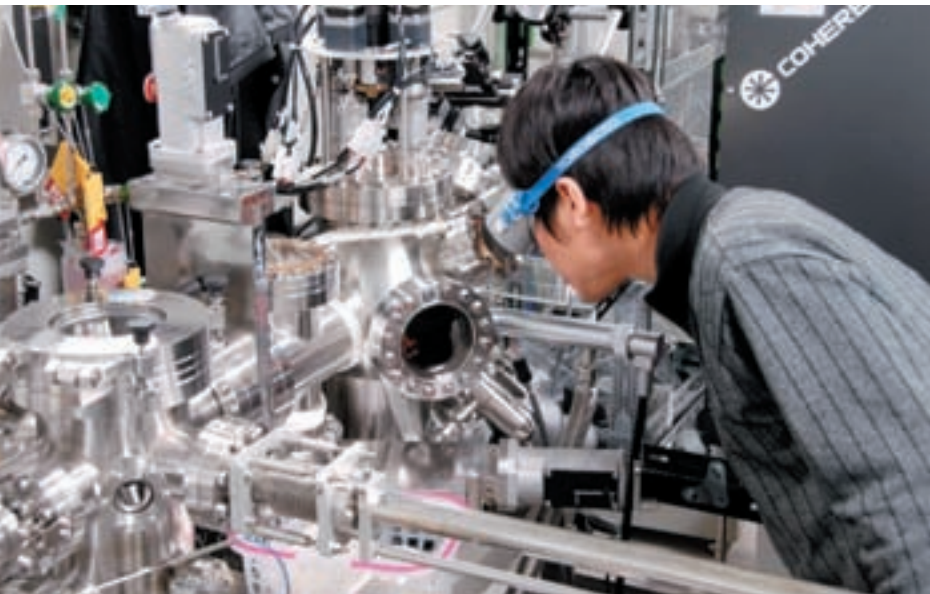


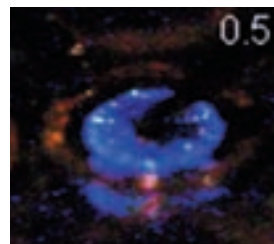
International Center where Knowledge of the Highest Level Gathers and the Most Advanced Knowledge is Created Environment and System for Developing World - Leading Research

"World Premier International Research Center: Advanced Institute for Material Research (WPI-AIMR)" Opens

<http://www.wpi-aimr.tohoku.ac.jp/>



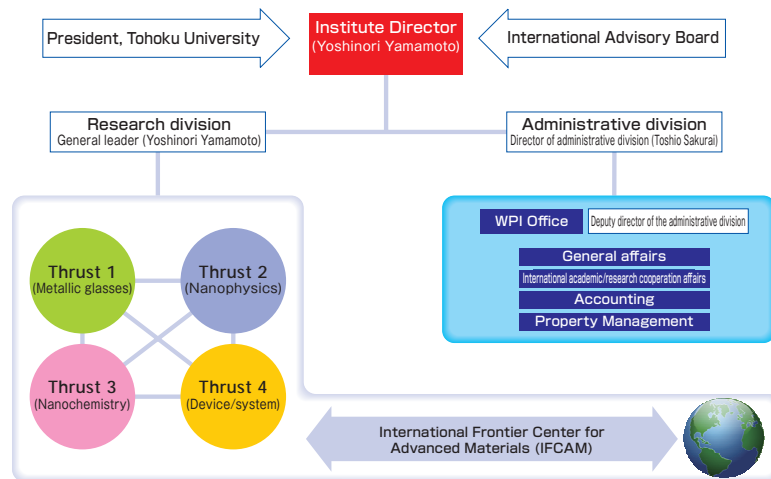
New Zr-based bulk metallic glass (a maximum diameter of 30 mm)



Ultraviolet light-emitting device of an ecotype light-emitting material, first in the world

The Advanced Institute for Materials Research (AIMR) of Tohoku University was selected as one of the five centers around the country in the World Premier International Research Center (WPI) Initiative of the Ministry of Education, Culture, Sports, Science and Technology. The WPI Research Center: Advanced Institute for Materials Research (WPI-AIMR) was inaugurated in October 2007.

WPI-AIMR will be an international base to open new areas of materials science where forefront researchers gather from the world and engage in research and development by fusing five fields: physics, chemistry,



materials science, electronic engineering/information engineering, and precision/mechanical engineering.

Field of metallic glasses
Control of composing clusters makes metallic glasses sheets large, very strong and high-functional. Unique advanced non-equilibrium phase materials that exist nowhere in the world are being developed.

Field of nanophysics
The most advanced measuring instruments in the world are being developed, and the physical properties of nanomaterials are being elucidated. A group of new nano-materials is being developed.

Field of nanochemistry
The field of soft materials, an unexplored field of materials science, is being opened, such as the development of organic and inorganic hybrid materials with self-assembled molecules.

Field of devices/systems
Materials, new magnetic substances, advanced optical communication, and ultra high-performance LSI that provide various functions in micro electromechanical systems to support the information-oriented society of the 21st century are being developed.

Graduate School of Biomedical Engineering, an Academic Field First Created in Japan

<http://www.bme.tohoku.ac.jp/>

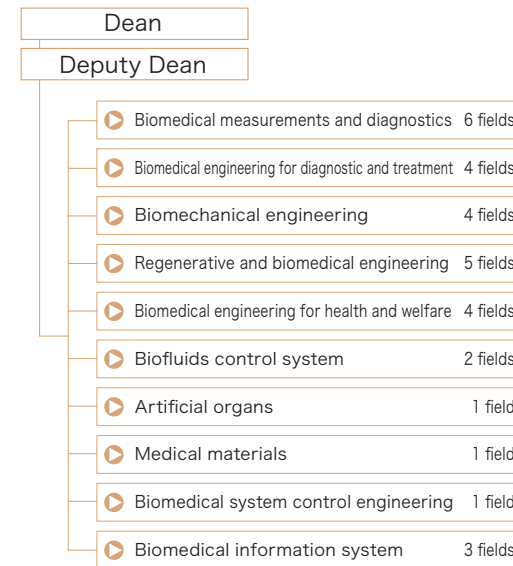
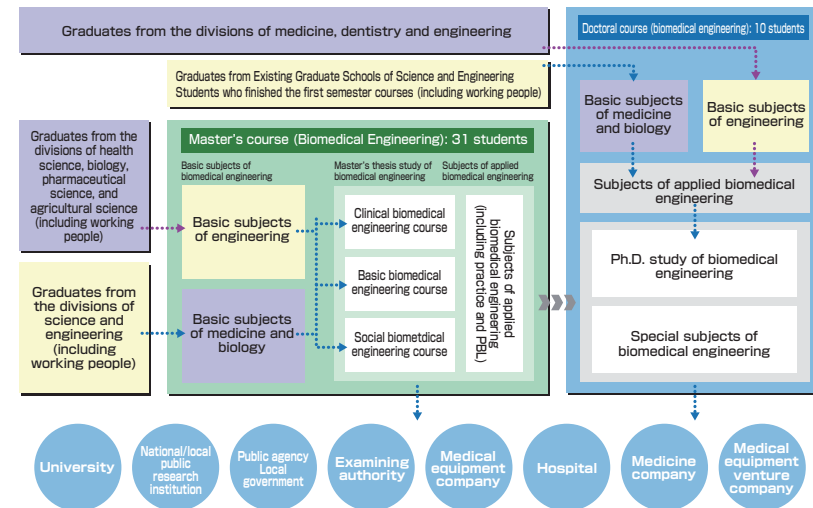


The first Graduate School of Biomedical Engineering in Japan was created at Tohoku University in April 2008. Biomedical Engineering is a new academic field that is based on physics, chemistry and biology, and also, a fusion of those sciences.

The mission of this fusion field is to approach the wonder of life by fully using engineering knowledge and technologies to elucidate the functions of life, to result in reforms of medicine and medical care to make a contribution to social welfare.

At Tohoku University, there was already joint research between engineering and medicine leading to the development of an electric stethoscope in 1925, and since then, there has been much research and development that pioneers biomedical engineering.

Such a progressive spirit in the collaboration of different fields is the basis for the creation of the Graduate School of Biomedical Engineering. The university is going to inherit the knowledge of preceding generations and develop students so that the students of the first generation of this Graduate School can become human resources to open the field of biometric engineering in the world.



"Innovation of New Biomedical Engineering Center" for TR

http://www.hosp.tohoku.ac.jp/tr_center/index.html

Nowadays, basic research results in the field of life sciences in Japan are highly evaluated internationally. It is, however, pointed out that a lack of a base support system for translational research (TR) to clinically apply such results allows little reflection of them in practical medicine. Tohoku University, therefore, created the Innovation of New Biomedical Engineering Center at the Tohoku University Hospital to carry out TR as one of the university-wide initiatives in February 2008. This makes it possible for all the clinical departments to gather all of their capacity to drive next-generation medical practice systematically. In addition, for clinical applications of the results, a review system by an organization of the Center comprising external members is being set up to strictly analyze and evaluate the applications, with the aim of spreading sophisticated and advanced medical care in society.

Environment and System for Developing World-Leading Research

Seven Projects Accepted in the Global COE Program of 2008

The Global COE Program is a successor to the 21st Century COE Program that the Ministry of Education, Culture, Sports, Science and Technology has implemented since financial year 2002 mainly to form globally excellent education and research programs in order to develop creative human resources to lead the world. Seven of the 12 programs that Tohoku University submitted as applications for this Program were accepted. In the selection for the Global COE Program, applications are reviewed in terms of the

potential development of the planned centers for education and research that function to develop human resources, on the precondition that the centers have excellent research bases of the world-highest level and also such bases for academic fields with some significant features. This year, 315 applications from 130 national, public, and private universities were reviewed, and 68 applications from 29 universities were selected.

Year	Research Fields	Program Leader	Organization	Program Title
Financial Year 2007	Life Sciences	Noriko Osumi	Graduate School of Medicine	Basic & Translational Research Center for Global Brain Science http://www.sendaibrain.org/
	Chemistry, Material Sciences	Masahiko Yamaguchi	Graduate School of Pharmaceutical Sciences	International Center of Research & Education for Molecular Complex Chemistry http://iremc.pharm.tohoku.ac.jp/index_en.html
	Chemistry, Material Sciences	Takashi Goto	Institute for Materials Research	Materials Integration International Center of Education and Research http://www.gcoe.imr.edu/en/index.html
	Information, Electrical and Electronic Sciences	Fumiyuki Adachi	Graduate School of Engineering	Center of Education and Research for Information Electronics Systems http://www.ecei.tohoku.ac.jp/gcoe/
	Interdisciplinary, Combined Fields, New Disciplines	Takami Yamaguchi	Graduate School of Biomedical Engineering	Global Nano-Biomedical Engineering Education and Research Network Centre http://www.nanobme.org/en/index.html
Financial Year 2008	Medicine	Yoshitomo Oka	Graduate School of Medicine	Global COE for Conquest of Signal Transduction Diseases with "Network Medicine" http://www.nm-gcoe.med.tohoku.ac.jp/english/index.html
	Mathematics, Physics, and Earth Sciences	Kunio Inoue	Graduate School of Science	Weaving Science Web beyond Particle-Matter Hierarchy http://www.scienceweb.tohoku.ac.jp/english/index.html
	Mathematics, Physics, and Earth Sciences	Eiji Ohtani	Graduate School of Science	Global Education and Research Center for Earth and Planetary Dynamics http://www.gcoe.geophys.tohoku.ac.jp/index-e.htm
	Mechanics, civil engineering, architecture, and other engineering	Shigenao Maruyama	Institute of Fluid Science	World Center of Education and Research for Transdisciplinary Flow Dynamics http://www.ifs.tohoku.ac.jp/gcoe/index-e.html
	Social Sciences	Yoshimichi Sato	Graduate School of Arts and Letters	Center for the Study of Social Stratification and Inequality http://www.sal.tohoku.ac.jp/coe/index.html
	Social Sciences	Miyoko Tsujimura	School of Law	Gender Equality and Multicultural Conviviality in the Age of Globalization http://www.law.tohoku.ac.jp/gcoe/english/index.html
	Interdisciplinary, combined fields, new disciplines	Tohru Nakashizuka	Graduate School of Life Sciences	Center for Ecosystem Management Adapting to Global Change http://memo.biology.tohoku.ac.jp/gcoe/index_english.html

Topics

Number of projects approved as a Global COE Program

The Global COE Program of the Ministry of Education, Culture, Sports, Science and Technology help create centers of education and research excellence of the world's highest order. Five programs proposed by Tohoku University in 2007 and seven in 2008 were selected. As a result, Tohoku University is in second place among the universities in terms of the number of programs under the Global COE Program.

1 The University of Tokyo	16
2 Tohoku University	12
2 Kyoto University	12
4 Osaka University	11
5 Tokyo Institute of Technology	8

International Advanced Research and Education Organization - an across-the University Education Support System

<http://www.iiare.tohoku.ac.jp>

In April 2007, Tohoku University established the International Advanced Research and Education Organization as a new education support system to train world-class young researchers. This Organization has a role of coordinating on a centralized basis measures to deal with the issue of post-doctoral positions for young researchers and measures to enhance graduate school education in

research in interdisciplinary fields that are taken by the Institute for International Advanced Interdisciplinary Research established in April 2007 and by the Institute for International Advanced Research and Education established in 2006.



Institute of Liberal Arts and Sciences, a New Organization to be a Foundation for University Education

Liberal arts education is absolutely essential for students to improve their human awareness, acquire a broad view of the world, and establish a solid foundation for further specialized education. It is also important for them to create research fusing different fields in graduate schools. On those ideas, after it abolished the College of General Education, Tohoku University created original curricula including basic seminars and established the Institute of Liberal Arts and Sciences in April 2008.

For the teaching staff of the Institute, three retired professors who can provide a wide range of general education, including education for international communication ability, have been appointed as Special Professors by Presidential Appointment.



Masao Akiba, Professor Emeritus | Michio Umino, Professor Emeritus | Hiromichi Ebisawa, Professor Emeritus

Topics

Two Distant Cities Bonded over the Teacher-student Relationship of Dr. Fujino and Dr. Xun

Awara City, Fukui Prefecture and the Lu Xun Museum in Beijing exchanged the busts of Dr. Genkuro Fujino and Dr. Lu Xun in the year 2006. Dr. Xun studied at Sendai Medical College (present School of Medicine at Tohoku University), and 2006 was the year when it marked the 100th year after he left Sendai. Awara City is the hometown of Dr. Fujino, who was a good teacher to Dr. Xun. The two busts were later donated to Tohoku University in 2007 in commemoration of the 100th anniversary of the university. As Tohoku University celebrated the 100th year anniversary,



Tohoku University Library