection**: Based on academic performance.
- **Dates**: In the 4th year.
**Hitachi Campus**

**Educational facilities**

**N4, N9 Extracurricular Activity and Sports Facilities**
Facilities include athletic fields, tennis courts, a gymnasium, martial arts, and an indoor leisure center for use for physical education classes and club activities.

**S5 Manufacturing Education & Research Support Lab**
A wide range of machines is available for producing parts, designed for students and research facilities, and are of a sufficient level of capacity for the training of manufacturing education students. Students participate in design, content, and other competitions to give form to their ideas.

**E5 Center for Information Technology**
The center provides an educational computing environment that includes servers, specialized workstations, and personal computers. It also provides a wireless network. The computer is the tool the students can use to enrich their lives.

**E4 Library**
The approximately 80,000 volumes housed by the Hitachi University Library is a valuable resource for students. Books can be viewed in the library or through remote access, making it a valuable asset for students studying abroad.

**NS Center for Cooperative Research & Development**
The objective of the Center is to contribute to the advancement of the educational and research activities of Hitachi University, as well as to promote joint R&D activities with private enterprises and other organizations.

**NS 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.

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**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.

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**Departments**
- Department of Mechanical Engineering: Bldg. W1, E5, W2, H1, W5
- Department of Biomedical 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, E1
- Department of Computer and Information Sciences: Bldg. S1
- Department of Urban and City Engineering: Bldg. S2, S3
- Department of Intelligent System Engineering: Bldg. E2, E3

**Others**
- Center for Information Technology: Bldg. E5
- Administration Office: Bldg. E1
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.
Dream on the Go

Econo Power Competition Club

More particular about how far we can run than how fast we can run

We are happy about the driver. We are particular about material and take some care of machine work and weight.

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“Kogaku” Festival

For more information, visit http://www.eng.ibaraki.ac.jp/

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 (USAJE), this is a competitive event in which students design, modify, and manufacture formula-style race cars under the theme of “monostick”.

IUTE-01 Vehicle Specifications

Wheelbase (F/R): 1,480mm (1,480mm / 1,480mm)

Min. ground distance: 15mm

Body weight (dry weight): 325kg

Brakes: F/R (Disc/drum, Disc) / Drum/drum breaking with single piston

Suspension type: F/R: 4 points, double wishbone

Tire: Bridgestone 17.5 inch

Engine: Honda G1000002 (closed type model)

Total displacement: 944 cc

Transmission: 5-speed manual (4-speed, 4-speed)

Differential: Full TRAC (4-speed, 4-speed)

Shifters: (5-speed sequential)

Fuel tank capacity: 400 liters