

# Our Educational Program for JABEE

## ENGINEERING EDUCATION in accordance with JABEE STANDARDS

Having attained certification by JABEE (Japan Accreditation Board for Engineering Education), May 2005, our graduates will be:

- Highly-skilled engineers with globally-accepted credentials.
- Exempt from initial examinations for Professional Engineers.
- Able to attain qualifications for Professional Engineers in four years.
- More Marketable in the Workplace.
- General and Combined Engineering

### 1. Program Title: Integrated Creative Technology

### 2. Engineering Talents to be Developed

We develop creative, internationally recognized engineers with the ability and intellectual foundation for solving issues from a global and multilateral viewpoint, by providing specialized engineering knowledge in each field (mechanical engineering, electrical and electronic engineering, and chemical and biological engineering) and by fostering a positive attitude toward integrating advanced engineering knowledge from other fields.

### 3. Learning and Educational Objectives

Our program has established the following learning and educational objectives, described in (A) through (E). We aim to instill our engineers with:

- (A) fundamental and specialized knowledge and ability of engineering, for example,
- knowledge of engineering of mathematics (Differential and Integral Calculus, Linear Algebra, Differential Equation, Probability and Statistics, Numerical Analysis, Applied Mathematic and so on) and of natural science (physics, chemistry and so on).
  - fundamental knowledge of information technology and the ability to apply such knowledge to collecting information, analyzing and evaluating data from experiments, and using computers.
  - fundamental knowledge of engineering and the ability to apply such knowledge to provide solutions to complicated engineering problems.
  - specialized engineering knowledge in each field (material elements, design & manufacturing, analysis & evaluation, and the integration of this knowledge) and the ability to apply such knowledge to innovate new technology.
- (B) a global viewpoint and ethics as engineers with the ability and intellectual foundation for
- considering issues from a global viewpoint through deep understanding of historical and cultural background of each country in the world.
  - understanding of the effects and impact of technology on society and nature and behaving as engineers considering social responsibilities.
- (C) communicative abilities, such as
- the ability to logically explain technical matter in oral or written Japanese.
  - the ability to give suitable response in Japanese to the questions or opinions of others.
  - the ability to conduct basic English conversation.
  - the ability to read and write basic technical English passages.
- (D) multilateral and practical skills to solve issues, such as,
- the ability to construct practical plans or procedures independently to carry out basic experiments, to evaluate and analyze correctly the results of the experiments, and to discuss and give logical explanations for them.
  - the ability to integrate fundamental knowledge and skills in engineering, and to creatively seek solution for tasks.
  - the ability to design and organize comprehensive solutions to societal needs.
  - acquiring practical abilities through experiments, practice, research and internship, and developing the ability to cope suitably with practical problems or tasks that engineers face.
- (E) independent, cooperative and well-rounded personalities including
- the ability to continue learning on an independent and sustainable basis, in order to cope with societal needs in a timely fashion and to accelerate the promotion of science and technology.
  - the ability to cope with and accomplish required tasks independently or cooperatively within time limits.
  - the ability to undertake tasks cooperatively with professionals from other fields.

### 4. Decision Process into the Program

Upon entering the Advanced Course, the students have the status of admitted participants in the program.

### 5. Field to be Accredited

Engineering (General and Global, New Field)