Educational purpose

We foster personnel leading the unfolding of the 21st century who understand and use various information technologies related to given activities, such as recording, accumulation, sharing, processing, and utilization of knowledge and information as well as the science underlying such technologies. Moreover, we aim to require students to acquire sufficient knowledge and expertise for human intellectual activities and social and cultural foundations as well as from the aspect of science and technology.

College of Information Science

- Bachelor of Information Science
- Bachelor of Information Engineering

Educational purpose

We foster personnel with practical abilities for understanding engineering technologies to collect, analyze, understand, transmit, transform, and utilize information, which is a driving force for modern society, as well as mathematical theories and natural science underlying the fundamental principles of such technologies and for applying the aforementioned skills to various problems and their solution in the real world. Moreover, such personnel are able to take initiative in developing information technology from the global viewpoints.

Desired students

Personnel with strong curiosity and a spirit of inquiry concerning information technology and natural science/engineering, and with basic academic skills necessary for learning the subjects. Moreover, such personnel are desired to be motivated to creatively use and developing leaned knowledge, proactively engage in new challenges, and take leadership in the information society.

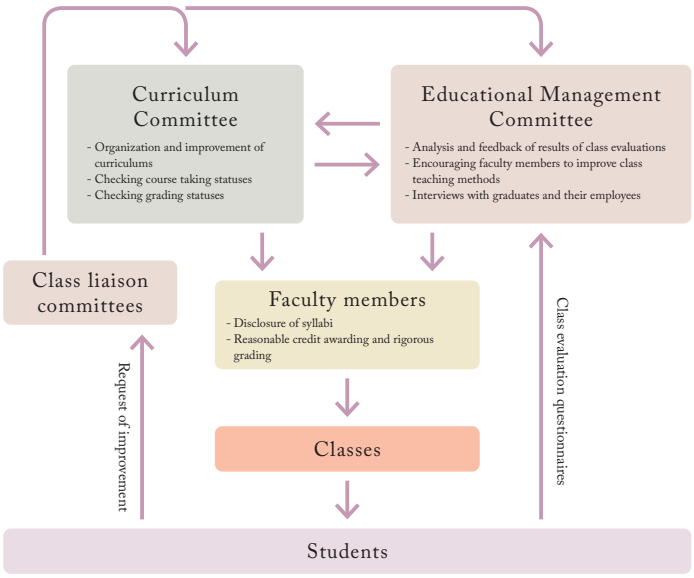
Measures to ensure and improve the quality of education

Class evaluation and feedback: The Educational Management Committee conducts class evaluation for all classes. The questionnaire surveys consist of standardized questions and open-ended questions to efficiently collect comprehensive data and student opinions on class content and class operation. The surveys also provide students with opportunities to reflect on their own approaches to the classes. The Educational Management Committee analyzes the results of the survey and provides feedback and recommendations for improvement to the faculty and the Curriculum Committee.

Opinions from outside the university: We interview or set discussions with graduates and their employees. Their opinions are used in feedbacks. In addition, the Curriculum Committee and the Educational Management Committee hold meetings, where students and faculty directly exchange their opinions.

Class improvement by faculty members: To support faculty members, especially young and new members and improve their educational skills, peer class observations and lectures are carried out as needed.

Measures to improve educational abilities



Bachelor of Information Science

Diploma Policy

We grant diplomas for Bachelor of Information Science to persons who have acquired the knowledge and abilities (that is, Generic Competences) to become learned based on the educational purpose for undergraduate students of the University of Tsukuba. In their learning outcomes, they will achieve the following goals based on the educational purpose of our school and college.

- Understanding of the mathematics and physics underlying information representation, modeling, and abstraction
(Relevant competence: Foundation of Information Science)

- Ability to produce high quality software with an understanding of mathematical modeling and program construction principles and methods
(Relevant competence: Expertise in the field of software and computing science)

- Ability to design computer systems with a systematic understanding of hardware, software, and network technologies
(Relevant competence: Expertise in the field of computer systems)

- Ability to systematically understand and apply various intelligent information processing technologies and media processing technologies
(Relevant competence: Expertise in the fields of machine intelligence and media technologies)

- Ability to work internationally based on specialized English skills and a global perspective related to information science
(Relevant competence: English communication skills in Information Science)

- Practical ability to solve unknown problems related to information science, problem-solving ability, and innovation ability
(Relevant competence: Practical technical skills and problem-solving abilities)

- Understanding of information ethics, security, and intellectual property rights as a professional engineer and researcher who leads the information society
(Relevant competence: Information ethics for professional engineers)

Curriculum Policy

We organize and implement curricula based on the following policies for programs that allow students to acquire learning outcomes related to Bachelor of Information Science.

General policy

We provide a high quality curriculum that reflects the latest technological trends and encompasses international standards in the field of information ranging from hardware and networks to software and intelligent media.

We provide a well-balanced education that enables students to acquire a broad knowledge of information science and engineering as well as advanced expertise in information science fields such as programming language theory, mathematical modeling, software science, and intelligent interfaces, etc. In addition, we place the utmost importance on students making their own choices in their learning.

Course sequence policy

In the first and second years, students learn foreign languages including English, select subjects from a wide range of fields, and culture in order to become active members of society. Also students learn mathematics and other subjects serving as the foundations of information science and engineering and participate in workshops and experiments to learn the fundamentals that extend over the entire areas of information such as hardware, programming, algorithms.

In the third year, students take the classes of mathematical modeling and software science, etc., based on the curriculum of the major in Software and Computing Science in order to gain the knowledge and specialization in the entire areas of information science and engineering. Moreover, practical skills and problem-solving ability are gained through Software and Computing Science Laboratory. In addition, extensive specialized knowledge and specialized skills are gained through a broad range of specialized courses in information science and engineering including

the area of Computer Systems, and Machine Intelligence and Media Technologies.

In the fourth year, in addition to the above learning, students are engaged in diploma research and technical English to cultivate the creative ability and challenge spirit that can produce innovative technologies in information science and also acquire inspiration, communication ability and cooperativeness from an international point of view to gain the skills that work in the actual society.

Implementation policy

We provide education that deepens students' knowledge and understanding of the technologies acquired in lectures by incorporating many practical exercises and computer-based training and experiments, not only in major subjects in information science and engineering, but also in basic subjects such as mathematics and English.

In addition, we provide a group of courses to draw out students' autonomy, such as courses in which students set their own themes and plan their own studies.

Policy for evaluation of learning outcomes

Evaluation method: We evaluate the achievement of academic results throughout the entire educational program, including student grades, achievement of graduation requirements, questionnaire surveys, graduation theses and other deliverables, conference presentations, and results of extracurricular activities.

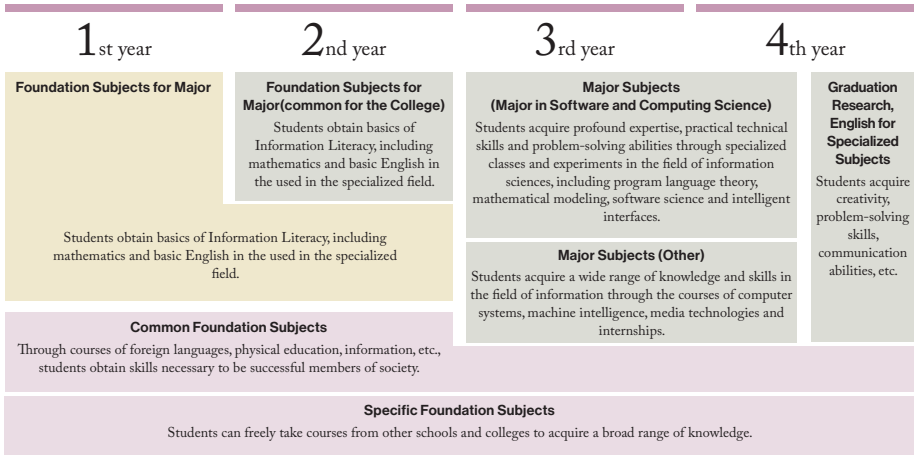
Evaluation index (while in the course): status of credit acquisition, GPA, English test scores, progression and retention rate, absence and withdrawal rate, and status of out-of-class activities, etc.

Evaluation index (upon graduation): GPA, rate of acquisition of bachelor's degree, thesis and presentation of bachelor's degree, employment rate/ graduate school enrollment rate, questionnaires upon graduation and outcomes of out-of-class activities, etc.

Characteristics

In the Embedding Technology Campus OJT Program, students can receive practical courses from instructors who are involved in product development at companies.

Structure of competencies to be developed and curriculums



Bachelor of Information Engineering

Diploma Policy

We grant diplomas for Bachelor of Information Engineering to persons who have acquired the knowledge and abilities (that is, Generic Competences) to become learned based on the educational purpose for undergraduate students of the University of Tsukuba. In their learning outcomes, they will achieve the following goals based on the educational purpose of our school and college.

- Understanding of the mathematics and physics underlying information representation, modeling, and abstraction
(Relevant competence: Foundation of Information Science)

- Ability to produce high quality software with an understanding of mathematical modeling and program construction principles and methods
(Relevant competence: Expertise in the field of software and computing science)

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- Understanding of information ethics, security, and intellectual property rights as a professional engineer and researcher who leads the information society
(Relevant competence: Information ethics for professional engineers)

Curriculum Policy

We organize and implement curricula based on the following policies for programs that allow students to acquire learning outcomes related to Bachelor of Information Engineering.

General policy

We provide a high quality curriculum that reflects the latest technological trends and encompasses international standards in the field of information ranging from hardware and networks to software and intelligent media.

We provide a well-balanced education that enables students to acquire a broad knowledge of information science and engineering as well as advanced expertise in information engineering fields such as hardware, network, fundamental software, intelligent media, media informatics, etc. In addition, we place the utmost importance on students making their own choices in their learning.

Course sequence policy

- In the first and second years, students learn foreign languages including English, select subjects from a wide range of fields, and culture in order to become active members of society. Also students learn mathematics and other subjects serving as the foundations of information science and engineering and participate in workshops and experiments to learn the fundamentals that extend over the entire areas of information such as hardware, programming, algorithms.

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