

Course Number	07005
---------------	-------

2007 「The International Priority Graduate Programs (PGP)」

~Advanced Graduate Courses for International Students~

【1. Profile of the University】

①University Department	Tokyo Institute of Technology Interdisciplinary Graduate School of Science and Engineering		
②President	IGA, Kenichi		
③Address (Headquarters)	〒152-8550 2-12-1 O-okayama, Meguro-ku, Tokyo, Japan		
④Contact	Division	Head, International Student Division	
	Contact person's Name	OKAWA, Harumi	e-mail ryugakusei@jim.titech.ac.jp
	TEL/FAX Number	TEL/FAX Number +81-3-5734-3027, 7667/+81-3-5734-3677	
⑤Web-Address	http://www.titech.ac.jp/		
⑥Enrollment (only GraduateSchool)	653 (include MEXT's Scholarship Students : 278)		

【2. Outline of the Course】

①Course	International Program on Earthquake Engineering
②Degree	D.Eng., D.Sci., and Ph.D (Integrated Doctoral Education Program, 3-5 years)
③Form	This program is performed in a single university
④Graduate Course, Department	Department of Built Environment (Interdisciplinary Graduate School of Science and Engineering)
	(Address) 4259 Nagatsuta, Midori-ku, Yokohama 226-8502, Japan
⑤Collaboration (Universities, Graduate courses, Departments)	Interdisciplinary Graduate School of Science and Engineering Dept. of Environmental Science and Technology School of Science and Engineering Dept. of Architecture and Building Engineering Dept. of Civil Engineering Dept. of International Development Engineering School of Information Science and Engineering Dept. of Mechanical and Environmental Informatics
⑥Quota	15 (include MEXT's Scholarship Students: 5) (include Japanese : 5)
⑦Faculties	33 (Fulltime: 30 Full-time(other department): 0 Parttime: 3)
⑧Representative of the Course	Job Title Dean, Interdisciplinary Graduate School of Science and Engineering
	Name Prof. MISHIMA, Yoshinao

INTERNATIONAL PROGRAM ON EARTHQUAKE ENGINEERING

Seismically active metropolitan areas in Japan as well as other countries are becoming much more vulnerable to earthquakes, due to increasing populations and complexity of urban environments. Because of Japan's experience with urban seismic disasters, it has developed leading technologies for seismic hazard mitigation. A key mission of the International Program on Earthquake Engineering is to transfer such technologies to other countries, thereby contributing to earthquake hazard mitigation world-wide.

The program is designed to utilize strong ties with other foreign and domestic institutes, in order to produce highly skilled engineers and researchers (Figure 1). Graduates of this program are expected to lead the development and research activities of earthquake engineering in their home countries, which can lead to seismic risk reduction in their countries, as well as global stabilization of the world-wide communities.

CONTENTS AND DISTINCTIVE FEATURES

The graduate program is a part of the 21st Century Center of Excellence (COE) program entitled "Evolution of Urban Earthquake Engineering" that was awarded on a competitive basis by the Ministry of Education, Culture, Sport, and Technology (MEXT). The program won the support from the MEXT, and has been receiving funds for its operation since 2002. This COE program aims not only to promote research for the overall earthquake risk reduction technology, but also to strengthen the graduate education program as well as to launch international collaboration in research and education.

The graduate program encompasses the two campuses of the university. Six departments belonging to three different faculties collaborate in the program. The program provides the students with a broad education in seismic mitigation practices as well as international communication skills. The following are overviews of the course subjects.

I. Applied Mathematics and Social Science

Applied mathematics and social science courses are essential background for highly skilled seismic professions. These consist of lectures and lab exercises, covering applied and numerical mathematics, as well as social science especially related to environment and social problems related to disasters.

II. Advanced Technology for Earthquake Disaster Mitigation:

These include courses dealing with very effective advanced technologies for the creation of safer cities and communities. This subject involves courses addressing seismic hazard and risk simulation technology, smart material structures, intelligent passive and active control, real-time processing of ground profile survey, high seismic performance foundations, and real-time earthquake information system.

III. Renovation Technology for Urban Earthquake Resilience:

These deal with various schemes and design concepts for reduction seismic risks in existing cities and communities. This subject involves courses addressing seismic evaluation of existing facilities in urban areas, comprehensive disaster mitigation technology for ground and underground structures, seismic retrofit technologies with limited environmental impact, regional planning for mitigating fire spread, evacuation planning, and universal design for disaster mitigation.

IV. Strategic Plan for Urban Seismic Risk Reduction:

These relate to development of practical strategies for reducing seismic risks of urban cities, yet are also friendly to people and environment. This subject involves evaluation of urban seismic risks, evaluation of investment required for risk reduction, performance-based design, damage control design, and earthquake education.

Students are also required to enroll in the internship program to gain experience in actual strategic planning and international communications. Teaching of courses necessary to fulfill the requirement for the degree, academic supervision and advising, presentation of thesis, and examinations are done in English. Students are assigned an academic coordinator specialized in the planning and day-to-day program operation thereby ensuring effectiveness of the educational experience.

POST-GRADUATE CAREER EMPLOYMENT

Japanese students are expected to be employed by companies engaged in seismic mitigation and technology, government administrative organizations, international organizations, universities, and research institutes. The type of the work would be seismic mitigation engineering, management and administration, and education and research.

Foreign students are expected to be employed by companies, government organizations, and universities in their home countries, and would make significant contribution for growth of seismic mitigation technologies of their countries. They may also work for Japanese research institutes or companies.

Both the Japanese and foreign students are expected to play a leading role in the area of earthquake engineering world-wide.

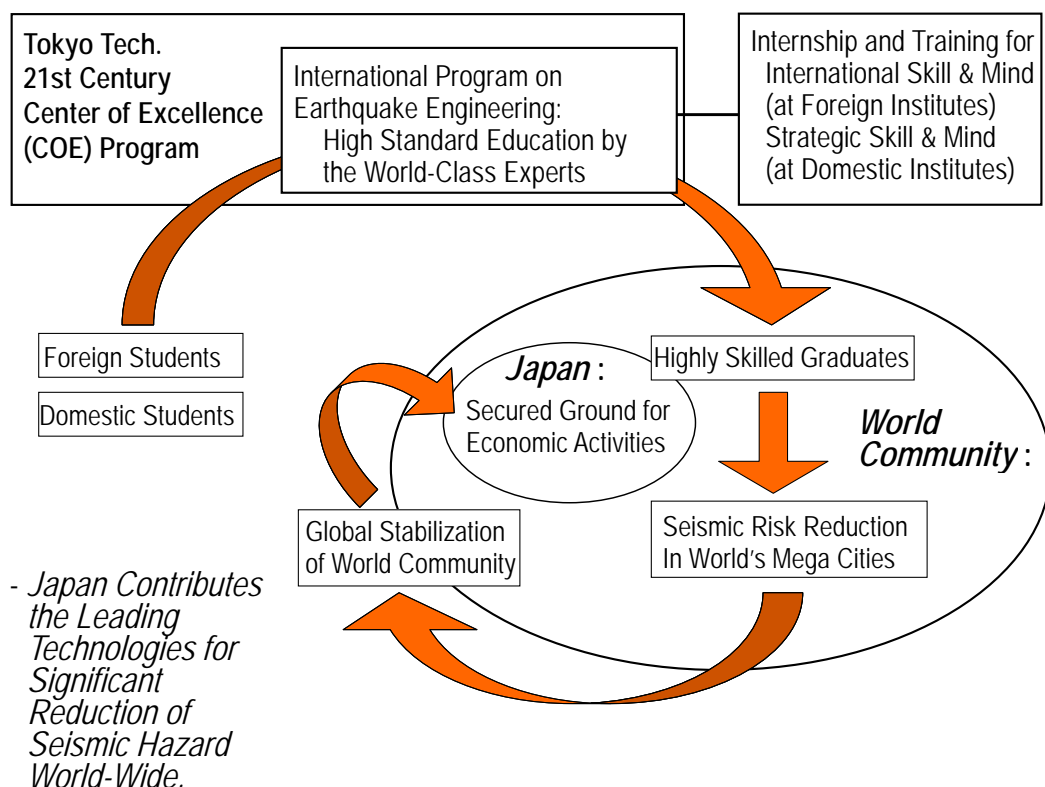


Figure 1 Concept and Effect of International Program on Earthquake Engineering