

Niihama National College of Technology

Outline of the College

The system of the college of technology was created in 1962 in order to promote new scientific technology and cultivate creative engineers with practical techniques. A College of technology, which requires for admission the completion of lower secondary schooling, started as a new type of a unique higher educational institution with the continuous five-year education. The characteristic of the college is that teachers with the same qualifications as university teachers place stress on experiments and practical exercises, emphasizing human contact between students and teachers. Since Niihama National College of Technology was founded in 1962 as one of the first colleges of technology in Japan, the college has turned out about 6,000 graduates. Many of the graduates have been active in the various fields of engineering both inside and outside the country and contributed to industrial development in our country.



The Basic Idea of the College (The Educational Idea) :

Wisdom, Action Power and Confidence

The Educational Policy of the College :

To cultivate trusted engineers who have wisdom and action power enough to open up the future through learning and experiences

The Administrative Policy of the College :

Niihama National College of Technology aims at

- 1) having wisdom to create and practice education of great individuality,
- 2) having action power to make persistent efforts to improve education and research, and
- 3) being a trusted school that marches together with the local community and industries.

The Educational Objectives :

- 1) To develop autonomy, a sense of responsibility and independent learning ability through learning by experience
- 2) To develop an adequate knowledge necessary for discovering and solving problems, a sense of technology and practical ability
- 3) To acquire a good education, an ethical viewpoint as an engineer, and a view of things broad enough to contribute to the society

The following objectives are added as the ones of advanced engineering course

- 4) To improve ability as a trusted leader and international communication ability
- 5) To improve creative ability for technological development and synthetic judgment

Quota

| Department | Undergraduate Course | | | | | |
|------------|------------------------|--|--------------------------------|-------------------------------------|-------------------------------------|-------|
| | Mechanical Engineering | Electrical Engineering and Information Science | Electronic Control Engineering | Applied Chemistry and Biotechnology | Environmental Materials Engineering | Total |
| Quota | 40 | 40 | 40 | 40 | 40 | 200 |

| Program | Advanced Engineering Course | | | |
|---------|-----------------------------|-------------------------------------|------------------------|-------|
| | Production Engineering | Applied Chemistry and Biotechnology | Electronic Engineering | Total |
| Quota | 8 | 4 | 8 | 20 |



Department of Mechanical Engineering

The Department of Mechanical Engineering aims to cultivate mechanical engineers with fundamental knowledge of mechanical engineering who not only have creativity and ability to cope with problems regarding technology, but also possess an international point of view. The department also studies on environment, energy, robots, medical engineering, automobiles and nanotechnology.

Department of Electrical Engineering and Information Science

The Department of Electrical Engineering and Information Science provides the students with a wide range of study concerning electricity from the basics to electrical appliances, electric power, electron, information, communication, control, computers, etc. The department also aims to cultivate electrical information communication engineers with practical techniques who can cope with diversified information society.

Department of Electronic Control Engineering

The Department of Electronic Control Engineering aims to cultivate practical engineers who not only control various kinds of electronic devices by semiconductor integrated circuits and computers, but also understand the whole control system synthetically and grasp the technological and social background with accuracy, playing a leading part in the sectors of design, development, and manufacture.

Department of Applied Chemistry and Biotechnology

Chemical technology has produced various products related to food, clothing and shelter for human beings and made a large contribution to human civilization. Further development of chemical technology has required knowledge of biotechnology as well as knowledge of chemistry. The Department of Applied Chemistry and Biotechnology aims to cultivate engineers who will contribute to the future development of chemical industry through studies on chemistry and biotechnology.

Department of Environmental Materials Engineering

The Department of Environmental Materials Engineering promotes education and research of creative manufacturing in consideration of environment from the viewpoint of materials engineering. The department aims to cultivate engineers who will help build a recycling-oriented society and make a social contribution by promoting new industry concerning environment-friendly materials.

Advanced Engineering Course

The Advanced Engineering Course aims to help the students who completed the five-year department course develop more profound knowledge of technology and a wide range of advanced technical abilities for two years, and to produce main staff such as design engineers and production engineers.

The educational program of Applied Chemistry and Biotechnology of Niihama National College of Technology was authorized by JABEE in the academic year of 2003. Following this, the educational programs of Production Engineering and System Design Engineering were authorized by JABEE in the academic year of 2005.

JABEE (Japan Accreditation Board for Engineering Education) is an organization which evaluates and accredits the engineering education programs of universities and colleges of technology . JABEE examines the following items by the review of the report as well as by on-site inspection; Does the institution establish adequate educational objectives?; Is the curriculum designed to achieve the educational objectives and are the students assessed appropriately?; Are the educational methods adopted by the institution improved?; Are sufficient facilities and equipment provided?, etc. In this way, JABEE examines not only the curriculum but also the whole educational system including educational objectives, organizations and facilities.

Facilities

Library

The College Library contains many books and academic journals mainly on engineering and science, and functions as the center of the students' study and the staff's education and research. Many books on general culture are also in the library.

The Library is open to the public and provides a reference service and a lending one .

Regarding academic journals, various areas of electronic journals (ASP, AIP/APS, ACS, IEEE-ASPP, JDream, KANON, MathSci Net, SD) have been added and utilized for study and research.



Advanced Research and Technology Center

The Advanced Research and Technology Center is a facility that promotes new industry and develops new technology by doing collaborative research. The center aims to produce practical engineers with creativity through interdisciplinary education, and tries to contribute to the development of regional industries as the institution of collaborative research.



Information Education Center

The Information Education Center is a facility that promotes information education, introduces new teaching methods by making use of information technology (IT), and administers the campus information network, in order to deal with a highly information-oriented society. The center is managed based on the following four fundamental policies;

- To establish educational programs of information basic essential to the members of IT society
- To promote the introduction of new teaching methods by making use of IT
- To make effective use of the facilities for information education and improve them
- To administer the facilities for the campus information network



Manufacturing Education Support Center

The Manufacturing Education Support Center carries out the following objectives;

- To support experiments, practical exercises, and graduation research of the students
- To support extracurricular activities of the students
- To support regional industries
- To administer machine and material practice workshops
- To administer the Idea Street Studio
- To establish and assess annual plans of the technical staff department
- To plan the training of the technical staff



Staff (April 1, 2010)

| the number of the present staff | Principal | Academic staff | | | | | Clerical staff | Total |
|---------------------------------|-----------|----------------|---------------------|----------|---------------------|----------|----------------|-------|
| | | Professor | Associate professor | Lecturer | Assistant Professor | Subtotal | | |
| | 1 | 35 | 22 | 15 | 9 | 82 | 44 | 126 |

Education System in Japan

