

Overview

The master course students will learn expertise in science and engineering. We should emphasize that we focus on the interdisciplinary study of science and technology in the curriculum. We are free from a sort of stereotype idea, which advocates the individuality of fundamental science and industrial technology.

In the doctoral course, we aim to train scientists and professionals, who have a variety of viewpoints and synthetic judgment, with which they can follow rapid evolutions of cutting-edge science and technology, and resolve interdisciplinary issues.

Access/Address

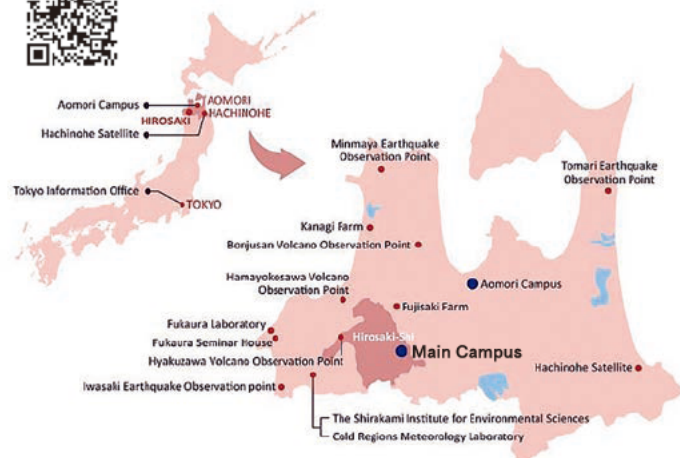
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Mathematics and Physics

Mathematical Science, Applied Computational Science

Education and research is conducted so that students can acquire advanced expertise in such subjects as algebra, number theory, combinatorics, differential geometry, functional analysis, dynamical systems, differential equations, statistics, and optimization theory. We also train students to understand and mathematically represent the mechanisms of natural phenomena and social systems, and to be able to solve the problems in those systems.

Materials Physics and Astrophysics

Our purpose is to train creative and initiative talent who will be able to contribute to the development of physical sciences and engineering. We supervise the candidates' theses, the topics of which will be considered from the wide perspective of physics and engineering. The candidates will learn advanced skills and knowledge of physics, and will study trends and essentially important topics in physical and engineering sciences.

Field of Research

- Mathematical Sciences
- Condensed Matter Physics
- Astrophysics
- Theoretical Particle Physics



Frontier Materials Chemistry

Overview

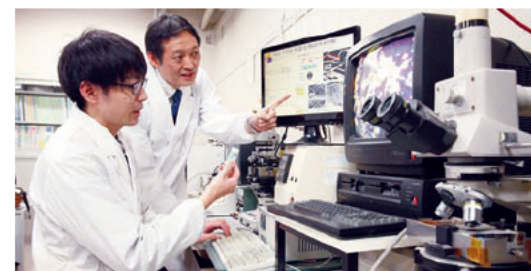
Researchers and advanced professional technicians are trained so that they can master deep professional knowledge and interdisciplinary sense regarding inorganic and organic material creation, energy and functional creation chemistry in consideration of the global environment, and are equipped with the ability to transmit and contribute to the development of Japan and the world, based on inorganic chemistry, organic chemistry, analytical chemistry and physical chemistry.

Ideal applicants

Persons who desire to become researchers and advanced professional technicians who wish to master deep professional knowledge in an interdisciplinary sense regarding organic and inorganic material creation, energy and functional creation chemistry in consideration of the global environment, and seek to acquire the ability to transmit and contribute to the development of Japan and the world.

Field of Research

- Organic Chemistry
- Physical Chemistry
- Inorganic / Analytical Chemistry



Global Environment and Disaster Prevention Sciences

Overview

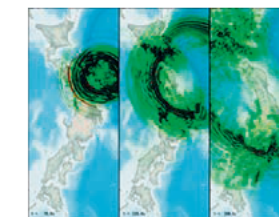
Advanced and professional education is carried out in each research field of cosmology, meteorology, climatology, environmental chemistry, geology, petrology, volcanology, seismology, and natural disaster engineering. Scientists who can tackle issues in the society such as environment conservation, mitigation of natural disasters, and stability in energy resources are needed in various occupations across countries and regions. In this course, students who can tackle these issues are trained.

Ideal applicants

Persons with an interest in earth sciences targeting the universe, weather, environmental chemistry, nature of the soil, rocks, volcano, earthquake, etc. Persons who wish to research global/regional environmental issues, such as the global warming, natural disaster prevention, and energy resources through the earth sciences. Persons seeking to become advanced technicians who can respond to these issues from both global and regional perspectives.

Field of Research

- Cosmology and Cosmic Ray Research
- Meteorology
- Geology and Petrology
- Seismology



Electronics and Information Technology

Mechanical Science and Engineering

Sustainable Energy

Overview

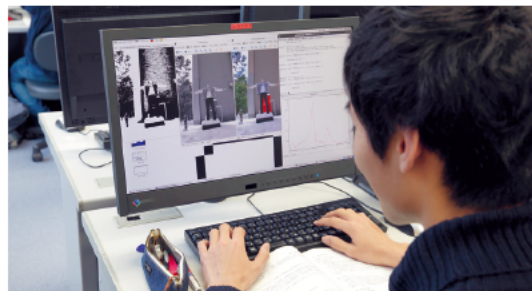
This course aims to train human resource personnel who can acquire advanced knowledge in electronic engineering, communication engineering, information science and connected areas with knowledge in related fields, and can acquire the ability and education for use in technical development and research for innovative products and systems, within the wide field of an advanced information society from basic knowledge to applied systems, such as electronic materials, devices, and information science.

Ideal applicants

Persons interested in academic research in the electronic information engineering field which is represented by advanced IT technology, and who have a strong desire to take the lead in technical innovation in the field, and utilize the results in society.

Field of Research

- Electronics Engineering
- Electronics and Computer Engineering
- Information Engineering
- Computational Engineering and Science



Overview

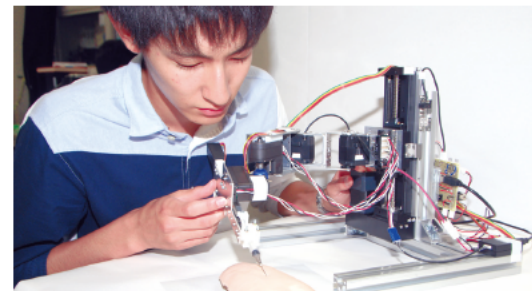
Based on undergraduate education, we train students to have the advanced ability to create and develop a future mechanical system as well as the fundamental ability to create new value and technological innovation. We aim to train students to be engineers and researchers who think and judge flexibly in response to changing values and global competitiveness in science and technology.

Ideal applicants

Are you interested in developing a future mechanical and medical engineering system where people and machines or machines themselves exchange information? If so, then Mechanical Science and Engineering course is the right choice for you.

Field of Research

- Mechanical and Intelligent Material Systems
- Thermal Fluid Engineering of Various Systems
- Instrument and Control Engineering
- Medical System Engineering



Overview

This course seeks to assist students to acquire professional knowledge regarding new energy resources, energy conversion, storage and usage, and energy systems, as well as the ability to evaluate energy from the regional and world viewpoints, and the ability to contribute to the establishment of a future clean and smart energy system.

Ideal applicants

Persons who are eager to learn advanced knowledge with the intention of establishing a sustainable society that is safe, secure and rich, and seek to become researchers and technicians who can work towards the creation of new energy sources and advanced energy systems.

Field of Research

- Advanced Energy Materials
- Energy Conversion Engineering
- Geothermal Engineering
- Wind and Ocean Energy Engineering



Hirosaki University Graduate School of Science and Technology

Utilizing the advanced research facilities, the Graduate School of Science and Technology provides professional education for students in master and doctoral courses on cutting-edge science and technology, the fusion of which we focus on as well as we do in the undergraduate school.



Hirosaki University Graduate School of Science and Technology