

Faculty of Engineering Science

The Faculty of Engineering Science is striving to train talented students and researchers with expertise backed by “reason” and a high-level of ethics. Students in this faculty can look at a range of interdisciplinary fields, making them able to contribute not only to Japan as a whole, but also to the region with confidence. In the first and second years students receive a thorough education in engineering, and in the third and fourth years students take that knowledge and gain a fuller understanding of what it means as they apply it in while taking a more active role in their desired field. During their undergraduate education students can discover questions on their own, gain a broad perspective regarding issues in fields previously unknown to them, and gain the ability to problem solve and be flexible.

Faculty Organization Department of Life Science

We train students to become researchers and engineers who challenge to solve problems in the life science fields including research area of food, medical care and the environment.

● Life Sciences Course

Our department provides teaching in solving the questions of life phenomena at the cellular level, individual level and organism group level.

Department of Materials Science

This department trains researchers and engineers who will deal with cutting-edge, functional materials and chemical processes.

● Applied Chemistry Course

Students will study a broad spectrum of specialized chemical fields from chemical engineering that deals with organic and inorganic materials and energy, to bioprocesses.

● Materials Science and Engineering Course

A wide range of fields are studied starting with the fundamental sciences focusing on solid-state physics, solid-state chemistry, metallic materials, science and engineering, and ceramic materials.



Department of Mathematical Science and Electrical-Electronic-Computer Engineering

These departments train talented students in multi-faceted approaches in order to become leaders in fields ranging from mathematics and physics to electrical and electronic telecommunications.

● Mathematical Science Course

Students learn a wide range of mathematical science which covers mathematics (algebra, geometry, analysis), theoretical physics (quantum mechanics), and computer science including AI.

● Electrical and Electronic Engineering Course

Electrical and Electronic Engineering Course Students choose and study topics they are interested in from basic subjects such as electromagnetism and electric circuits, and from a wide range of specialized fields, such as electric energy, electronic devices/materials, information/communications, and measurement control systems.

● Human-Centered Computing Course

Students will learn applied computer science and engineering, with a focus on human-computer interaction, well-being information engineering, image analysis, and information communications and networks.

Department of Systems Design Engineering

This department trains practical engineers capable of creating new things.

● Mechanical Engineering Course

Students will study the basic aspects of mechanical engineering which apply to all industries, such as materials, thermal fluids, controls, and drawing, as well as studying specialist topics in medical bioengineering, robotics engineering, hydraulic machinery and so on.

● Creative Engineering Course

Students learn about a wide range of engineering disciplines with a focus on design engineering, production engineering, electrical and electronic, engineering, control engineering and aerospace engineering and practical research projects.

● Civil and Environmental Engineering Course

Students learn the technology to create and preserve a safe, secure and comfortable local environment with a focus on structural mechanics, construction material science, ground disaster prevention engineering, and environmental hydraulics.

Distance Learning

Akita University Faculty of Engineering is the only national university that offers “public distance learning courses.” Since the first class was held in 1948, over 1900 graduates have taken the course, upholding the course’s educational tradition and history. In order to gain general background knowledge in scientific technology, a general scientific technology course and courses to study the basics and specifics in resources, materials or electrics and electronics are offered.