

<b>Sub-Program/ Component</b>	<b>Development of infrastructure to Promote Economic Activity (Development Engineering · Information Communication Technology)</b>
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<b>1.</b>	<b>University</b>	<b>Tokyo Institute of Technology</b> (National)
	<b>Graduate School</b>	Department of International Development Engineering, Graduate School of Science and Engineering
	<b>URL of University</b>	<a href="http://www.titech.ac.jp/english/index.html">http://www.titech.ac.jp/english/index.html</a>
	<b>URL of Graduate School</b>	<a href="http://www.ide.titech.ac.jp/index.html">http://www.ide.titech.ac.jp/index.html</a>
	<b>Program name</b>	Department of International Development Engineering
	<b>Degrees</b>	· Master of Engineering · Master of Arts
	<b>Credit and years needed for graduation</b>	30 Credits, 2 Years
	<b>Note</b>	The student is required to study for two years and to get 30 credits to complete the Master course. One 2-credit course consists of fifteen 90-minutes lectures including examination. In addition, the student should submit the master thesis and pass the final examination. Among the 30 credits, 8 compulsory credits are obtained through the seminars and the laboratory activities, which are supervised by the advisor. At least 16 credits including above 8 credits should be the courses provided in the Department. Among the rest 14 credits, 4 credits should be the courses provided in other departments. In addition to 30 credits, the student can take the Minor certificate by getting 8 credits provided in a single department.

## 2. Features of University

Tokyo Institute of Technology - TOKYO TECH - develops distinctive students with outstanding qualities of creativity and leadership. TOKYO TECH is making significant contributions to science and technology in many fields of expertise, creating new and powerful synergies. TOKYO TECH, being a research-based university, is dedicated to education and research, and to exploring knowledge in science and technology. Pursuing excellence, TOKYO TECH serves society and the world.

Some figures: (As of 2010/5/10)

- Founded in 1881, and has been a prominent science and engineering university in Japan
- Budget for FY 2008: 44,954 mil. Yen
- Number of Research and Teaching staff: 1,079 (Profs.:380, Asso.Profs.:330, Assit.Profs.:369)
- Number of students: 10,051 (Grads: 5,183, Undergrads: 4,861, Research Students:128)

•Number of International students from abroad: 1,247 (graduate:847, undergrad.:238, non-degree students:162, from 77 different countries)

### **3. Features of Graduate School**

Graduate School of Science and Engineering

The underlying philosophy of the School is to contribute to the sustained advancement of humankind through the advancement of science and the creation of pioneering technologies based on a tradition of engineering excellence, the eternal and priceless source of knowledge accumulated over many generations. The School is resolved to encourage students to recognize the importance of the discovery and analysis of new phenomena as well as experimental synthesis, design optimization and innovation, so that they may better contribute to a deep understanding of the global issues of the new millennium.

Charter

1. To participate with intellectual curiosity and determination in the creation of new knowledge based on our tradition of engineering excellence.
2. To create an intellectually inspiring campus through the free exchange of views and information between departments and individual members of the School.
3. To promote the creation of knowledge by encouraging constructive interactions between individuals from diverse backgrounds.
4. To create new fields of study for the future of the Earth and humankind; and to contribute to society and the local community by supporting the development of new industries.

### **4. Features of the Program**

Department of International Development Engineering

The department creates academic and technical achievements as well as to produce human resources that can provide the sustainable solutions, by deeply analyzing various problems in the globalized society, on the basis of engineering.

Program Description

The goal of the education in the department is to produce the engineers who can take the leadership in the sustainable development of the global society by utilizing the science and technology. The areas of their contributions include the industry, public works, information and communication technologies, and environment. Toward this goal, several unique components are integrated into the course: first, skills on project formulation and management are emphasized. In addition to the case method, the ongoing international development projects are used as the course materials for the analyses of the problems and their solutions. The skills provide the vision of the high level “problem solution” to the engineering students. Second, advanced knowledge in engineering fields is provided with the focus on the sustainable development. Third, internship and field work are provided as an elective course. Fourth, thesis writing provides an opportunity for the training to build the capacity as the engineer. The searching for solution for a specific development problem is emphasized in addition to technology itself. Therefore, a co-advisor from different engineering fields may be appointed on request.

The weights of the curricula in international development and the engineering are about 3:7.

## 5. Necessary Curriculum to Obtain to the Degrees

Please see the attached sheet.

## 6. Academic Schedule

### Academic Calendar of 2011-2012

<b>2011</b>	
April 4 (Mon)	Orientation divided according to academic groups for undergraduate freshmen
April 5 (Tue)	Orientation for undergraduate freshman
<b>Spring Semester</b>	
April 6 (Wed)-July 28 (Thu), 30 (Sat), 30 (Sat), 8 (Fri), 9 (Sat) No classes	Classes (16 weeks 3 days)
April 28 (Thu)	Friday schedule of classes to be held
April 29 (Fri) Showa day	Thursday schedule of classes to be held
May 3 (Tue) constitution Memorial Day (holiday)	Tuesday schedule of classes to be held
May 4 (Wed) Greenery Day (holiday)	Wednesday schedule of classes to be held
May 5 (Thu) Children's Day (holiday)	Thursday schedule classes to be held
May 11 (Wed)	Friday schedule of classes to be held
May 13 (Fri)	Suzukakedai Campus Festival preparation, Wednesday schedule classes to be held
May 14 (Sat)	Suzukakedai Campus Festival (no classes)
May 15 (Sun)	Suzukakedai Campus festival
May 21 (Sat)	Monday schedule classes to be held
May 26 (Wed)	Tokyo Tech Foundation Day (Monday classes will be held on July 22 (Thu))
May 28 (Sat)	Tuesday classes to be held
June 4 (Sat)	Friday schedule classes to be held
June 11 (Sat)	Monday schedule classes or makeup lessons to be held
June 18 (Sat)	Tuesday schedule classes or makeup lessons to be held
June 25 (Sat)	Wednesday schedule classes or makeup lessons to be held
July 11 (Mon) - August 8 (Mon)	Make-up class days and examinations (2 weeks)
July 18 (Mon)	Marine Day (holiday, no classes)
August 9 (Sun) - September 30 (Fri)	Summer holidays (7 weeks 4 days)
September 26 (Mon)	Diploma Conferring Ceremony (Undergraduate / Graduate)
<b>Autumn Semester</b>	
October 1 (Sat)	Start of the Second Semester
October 3 (Mon)	Entrance Ceremony for October-enrollment Graduate Students
October 1 (Sat) - December 22 (Thu)	Classes (11 weeks 5 days)
October 10 (Mon)	Health and Sports Day (holiday, no classes)
October 18 (Tue)	Friday schedule of classes to be held
October 21 (Fri)	Ookayama Campus Festival preparation (no classes)

October 22 (Sat)	Ookayama Campus Festival (no classes)
October 23 (Sun)	Ookayama Campus Festival
October 24 (Mon)	Ookayama Campus Festival Clean-up (no classes)
October 27 (Thu)	Monday schedule of classes to be held
November 3 (Thu)	Culture Day (holiday, no classes)
November 23 (Wed)	Labour Thanksgiving Day (holiday, no classes)
December 23 (Fri)	Emperor's Birthday(holiday)
December 23 (Thu) - January 4(Wed)	Winter holidays (1 week 6days)
<b>2012</b>	
January 5 (Thu) - February 6 (Mon)	Classes (4 weeks 5 days)
January 9 (Mon)	Coming-of-Age Day(holiday no classes)
January 13 (Fri)	National Center Test preparation (no classes)
January 14 (Sat)	National Center Test Examination (no classes)
January 15 (Sun)	National Center Test Examination
February 7 (Tue) - February 15 (Tue)	Examinations(7days)
February 11 (Sat)	National Foundation Day(holiday)
February 16 (Wed) -	Spring holidays begin
February 25 (Sat)	Entrance exams
February 26 (Sun)	Entrance exams
March 12 (Mon)	Entrance exams
March 20 (Tue)	Vernal Equinox Day(holiday)
March 26 (Mon)	Diploma Conferring Ceremony (Undergraduate / Graduate)

(Reference)

2011

May 14(Sat) - May 15(Sun)      Suzukakedai Campus Festival

August 11(Thu) - August 12(Fri)      All facilities are closed

October 22(Sat) - October 23(Sun)      Ookayama Campus Festival

2012

January 14(Sat) - January 15(Sun)      National Center Test Examination

February 25(Sat) - February 26(Sun)

March 12(Mon)

· Saturday classes will be held only at Graduate School of Innovation Management.

· November 16(Wed) afternoon      Disaster drills

(The information above can be found at: [http://www.gakumu.titech.ac.jp/nyusi/prospectus/index\\_e.html](http://www.gakumu.titech.ac.jp/nyusi/prospectus/index_e.html))

## 7. Facilities

The students are provided computers and study spaces in the laboratories of their supervisors. Tokyo Tech Information Infrastructure, including e-mail account, campus wireless LAN, VPN connection, etc., is available for all registered students. Many common facilities for research and daily life are also available. Here is the listed a few of them:

- **Tokyo Tech Library** provides the comprehensive Digital Library as well as the vast collection of academic journals and books. ([http://www.libra.titech.ac.jp/welcome\\_e.php](http://www.libra.titech.ac.jp/welcome_e.php))
- **Global Scientific Information and Computing Center** provides the network and computing services, including TSUBAME (Tokyo-tech Supercomputer and Ubiquitously Accessible Mass-storage Environment) Grid Cluster, which is the fastest supercomputer in Asia or the 9th

in the world (November 2006 by <http://www.top500.org>). Please see the following URL for the more detailed information (<http://www.gsic.titech.ac.jp/en>).

- **Art and Crafts Education and Research Support Center** provides the training programs and facilities of machine tools and electric works.
- **Health Service Center** gives various supports to students, such as regular medical checkups and health counseling.  
(<http://www.gakumu.titech.ac.jp/gakuseisien/health/center/english/index.html>)
- **International Student Center** provides counseling and support services for international students, Japanese language education, and vibrant cultural activities.  
<http://www.ryu.titech.ac.jp/english/index.html>
- There are **dormitories** for international students but availability is less likely due to over-flowing demand against the limited capacity.  
Facilities: Lavatories, Multi-Purpose Room, Reading Room, Kitchen, Laundry Room

## 8. List of Faculty Members Capable of Guiding JDS Fellows

### Professors:

<u>OTSUKI, Nobuaki</u> , D. Eng.	Construction Materials
<u>HINODE, Hirofumi</u> , D. Eng.	Inorganic Materials and Properties, Catalyst and Chemical, Process, Chemical Engineering in General
<u>TAKADA, Jun-ichi</u> , D. Eng.	Wireless Communications, ICT and Development
<u>MOCHIMARU, Yoshihiro</u> , D. Eng.	Fluid Dynamics, Thermal Engineering, Chemical Engineering
<u>KANDA, Manabu</u> , D. Eng.	Environmental Hydrology
<u>NAKASAKI, Kiyohiko</u> , D. Eng.	Environmental Engineering, Biochemical Engineering
<u>HIROSE, Sachio</u> , D. Eng.	International Student Education, Biochemical Engineering, Diagnostic Reagents, Polymer Engineering
<u>YAMAGUCHI, Shinobu</u> , Ph. D.	Education and IT, International Development and Cooperation, Sustainable Development of World Cultural Heritage

### Associate Professors:

<u>ABE, Naoya</u> , Ph. D.	Environmental Economics and Planning, Policy Studies
<u>HANAOKA, Shinya</u> , D. Info. Sci.	Transportation Engineering, Project Management
<u>YAMASHITA, Yukihiro</u> , D. Eng.	Computer Science, Intelligent Informatics
<u>EGASHIRA, Ryuichi</u> , D. Eng.	Separation Engineering, Separation Process, Separation Operation
<u>TAKAHASHI, Kunio</u> , D. Eng.	Certification System of Engineers, Sustainable Processes in Joining, Welding, Tribology, Surface Science and Technology
<u>PIPATPONGSA Thirapong</u> , D. Eng.	Geotechnical Engineering, Continuum Mechanics
<u>TAKAGI, Hiroshi</u> , D.Eng.	Coastal Engineering, Disaster Prevention Engineering

(Dr. Takagi will join IDE on July 1, 2011)

**Note: Both Profs. Hirose and Mochimaru cannot be advisers to incoming students due to their planned retirements in 2012.**

## **9. Message for Applicants**

The Department of International Development Engineering (IDE) was established to foster engineers who can contribute to global welfare from a technical aspect. IDE develops global engineers who can lead others in international fields, solve problems related to poverty and regional differences in developing countries, and work to halt the worldwide destruction of the environment by utilizing science and technology.

The field of science and technology is becoming borderless and more open, and in line with this trend, we have lowered the barriers between individual and traditional engineering fields to offer a curriculum in which students can learn universal concepts in a comprehensive and interdisciplinary way. We also provide lectures by engineers and businessmen working in their fields throughout the world, and offer overseas internships and field work in order to help students develop communication skills that will help them discuss topics of interest with their counterparts overseas and acquire knowledge to help them take the initiative in global projects.

Let's take a step toward becoming a global engineer who can make decisions on the international stage beyond the boundaries of disciplines and nationalities.