

## Education Programs

Tohoku University promotes the following educational programs with support from the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

### Program for Promoting High-Quality University Education

This program is conducted to provide information with our society widely and promote the quality of our education at an organizational level by clarifying policies of our University and establishing the PDCA Cycle system.

Year	Program	Contents
FY2008 - FY 2010	Building a medical education system to bring up a research mind : Project that promotes a spirit of inquiry for the truth and practice ability.	The expected objectives to be learned by the student are 1) a clear sense of purpose as the medical student, 2) high ethics as the doctor and the researcher, 3) a vigorous inquiring mind to search for the truth, 4) a flexible idea to voluntarily find the problem, and 5) practice ability to solve the problems. The curriculum is carried out by three stages within three academic years (introduction and training, development education, and object lesson). Introduction and training stage is composed of the medicine training (the 1st) and the motive putting study, and it aims at the acquisition of the sense of purpose and ethics and the understanding of the relation between knowledge and practice. The development education is carried out by adopting a new method on education such as Advanced Science Course and Workshop for Tackling Question to acquire the mind of inquiry and ability of flexible thinking. The object lesson aims at the acquisition of practicing ability for the problem solving, an actual research like basic medicine tutorial and basic medicine training, etc. is experienced for a long term. Research results will be presented at the academic meeting held by students. The privilege such as an overseas dispatch etc. is given to the excellent student.
FY2008 - FY 2010	Evaluation of educational effectiveness by analyzing records of leaning achievement - Assessment analysis by combining electronic portfolio and entrance examination data	Based on our past experience of educational guidance, we will pursue the following three activities in this program: (a) conducting a face-to-face meeting with undergraduate students using portfolio, (b) Improvement the questionnaires in the portfolio to suit evaluation of educational effectiveness, and (c) establishment of an evaluation index of leaning achievement by analyzing records in portfolio and entrance examination data.

### Program for Enhancing Systematic Education Graduate Schools

This program supports the organization of educational systems at the graduate school level; it was established in order to nurture high quality professionals who are adaptable in various fields of our society.

Year	Program	Contents
FY2008 - FY 2010	International standardized curators for historical resources archives training plan	This program aims to train highly qualified curators who could perform at an international level as well as having a profound knowledge on their areas of specialization and knowledgeable about a wide range of relevant resources.
FY2008 - FY 2010	The information literacy education professional program -Information literacy education design for information ethics issues we are facing today-	The information literacy education is important in our society today. This program aims to train professionals who are able to create information literacy education design to resolve issues we are facing today precisely and who are able to take responsibility for cutting edge information literacy education by educating highly qualified vocational professionals
FY 2007 - FY 2009	Program for cultivating practice-oriented education professionals	The program trains students to acquire practical teaching skills which meet the standards of higher quality school education. It aims to cultivate top-level professionals and researchers through educational research programs which combine theory and practice; the program wins the support of Tohoku University, with principal relationship in the Graduate School of Education.
FY 2007 - FY 2009	Cultivation of advanced scientists aiming at the practice and application of science	Based upon the educational approaches, the Graduate School of Science cultivates young and leading researchers in science with high professionalism and internationalism; the program aims to cultivate "advanced scientists for practicing and applying academic science" (frontier scientists), who are flexible and to work in new academic fields with high skills in practicality and adaptability, in environment where technical innovation shows the most rapid diverse changes.
FY 2007 - FY 2009	Substantiality of graduate school of medicine education with multiple layers and bidirectionality - Renaissance plan for cultivating physician-scientists who play leading roles	The program aims to foster students to be autonomous and cooperative through research activities, and to attain a post-graduate (medical) degree by implementing the "multi-teacher instruction system." The goal of this program is to produce "physicians-scientists who play leading roles" in society having exceptional intelligence with experience both internationality and academically.
FY 2007 - FY 2009	Creation of frontier technology in mechanical engineering - Innovation for system integration based on flight, robotics, and nano-technology	This graduate education program provides an extensive curriculum for innovative engineers through the project-based, hands-on experiences on broad research topics of mechanical engineering, highlighted by flight, robotics, and nano-technology. It aims to foster creative and experienced graduates to be recognized in the international society, industries, and academic communities. Two new courses: "Project-Based Learning for Frontier of Mechanical Engineering" and "Innovation Oriented Seminar on Mechanical Engineering" are offered as a core of this advanced education program.
FY 2007 - FY 2009	Education Program for Biomedical and Nano-Electronics, Tohoku University	By teaching and training the electronic major students systematically in biology and medicine, the program aims to cultivate those who can apply and expand their knowledge of electronic technology into the field of biology and medicine; an important academic field of welfare for the 21st century.
FY 2007 - FY 2009	Graduate Program on Frontier Environmental Studies - Develop basic skills and research capabilities by striking a good balance between multi-disciplinary subjects such as science, engineering, human and social studies –	In Masters and Doctoral programs, the social and cultural studies' students will be offered with subjects on ecology, energy, recycling and other environmental techniques along with environmental risk assessment, international environmental economics, emission trading, and Asian economies. A distinctive feature of this program is 'eco-practice', a compulsory subject through which students expose themselves to international environmental problems and carry out feasibility studies of solutions available in developed countries.

### University Hospitals Cooperated Highly Skilled Professionals Training Program

We aim to cultivate medical practitioners who will be working in medical fields in the future. To achieve this, we promote stimulation in university hospitals and our local community by providing financial support to high standard practitioners and clinical researchers training programs. Programs will be selected from candidates who submit applications from national, public and private university hospitals.

Year	Program	Contents
FY 2008 - FY 2012	Highly qualified medical specialists career path supporting system in Tohoku direct (The hub and university hospitals alliance medical specialists training plan)	This program aims to train highly qualified medical specialists efficiently in the Tohoku District and streamline a consistent lifetime career path supporting system for medical practitioners. Ranging from medical students to trainee doctors, specialist trainee doctors and postgraduate medical students mainly based in Medical Practitioners Career Path Support Centers of University Hospitals.

### Cancer Professional Training Plan

This program aids in fostering medical professionals who specialize in the field of cancer; high in intelligence and skills; those who become carcinoma doctors, etc.

Year	Program	Contents
FY 2007 - FY 2011	Tohoku Cancer Professional Cultivation Plan	In order to enhance cancer treatment, the plan introduces holistic educational program which trains the potential cancer specialists high in knowledge and skills; it also assists those with abilities to pursue and promote practical research, both academically and holistically, and also to attain a medical license.

### Core Curriculum of Accounting Schools (sponsored by the Ministry of Education, Culture, Sports, Science and Technology)

This program aims to promote training for professionals who seek a high standard of skill. This is to promote leading actions that could expand educational methods in cooperation with industry, academic institutions, vocational organizations and local public authorities.

Year	Program	Contents
FY 2008 - FY2009	Core Curriculum of Accounting Schools	This program aims to create core curriculums and their operation frameworks. This also aims to conduct classes following the core curriculums. By conducting these plans, we aim to train accounting specialists by providing systematic educational processes instead of current qualifying exams based educations.

### Industry-Academic-Cooperated Practical Human Resources Training Program (Long Term Internship Program Development)

Under this plan, students who already possess a certain level of expertise, are publicly solicited and implemented in joint projects between universities and corporations. They target on developing and carrying out programs centered on "hands-on" training within the industry and nurture professionals who can play a central role in a variety of research fields and business activities.

Year	Program	Contents
FY 2005 - FY 2009	Promotion of Graduate Students Internship Project - Green Steel Creation Program -	The advanced internship program for graduate students by the Ministry of Education, Culture, Sports, Science and Technology entrusts academic and industrial entities to create and implement together good long term internship program for graduate students using practical environments in businesses and workplaces. This program aims at constructing a system for developing human resources by which academic and industrial entities can cooperate with each other in a constructive manner and which fosters highly educated experts who understand various problems in society and approaches in the industry, and have an interest in society, through effective management of joint research.

### Industry-Academic-Cooperated Practical Human Resources Training Program (Cultivation of Service Innovation Human Resources)

The program supports the educational centers which cultivate specialists knowledgeable of service through the establishment of an academic field in the hospitality industry, those who are professional and interdisciplinary; it also aims to foster students to be productive and successful, competitive in the international service industry.

Year	Program	Contents
FY 2007 - FY 2009	Cultivation of service innovation managers -cultivation of human resources for productivity control in service sector-	This program aims to train managerial personnel (Service Innovation Managers) who could evaluate productivities accurately, create new productivities in the service sector and manage qualities.

### Science and Mathematics Students Support Project

In order to cultivate potential science technologists, the project has been entrusted to the university's science department by the Ministry of Education, Culture, Sports, Science and Technology; to establish and to facilitate ability and knowledge of highly motivated students in the field of science and mathematics.

Year	Program	Contents
FY 2008 - FY 2011	Special education for advance mathematics and physics	The program aims to educate students with special knowledge in science and mathematics, and from an early stage, provides special education for small groups specialized in mathematics or physics; preparing them for further study in the graduate program.

### Initiatives for Distinctive Education

This is an extra-curricular course for undergraduate and graduate students aimed at enhancing practical English communication skills.

Year	Program	Contents
FY 2005 -	Practical English Course	This course, taught by native instructors, will help students further develop English communicative abilities required in academic and social situations through activities including discussions and oral presentations.