**Access to Hokkaido University**

From New Chitose Airport to Sapporo Station: 40 minutes by express train or 50 minutes by bus/car
From Sapporo Station to campus: 10 minutes by walk or 3 minutes by car

**English Engineering Education Program**

Kita 13 Nishi 8, Kita-ku
Sapporo, Hokkaido, 060-8628 JAPAN
☎️ +81-11-706-8099
✉️ +81-11-706-8094

If you have any inquiries write to:
✉️ eprogram@eng.hokudai.ac.jp

For details please check our home page:
http://www.eng.hokudai.ac.jp/e3/

**Study in English in JAPAN!**
Greeting from Prof. Norihiro IZUMI, Dean of the Faculty and Graduate School of Engineering

Welcome to the Graduate School of Engineering at Hokkaido University. I am excited to see that you are interested in our international program, e³. Over the past 150 years, our university has formulated educational philosophies based on a "frontier spirit", promoting "all-round education" taking a "global perspective", and pursuing "practical learning". These philosophies are as relevant as ever in today's world, with global competence playing a key role in the modern international education. The e³ program, started in 2000, aims to expand our university's reach beyond the boundaries of Japan. Multidisciplinary English education allows our students to benefit from the best Japanese technology and give them access to cutting-edge knowledge and an international environment, so that they can develop communication skills and cultural awareness, become flexible researchers and engineers in the diverse fields of science and technology, and graduate ready for the global challenges.

High quality education in English

Master’s or Doctoral degree entirely in English. More than 160 courses are offered in English.

Diverse choice of research fields

13 Master’s and 12 Doctoral degree programs in 13 divisions:
- Applied Physics
- Materials Science and Engineering
- Mechanical and Space Engineering
- Human Mechanical Systems and Design
- Energy and Environmental Systems
- Quantum Science and Engineering
- Field Engineering for the Environment
- Engineering and Policy for Sustainable Environment
- Architectural and Structural Design
- Human Environmental Systems
- Environmental Engineering
- Sustainable Resources Engineering
- Cooperative Program for Resources Engineering* (Master’s degree only)

Excellent academic reputation

Study in one of the top 10 Japanese universities, which is also ranked highly in Asia and in the world.

Ranking

World University Rankings 2022
- QS Asia: 29
- QS World: 141
- Times Higher Education (THE): 501-600

Facts

Hokkaido University

Student Enrollment: 17,999
- Undergraduate: 11,455
- Graduate: 6,544
- International Students: 2,074

Faculty and Staff: 3,917
- Partner Universities: 732

School of Engineering

Student Enrollment (from 2nd year) 2,184
- Master’s: 760
- Doctoral: 227
- International Students: 270
- Faculty Staff: 324
- Non-teaching Staff: 124

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AN UNFORGETTABLE EXPERIENCE!

Reasonable cost of living

Where can I stay?
For the first semester or two, most students will stay at the University accommodation. There are total 748 fully furnished, internet-enabled rooms (including 47 for family and couples) available.

Many affordable private apartments are located in close proximity to the campus. On-campus ground guide service is available for free.

Is life in Sapporo expensive?
Sapporo provides an excellent quality of life and more reasonable cost of living compared with other major cities in Japan. You can comfortably live on a budget of approximately JPY 80,000 to 110,000 per month*.

<table>
<thead>
<tr>
<th>Rent</th>
<th>University accommodation</th>
<th>JPY 47,000-51,000</th>
<th>JPY 57,000-61,000</th>
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<tr>
<td>Private apartment</td>
<td>JPY 25,000-35,000</td>
<td>JPY 40,000-49,000</td>
<td></td>
</tr>
<tr>
<td>Food</td>
<td>JPY 20,000-35,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>JPY 20,000-30,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*As of March 2023. Your budget depends on the lifestyle you choose. The amount is for reference only.

Global perspective

Study together with colleagues from all over the world, join an active social life and create your own unique international experience!

Academic Calendar / Events

October
- Classes begin
- Orientation
- Welcome trip
- Winter Quarter (classes)

November
- New Year’s Break
- Fall quarter (classes)

December
- Classes finish by early February
- Graduation ceremony

January
- Spring semester
- April
- Spring Quarter (classes)

February
- Golden week holidays

March
- Classes begin
- Orientation
- Welcome party
- Graduation party

April
- Orientation
- Welcome party
- Graduation party

May
- Orientation
- Welcome party
- Graduation party

June
- University Festival

July
- Classes begin by early August

August
- Orientation
- Welcome party
- Graduation party

September
- Sports festival
- Field trip
- Graduation party

Sapporo
is the 5th largest city in Japan, with a population of almost 2 million people, and it is often rated as one of the most desirable places to live in Japan. The Hokkaido University campus is located in a beautiful setting in the center of Sapporo with easy access from the international airport. Enjoy plentiful nature of Hokkaido and experience skiing, hiking, and many other outdoor activities.

Good infrastructure and support services

How do I fit in?
Ask our staff! Friendly English-speaking staff of the International affairs office of Engineering will help you with various issues, from academic affairs to everyday life.

Meet your buddy! Newly arrived international students are paired up with an enrolled student(s) and are given help to adjust to their new environment smoothly; from registering at the ward office and opening bank account to learning about the research facilities.

Join e-orientation! For new students to meet your colleagues and learn about the program.

Don’t miss e-welcome party, welcome trip and various social activities organized by e-students.

Will I learn Japanese?
Optional courses of different levels, from introductory to advanced, are offered on campus, learning some Japanese will help you to enjoy your everyday life and better understand Japan’s unique culture.

I am glad to carry out my studies at Hokkaido University under the banner of the diversity that I am exposed to by interacting with researchers from many parts of the world. The programs offered not only encompasses course work and research but field trips, conference opportunities and lecture series that help to balance academics.

Frances Serina CHIKANDA, D1 (Malaysia) • Laboratory of Environmental Ecology (LNE)

Commuting stress free

Is it easy to commute?
Many students live nearby and commute by bike or walk. Central railway station is within walking distance and subway passes right next to the campus.
Human Mechanical Systems and Design

The division of human mechanical systems and design aims to conduct advanced research on "man-machine" systems that support new fields and bring up by biotechnology, robotics and control engineering which are based on mechanical engineering, as well as offering specialized education related to these fields.

2 Research groups
- Biomechanics and Robotics
  - Tissue biomechanics, human movement, medical engineering, assistive technology, motion and vibration control, robot navigation, mobile robot, smart structures, structural health monitoring

- Microelectromechanical Systems
  - Fluid and solid mechanics, thermal conductivity, composite, functional material, sensor, actuator, bio-MEMS, mechatronics, optimization, static and dynamic analysis

Energy and Environmental Systems

Our division is engaged in research and education on advanced energy systems through research on hydrogen fuel cells, next-generation engine systems, and innovative devices for measurement and control of thermo-fluid phenomena, together with research and education on the evolution and development of future nuclear energy technologies including innovative nuclear systems, nuclear power plant safety, reactor physics, and radioactive waste management.

2 Research groups
- Applied Energy Systems
  - Applied energy systems, energy conversion systems, flow control, applied thermal engineering, engine system engineering, internal combustion engine

- Nuclear and Environmental Systems
  - Nuclear and environmental systems, nuclear reactor, nuclear safety and system engineering, nuclear waste management, boiling heat transfer

Advanced Research Facilities

- Quantum Science and Engineering
  - Neutron generation, neutron scattering, imaging, quantum beam, radiation detection / measurement, nuclear instrumentation, medical physics, proton therapy, neutron capture therapy

- Plasma Science and Engineering
  - Plasma processing, plasma diagnostics, laser ablation, laser processing, plasma-surface interactions, fusion engineering, vacuum engineering, simulation of electromagnetic field in plasma

- Nanomaterials Science
  - Quantum beam irradiation effects, in-situ observation, nuclear materials, transmission electron microscopy, synchrotron radiation, surface science, well-defined catalysts

Advanced Research Facilities

The website was very easy to navigate so I immediately fell in love with my master’s program and I immediately fell in love with the atmosphere of the program. I have been very impressed with the level of expertise and dedication of the faculty members, and the opportunities for collaboration with industry partners. The program has been instrumental in helping me refine my research skills and develop a strong foundation in the field of quantum physics.

- Multi-disciplinary approach: The program offers a broad range of courses that cover various aspects of quantum science and engineering, including quantum mechanics, quantum computing, quantum information, and quantum materials.

- High-quality facilities: The program has state-of-the-art facilities, including a dedicated laboratory and access to high-performance computing resources.

- Strong research network: The program has a strong network of industry and academic partners, providing opportunities for students to collaborate on cutting-edge research projects.

- Comprehensive curriculum: The program offers a comprehensive curriculum that covers both theoretical and practical aspects of quantum science and engineering.
Field Engineering for the Environment

This civil engineering division supports the development of engineers and researchers capable of formulating solutions to environmental and natural disaster issues that threaten human societies. Through a well-designed approach with world-class technologies offered by field surveys, wide-area measurement and assessment, experiments with sophisticated equipment and facilities, and numerical simulations, students will graduate with specialized knowledge and skills in related civil engineering subjects.

Human Environmental Systems

The human environment consists of the built environment and the natural environment. The human environment, such as residence space, indoor climates, forests and cities, is important for our lives and symbiosis with nature. Building envelopes, building facilities, urban green spaces, city facilities and so on are systems designed to improve the performance of the built environment. We carry out research concerning the performance of these systems and aim to heighten the quality level. We also verify the properties under actual service conditions.

Architectural and Structural Design

We aim at fostering human resources who can put the new sophisticated policy and design for social safety and sustainability into practice based on acquired skills and field works related to safety mechanisms that support structural and urban spaces, by acquiring critical thinking and problem-solving abilities on issues related to principles of symbols in the environmental spaces of buildings and cities and their design.

Engineering and Policy for Sustainable Environment

The Division of Engineering and Policy for Sustainable Environment aims to produce future leaders capable of solving complex environmental and social problems from global perspectives while building consensus with local residents and using methods including system-engineering and socio-economic approaches. These are intended to create the spaces and environment essential for safe, comfortable and well-developed human activities and harmonization with nature.

Environmental Engineering

The Division of Environmental Engineering aims to produce highly skilled environmental professionals with special capabilities essential to building sustainable social systems by conserving the environment and creating safe and comfortable living spaces based on the sound circulation and metabolism of water, air and substances. Such professionals should be furnished with the ability to engage in specialized work and R&D on environmental management.

Water Metabolic System

Environmental biotechnology, biofilms, microbial ecology, public health, water quality standard, microsensor, fluorochromes, lake Mochu, environmental risk engineering, innovative water treatment technology, drinking water guidelines

Environmental Management Systems

Sewage waste, landfill, thermal treatment, recycling, system optimization, air pollution, noise pollution, EIA, environmental health, sound materials, energy, soil and groundwater contamination, risk communication

2 Research groups
- Geotechnical and Material Engineering for Disaster Prevention
- Hydraulic and Aquatic Environment Engineering

2 Research groups
- Human Settlement Design
- Structural and Urban Safety Design

2 Research groups
- Human Settlement Design
- Structural and Urban Safety Design

Cooperative Program for Resource Engineering

The main research and educational topics of both our divisions are mining engineering, including geology, rock mechanics, mineral processing, and exploitation metallurgy. We also provide excellent opportunities to study environmental protection and remediation technologies, resources recycling of urban mine, and application of fossil fuel substitution, which are needed for sustainable extraction and supply of mineral resources to our society. Cooperative Program for Resource Engineering is established through collaboration between Hokkaido University and Kyushu University. The program aims to develop highly skilled resource engineers who can design and manage the entire process of the resource business.

2 Research groups
- Environmental Engineering
- Sustainable Resources Engineering

2 Research groups
- Geoenvironmental Engineering
- Resources Engineering

Katie Raul ARNEZ FERREL (B.S Env)
Doctoral course student
Laboratory of Hydraulic Research
Scholarships & Support

Apply for an acceptance letter or a scholarship through the e³ program

Japanese Government (MEXT) scholarships

Japanese government offers full-support scholarships for outstanding students (including monthly allowance of JPY 145,000 for PhD or JPY 144,000 for Master’s program; recipients are exempted from tuition and admission fees); e³ accepts applicants through such frameworks as: University nomination (including Top Global University Project slot), Foreign Study Coordinator slot (regions with coordinators office), Program for Indian Railways professionals, Embassy nomination.

Japanese Government (MEXT) scholarship via Embassy recommendation

You can apply for this type of MEXT scholarship through the Japanese embassy in your country of origin. After you pass the preliminary screening at the embassy, please contact the e³ program to receive an acceptance letter.

MEXT: Top Global University scholarship

The period of this scholarship is limited to a maximum of 24 months irrespective of the degree program (Master’s or Doctoral). Enrollment is possible from October only. Apply directly through the program.

MEXT honors scholarship: reservation system

Financial assistance of JPY 45,900/month (for a period of 6 or 12 months) is available for a number of newly enrolled Master’s and Doctoral students with good academic performance accepted directly into the e³ program through the special selection.

e³ Grant for self-supported Doctoral students

A grant of JPY 100,000 upon enrollment (one-time payment) is offered.

Other organizations’ full support scholarships

Chinese Scholarship Council — please apply to our program to obtain an acceptance letter.

Cost of education and tuition fee support

Tuition fee waivers

A discount of 25, 50, or 75% on full tuition fee waiver can be granted to the applicants in need.

Study support for Doctoral Students

Full tuition fee support through the combination of tuition fee waivers and employment as research assistant is available.

Are you interested in short-term research or study?

Research Internship

Are you a full-time undergraduate or graduate student at a university outside of Japan? Join a research project at one of our laboratories on favorable terms! Duration of the program is minimum 1 week, maximum 6 months. Please contact a potential supervisor at the Faculty of Engineering to agree upon the possible acceptance period and your research topic. Applications are accepted throughout the year.

Exchange programs

Are you a student at one of over 200 worldwide partner institutions of Hokkaido University? You are welcomed to spend one or two semesters with us as a tuition waived exchange student!

Research-oriented program (Special Research Students)

Graduate students undertake research control on their specialized areas at one of our laboratories under the supervision of a faculty member of the Graduate School of Engineering.

Course work-oriented program (International Students)

Undergraduate or graduate students join regular classes (graduate students take courses from the e³ English curriculum). Acceptance is possible from October (Autumn semester) and April (Spring semester). Please contact your home-university’s study abroad office for further information about the application procedure. Find out if your university or graduate school is our exchange partner: https://www.hokudai.ac.jp/globalinfo/ourinternationalagreements/
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