



**Keio University**  
Graduate School of  
Science and Technology

**Double Degree  
Program**

***Graduate Programs  
for Internationally  
Minded Scientists  
and Engineers***



JAPAN

## What Size Is Your World?

The founder of Keio University, Yukichi Fukuzawa, was one of the first Japanese to experience the vastness of the world beyond Japan. In 1860, only two years after he founded Keio University, he sailed to the United States, and two years later he visited Europe. He introduced the immensity of the world to the Japanese, who knew little outside their own country and explained its significance through great writings such as *Seiyo Jijo* (Conditions in the West) and *Bunmeiron no Gairyaku* (An Outline of a Theory of Civilization).

It has been 150 years since Yukichi Fukuzawa began his travels, and in that time the world has become both more complex and more accessible. We invite you to travel to Japan and study at Keio University, one of the country's most prestigious universities, to explore and understand those complexities.

At Keio, you will prepare yourself to become a top-rank scientist and/or engineer. You will gain invaluable experience learning how Japanese industries function and meet engineers who develop cutting-edge technologies, and your ability to connect across cultures will establish you as a truly multicultural person with a broad perspective.

Today, it is our own energy and range of activities that determine whether we see the world as excessively large or comfortably small. Let Keio be your gateway to a perfectly sized world.



# Progress and Innovation

## History

Keio University is Japan's oldest private university, founded in 1858 by the internationally minded Yukichi Fukuzawa. After traveling extensively in Europe and the United States, Fukuzawa (whose portrait is on the 10,000 yen note) was convinced that a global perspective is essential for success and leadership. As a result, Keio has always placed a high priority on educating students in an atmosphere of international learning and cooperation.

Priding itself on progress and innovation, the university is in a constant state of growth, and presently consists of 10 undergraduate faculties and 14 graduate schools on six different campuses, as well as seven affiliated schools, a medical institution and several research centers.

For more information about the university and its history, see [http://www.keio.ac.jp/english/about\\_keio/index.html](http://www.keio.ac.jp/english/about_keio/index.html)

## Research Activities

Keio has more than 30 research centers on its main campuses and at other facilities, making it one of the primary engines for advanced research in Japan. In fiscal 2008, research funds totaled 17 billion yen (188 million US\$), and there were 2,101 researchers and 356 visiting researchers.

## Global Partnerships

Keio has 242 partnerships with universities and organizations in 44 countries, involving both education and research in wide-ranging areas. Students from partner universities pursue degree work and research projects in English, and are able to study Japanese as well. At the institutional level, joint research projects are underway with over 200 organizations.

### Jean Klingler (EC Lille)

#### Why did you first become interested in DD Program?

Before "integrating" Ecole Centrale, I was interested in the international possibilities offered by the different Grandes Ecoles and was already thinking about doing a DD Program. After two years of Classes Préparatoires, I was aiming for a new challenge, which would be likely to increase my open-mindedness along with my polyvalence, so I thought that an international mobility would meet this expectation perfectly. Besides the fact that such a program could truly be a valuable asset to start an international career, which is my objective, it is also a unique opportunity to acquire a new foreign language and to live a very pleasant cultural and human experience.

## Undergraduate Faculties

- |                      |                        |
|----------------------|------------------------|
| Letters              | Policy Management      |
| Economics            | Environmental          |
| Law                  | Information            |
| Business & Commerce  | Nursing & Medical Care |
| School of Medicine   | Pharmacy               |
| Science & Technology |                        |

## Graduate Schools

- |  |                              |
|--|------------------------------|
| Letters  | Media & Governance           |
| Economics                                      | Health Management            |
| Law  | Law School                   |
| Human Relations                                | System Design and Management |
| Business & Commerce                            | Media Design                 |
| School of Medicine                             | Pharmacy                     |
| Science & Technology                           |                              |
| Business Administration (Keio Business School) |                              |



# The Graduate School of Science and Technology

## ***Broad Curriculum with Great Flexibility***

Located on the Yagami Campus, the Graduate School of Science and Technology has 1,638 Japanese students, 153 international students and a teaching staff of 571, including 288 part-time lecturers (2009 figures). It offers degrees in 11 fields of study, which are integrated into three schools: the School of Fundamental Science and Technology, the School of Integrated Design Engineering, and the School of Science for Open and Environmental Systems.

The strength of this integrated system is that it provides a flexible structure that enables a transdisciplinary education in which students can freely access different fields of study. Each of the three schools encompasses a broad range of fields, and students can flexibly choose among them. The schools are further subdivided in faculty groupings called "Centers," in which teaching and research units are structured for organizational adaptability and flexibility.

## ***Vision for Students***

The primary educational focus of the Graduate School of Science and Technology is on eliciting the native talents of each student, and awakening their ability to independently pose questions and then work to solve them. Our aim is to not only foster the capacity to produce innovative world-class research, but also to provide society with leaders. We are proud that our program has produced a large number of highly talented individuals—not only researchers, but also venture entrepreneurs, specialists with responsible roles in society, and leaders in various fields of science and engineering.

## ***Global COE Program***

The Global Centers of Excellence (G-COE) Program is sponsored by Japan's Ministry of Education, Culture, Sports, Science and Technology to provide strategic support for the formation of world-class centers for research and education, and for the training of skilled, creative people who can become leaders in their fields. The Graduate School of Science and Technology has had a number of its proposals accepted for the G-COE Program, helping maintain Keio's position as the best private university in Japan. Students in our doctoral programs receive substantial financial aid by serving as research staff on implemented G-COE projects.



# International Graduate Programs on Advanced Science and Technology (IGP)

The International Graduate Programs on Advanced Science and Technology (IGP) were initiated by the Graduate School of Science and Technology in 2003, enabling international students without Japanese ability to earn Master's and doctoral degrees at Keio. All academic affairs, including admission, lectures, research guidance, thesis writing and thesis defense, are conducted in English, although students do have the opportunity to study Japanese language and culture. The lectures in these programs are also open to enrollment by Japanese students, providing an international atmosphere for study and research.

The IGP is particularly suitable for international students who want to pursue a double degree at the Master's level. The Master's program consists of one year of independent study and one year of graduate research. The doctoral program requires an additional three years of study. The primary objective of the Master's program is to establish advanced fundamentals in science and technology through course work and independent research projects, with guidance and supervision from faculty members.

All science and engineering facilities, including research laboratories, are top class. In many cases, students are entrusted with managing the laboratory themselves, including network management, websites, acquisitions of books and other materials, and even research applications to firms and foundations. With support from governmental and corporate research foundations, students are encouraged to present their achievements at international conferences and in scientific journals.

## Seven programs are available for the IGP Master's degree:

- Nanoscience Program
- Biomedical Engineering Program
- Electronics and Photonics Program
- Mechanics and Manufacturing Program
- Computer Science and Communication Technology Program
- Environment and Multi-Scale Dynamics Program
- Open Systems Management Program



### **Daniel Marin** (EC Paris)

#### **How do you like Japan and campus life at Keio?**

I really enjoy both Japan and campus life. I'm in an environment where there are a lot of interesting people coming from all over the world, so I can make new encounters every day in my laboratory or in the campus. And there is so much to discover about Japan because the place is well adapted to make acquaintances. Of course there is work, but also free time we can use to know, visit, and enjoy Japan. Furthermore, I'm living in an international residence, where there are always some events to go to or some delicious Japanese food to taste with new friends.

## Faculty and Graduate School of Science and Technology

Teaching Staff	
Professors	144
Associate Professors	65
Assistant Professors	43
Research Associates	31
Total	283
Students	
Undergraduate	4316
Graduate	1791
Total	6107

As of April 2009

# Fostering International Engineers

*The DD program is available with French and Swedish institutions, and will be expanding to other countries*

In October 2007, Keio became a member university of the T.I.M.E. (Top Industrial Managers for Europe) Association. T.I.M.E. is a network of over 50 leading engineering schools and technical universities. Through a system of voluntary bilateral agreements between its members, the network promotes and recognizes academic excellence and relevance to the international labor market in the form of Double Degrees in engineering and related fields. By joining this prestigious association, Keio will be extending its Double Degree Program to European institutions in the network. Some T.I.M.E. institutions already have academic agreements with Keio University: TU Dresden, RWTH Aachen, TU Darmstadt, TU München (Germany); Politecnico di Milano (Italy); UP Madrid, UP Catalunya (Spain); and KTH (Sweden).

## Groupe des Ecoles Centrales

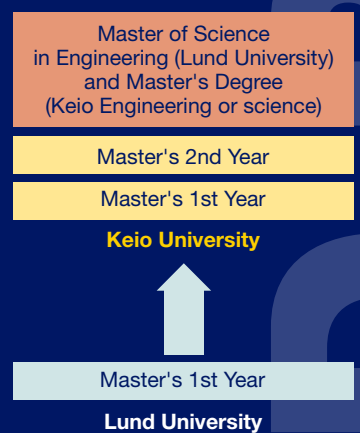
Keio has been exchanging students under the Double Degree Program with Groupe des Ecoles Centrales (EC) since 2005. The program is open to both Keio and EC students. Keio students do two years of study at the Faculty of Science and Technology, followed by a two-year curriculum at an EC school, and then a two-year Master's program at the Graduate School of Science and Technology. EC students do two years at their school in France, then the two-year Master's program at Keio. Upon concluding the program, students receive a Master's Degree from Keio and a Centrale Engineering Degree from the EC.

Groupe des Ecoles Centrales is a group of Grandes Ecoles (elite schools). There are five Grandes Ecoles for engineering in Lille, Lyon, Marseille, Nantes and Paris. These schools are certified in France as institutes of higher education that provide an engineering education that incorporate internship programs at business organizations and overseas study programs into their curriculum. The EC education system, which fosters engineering experts and internationally minded generalists, is highly regarded both in France and abroad. Strong partnerships with industries are another advantage of the group.

## Lund University

Lund University students who are enrolled in a Master of Science in Engineering program and have completed a minimum of 3¾ years of studies at Lund University are entitled to continue in the two-year Master's program at Keio University. Keio University students who are enrolled in a Masters' program and have completed one semester of studies at Keio University are entitled to continue their curriculum at Lund University. Keio University students will study at Lund University for a minimum of three semesters, then return to the final year of their Master's program at Keio University. When the degree requirements are fulfilled at both institutions, candidates are awarded the degrees Master of Science from Keio University and Civilingenjörsexamen (Master of Science in Engineering) from Lund University.

Lund University is located in southernmost Sweden. Along with the University of Uppsala, the University of Gothenburg and Stockholm University, it is one of Sweden's most prestigious universities and one of Scandinavia's largest institutions for education and research, especially in the fields of Science and Technology and Medical Science. Founded in 1666, Lund University is the second-oldest Swedish university and has produced many Nobel Prize laureates.



*Japan's second-largest city*

# Living on the Yagami Campus

## ***Yokohama***

Although only a short train ride from one of Tokyo's major hubs, Shibuya, the Yagami campus is even closer to central Yokohama. Located just south of Tokyo, Yokohama is Japan's second-largest city, with a population of 3.67 million. Well known for having the largest Chinatown in Japan, Yokohama is also popular for its fashionable Motomachi shopping area, the Yokohama Marine Tower, Yamashita Park and the futuristic Minato Mirai 21 harborside area, which includes Landmark Tower, the tallest building in Japan. Yokohama is also home to a professional baseball team and two professional football teams.

## ***Housing***

International graduate students are offered residence within walking distance of the campus for a period of up to two years. Japanese students serve as residence assistants to provide daily support. The university will also assist students in finding their own accommodations.

## ***Japanese Classes***

Students have the opportunity to take Japanese language courses. Classes are organized from beginning to advanced levels, enabling students to increase their ability in a short period. Those without prior knowledge of Japanese can learn basic daily life communication skills from the courses offered.

## ***Support Organizations***

Several organizations on the Yagami Campus offer a variety of events and services to international students. Welcome parties, short trips and bazaars are held several times a year.

## ***Extracurricular Activities***

There are many student activity groups at the Yagami Campus and the nearby Hiyoshi Campus. International students are welcome to join these groups to enjoy sports, Japanese games such as "Go," and cultural activities.

## ***Japanese Government Scholarships (MEXT)***

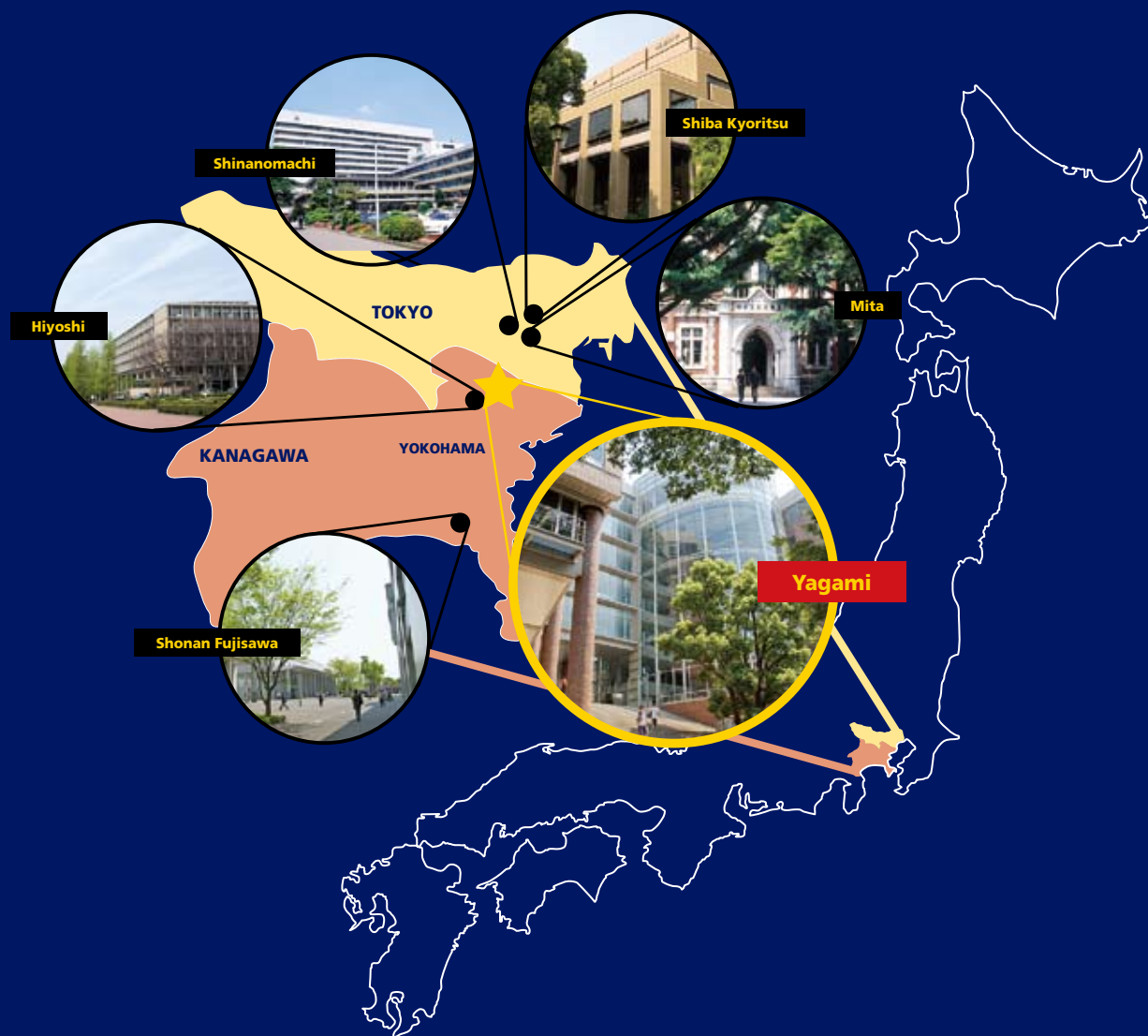
Up to five of the top qualified students will be provided with scholarships that cover tuition, entrance fees, one round-trip air ticket and a monthly stipend. In addition, many scholarships are available for privately financed international students. Please contact the Office of Student Services (International) for more information.



## Keio Campuses in Japan and Abroad

Keio University has six major campuses in Tokyo and Kanagawa prefecture. The main campus is in Mita, located in central Tokyo. The Shinanomachi Campus houses the medical school and university hospital, and the Shiba-Kyoritsu Campus is home to the Pharmacy department, while the Hiyoshi Campus is mainly for freshman and sophomore students. The Yagami Campus is dedicated to science and technology, and the Shonan-Fujisawa Campus specializes in non-traditional approaches to studies and research. The Faculty of Nursing and Medical Care is also located on the Shonan-Fujisawa Campus.

The Keio University system also includes a number of affiliated academic institutions on or near the above campuses, as well as a school in New York.



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STUDY in JAPAN