

## Graduate School of Science and Technology Keio University

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

**Application Guide** 

Master's and Ph.D. Program

April 2018 Enrollment September 2018 Enrollment

### The Management of Personal Information at Keio University

The personal information at Keio University is handled securely and appropriately in compliance with the Basic Policy concerning Protection of Personal Information and Rules for Protection of Personal Information.

The names of individuals, their addresses and other personal information provided by them in connection with applications and admissions procedures will be used in various departments of Keio University for the following purposes:

- 1. Conducting entrance examinations (processing applications, conducting examinations, announcing successful candidates),
- 2. Enrollment procedures,
- 3. Administering, communicating and carrying out procedures concerning academic affairs,
- 4. Administering, communicating and carrying out procedures concerning general student life,
- 5. Administering, communicating and carrying out procedures concerning the use of university facilities and equipment,
- Conducting communications for soliciting donations and recruiting members for the Keio Support Group and the Keio Card
- 7. Sending various documents to students and guarantors and carrying out other communications with them,
- 8. Sending documents to individuals related to the Mita-kai (alumni associations) and
- 9. Conducting other functions related to all or some of the preceding items listed above.

Some of the above operations may be entrusted to subcontractors hired by Keio University. In order for such subcontractors to carry out their work, some or all of the personal information Keio University has received from individuals (the minimum necessary), may be provided to them.

In principle, Keio University does not disclose personal information of individuals to third parties.

In exceptional circumstances, the personal information of an individual may be disclosed to a third party when Keio University bears a legal obligation to do so; when Keio University determines that disclosure is necessary in order to protect the life, health, property, rights, or welfare of an individual; or when any other pressing necessity arises and the permission of the individual concerned cannot be obtained.

### Contents

To the Applicants4
Curriculum4
Application6
Application and Admission Schedule
Application Process
Admission Criteria
Eligibility for Application
Application Documents
Application Fee
Submission of Application Documents
Announcement of Results
Enrollment Registration
Academic Fees
Contact Information11
Application Document Checklist 12

### To the Applicants

In September 2003, the Graduate School launched the International Graduate Program in Advanced Science and Technology (the courses are all conducted in English) which made it possible for students from abroad to earn degrees without having competence in Japanese. The courses in this program are also open to Japanese students. The students are studying in this highly internationalized environment with around 200 international students.

### **Admissions policy**

The Graduate School welcomes applications from a wide range of individuals with the ability to think and act for themselves, who seek to become creative scientists and engineers capable of playing leading roles in a range of fields on the global stage in the borderless world of the 21st century.

Applicants should have a particular interest in science and mathematics subjects that form the foundations of manufacturing (such as mathematics, physics, and chemistry). They should have a basic academic competency in these subjects, and be interested in acquiring the communication skills needed to be successful in the international arena. We particularly invite applications from:

- (1) Individuals who have a strong interest in science and technology.
- (2) Individuals who can think critically and are interested in discovering intriguing phenomena and solving problems.
- (3) Individuals who are interested in new things and seek the challenge of generating innovation.

Using the foundations learned in their undergraduate faculties, each of our students learn how to solve problems on their own in an organization which conducts trans-disciplinary education that traverses specialized fields in a flexible educational and research environment. In this graduate program, we encourage students to learn autonomously and to open up future paths and possibilities with their own two hands. We create a system which supports this.

### Curriculum

The Graduate School of Science and Technology consists of a two-year master's program followed by a three-year Ph.D. program. The master's program aims for the establishment of advanced fundamentals in science and technology through course works and independent research projects under appropriate guidance from faculty members. The Ph.D. program demands students to plan and perform original academic research. Interdisciplinary research projects are especially encouraged in order for the Ph.D. students to attain open—minded views, communication skills, and strong leadership.

The Graduate School of Science and Technology consists of three sub-schools and each sub-school consists of several centers of learning and research. (As of April 2017)

### 1) School of Fundamental Science and Technology

- Center for Mathematics
- Center for Physics
- Center for Molecular Chemistry
- Center for Applied Physics and Physico-Informatics
- Center for Chemical Biology
- Center for Biosciences and Informatics

### 2) School of Integrated Design Engineering

- Center for Multidisciplinary and Design Science
- Center for System Integration Engineering
- Center for Electronics and Electrical Engineering
- Center for Material Design Science

### 3) School of Science for Open and Environmental Systems

- Center for Space and Environment Design Engineering
- Center for Science of Environment and Energy
- Center for Applied and Computational Mechanics
- Center for Information and Computer Science
- Center for Open Systems Management

The student will become an official member of one of the sub-schools and conduct research under the supervision of a faculty advisor who is a member of one of the centers that belong to this particular sub-school. The advisor will be a member of one of the centers, but the student while being a member of a sub-school will not belong to any specific center. This is to allow the student to develop a broad perspective that is not restricted by the framework of his/her advisor's center.

### Master's Program

### Types of Master's Degree

Graduate students may pursue studies leading to any of the following degrees:

School of Fundamental Science and Technology: Master of Science in Engineering or Master of Science

School of Integrated Design Engineering: Master of Science in Engineering or Master of Science

School of Science for Open and Environmental Systems: Master of Science in Engineering

### **Language Options**

English (Students can take courses conducted in Japanese depending on the level of Japanese.)

### **Requirements for Completion**

The following are the requirements for completion of a Master's degree: 1) at least one academic year of study in the graduate program (standard duration is two academic years); 2) acquisition of thirty academic credits including at least four credits for the Independent Study and six for the Graduate Research 1 that is closely related to the Master's thesis; and 3) submission and approval of the master's thesis. Each course is usually worth two credits, i.e., a student will typically take at least ten courses in order to fulfill the requirement of twenty credits needed, aside from the ten credits required for the Independent Study and Graduate Research 1.

### Ph.D. Program

### Types of Ph. D. Degree

Ph.D. students may pursue studies leading to any of the following degrees:

School of Fundamental Science and Technology: Ph.D. in Engineering or Ph.D. in Science

School of Integrated Design Engineering: Ph.D. in Engineering or Ph.D. in Science

School of Science for Open and Environmental Systems: Ph.D. in Engineering

In addition to this, the degree of Doctor of Arts may be conferred.

### **Language Options**

English or Japanese

### **Requirements for Completion**

The requirements for completing the Ph.D. program are: 1) at least one academic year in the Ph.D. program (standard duration is three academic years); 2) completion of the Ph.D. graduate research (six credits); 3) approval of the Ph.D. thesis; and 4) passing of the final evaluation.

A student may complete his/her Ph.D. program in one to two and a half years (a total of three or more years including the time the student has spent in his/her master's program) if he/she produces outstanding research results.

### Evaluation for a Ph.D. Degree

A successful completion of the Ph.D. program is based on the following procedures:

- (1) Establishment of an evaluation committee among the faculty members belonging to one of the three sub-schools to which the Ph.D. candidate belongs. External members from outside the school and/or University may be part of the committee if deemed appropriate.
- (2) Evaluation of the Ph.D. thesis and open-to-public research presentation by the candidate.
- (3) A close-door examination by the committee on the basic knowledge related to the candidate's field of research, and language (English and Japanese).
- (4) A total and final evaluation of the candidate by the members of the sub-school.

Further evaluation details and standards vary depending on the sub-school.

### **Publication of the Research Results**

It is strongly advised that a student in the Ph.D. program publishes his/her research results. It is recommended that the student submits his/her papers to a professional publication or presents his/her results at an international conference or major academic congress. The publication will be presented as part of his/her academic achievement at the completion of the Ph.D. program.

#### Course Requirements for the Ph.D. program

Graduate Research 2 is mandatory for Ph.D. students. In this course, the student will be given guidelines and engage in discussions with his/her advisor on how to prepare for his/her Ph.D. dissertation. Upon acceptance, student is required to submit a proposal on the subjects he/she wishes to pursue in his/her Ph.D. program. This proposal needs to be approved by their advisor before being submitted. If it is deemed necessary after a discussion with the advisor, the student may choose courses that are offered in the master's program or in other research departments.

### Application

### **Application and Admission Schedule**

Japan standard time is used for all times and dates.

Master's Program	IGP-M12		IGP-M4
Month of enrollment	April 2018	September 2018	September 2018
Available scholarships	N/A	ADB scholarship	N/A
Online application period	November 1, 9:00 a.m. –December 1, 5:00 p.m., 2017		March 1, 9:00 a.m. – March 31, 5:00 p.m., 2018
Period for submitting application documents by postal mail service	November 1 – December 8*, 2017		March 1 – April 6*, 2018
Payment of application fee	November 1 – December 8, 2017		March 1 – April 6, 2018
Announcement of result	February 2, 2018	February 2, 2018 The result of the ADB scholarship will be announced separately.	Early June, 2018
Deadline for payment of tuition fees	February 23, 2018	Overseas applicant: May 25, 2018 Domestic applicant: August 17, 2018	Overseas applicant: June 22, 2018 Domestic applicant: August 17, 2018

<sup>\*</sup>All the application documents must be received by the Admissions Office by the deadline

Ph.D. Program	IGP-D12		IGP-D4
Month of enrollment	April 2018	September 2018	September 2018
Available scholarships	N/A	N/A	N/A
Online application period	November 1, 9:00 a.m. –December 1, 5:00 p.m., 2017		March 1, 9:00 a.m. – March 31, 5:00 p.m., 2018
Period for submitting application documents by postal mail service	November 1 – December 8*, 2017		March 1 – April 6*, 2018
Payment of application fee	November 1 – December 8, 2017		March 1 – April 6, 2018
Announcement of result	February 2, 2018		Early June, 2018
Deadline for Payment of tuition fees	February 23, 2018	Overseas applicant: May 25, 2018 Domestic applicant: August 17, 2018	Overseas applicant: June 22, 2018 Domestic applicant: August 17, 2018

<sup>\*</sup>All the application documents must be received by the Admissions Office by the deadline

### **Application Process**

- (1) Complete the following steps to prepare your application
  - Check your eligibility at "Eligibility for Application".
  - Contact your prospective supervisor and get a permission from him/her to become your supervisor.
    - Before submitting your application, you should contact your prospective research advisor to discuss your research plan thoroughly and receive instructions as to which sub-school you should apply to. Applicants who have failed to do this prior to submitting their applications have a much smaller chance of acceptance and in some cases their applications may be rejected.

For more information on our faculty members, use "Staff Search" at: http://www.st.keio.ac.jp/english/staff\_search/

Choose your prospective research advisor from among the faculty members who are qualified to be a thesis advisor.

- Take required tests. Check the requirements at "Application Documents".
- Identify and contact your recommenders.
- Request required official transcripts. Check the requirements at "Application Documents".
- (2) Apply online and pay the application fee
- (3) Send required documents to the Admissions Office by postal mail service.

Applications are accepted only when applicants submit documents both online and postal mail to be received by the Admissions Office by the deadline. The application must be submitted with an application fee. Applications are not accepted until the fee is paid.

#### **Admissions Criteria**

Each applicant will be screened based on the contents of the documents they submit.

### **Eligibility for Application**

### Master's program

The applicant for the master's program must satisfy one of the following conditions.

- 1. The applicant must have completed 16 years of schooling. He/she should have successfully graduated from a foreign university and have a bachelor's degree or a degree that is equivalent to this. Those who expect to graduate and have a bachelor's degree or its equivalent conferred before enrollment may also apply.
- 2. The applicant must have completed 15 years of schooling outside Japan. He/she should have successfully graduated from a foreign university and have a bachelor's degree or a degree that is equivalent to this. The applicant must have outstanding academic records regarding university courses that the Graduate School of Science and Technology of Keio University consider to be important. Those who expect to have completed the aforementioned before the enrollment date may also apply.
- 3. Exceptions are made when the Graduate School of Science and Technology of Keio University has deemed that the applicant has the equivalent or more academic skills as those who have completed a bachelor's degree.

### Ph.D. Program

The applicant for IGP-D12 must satisfy one of the following conditions.

- 1. The applicant must have received a master's degree, a professional degree or a degree that is equivalent to the aforementioned degrees outside Japan. Those who expect to have a master's degree or its equivalent conferred before enrollment may also apply.
- 2. The applicant must have enrolled in the **International Graduate Program** (master's program) of the Graduate School of Science and Technology at Keio University and **expects to complete** the program before enrollment.
- 3. The applicant must have enrolled in the Master's program at Graduate School of Science and Technology at Keio University **as an international student** and **completed** the program.
- 4. Exceptions are made when the Graduate School of Science and Technology of Keio University has deemed that the applicant has the equivalent or more academic skills as those who have received a master's degree or a professional master's degree.

The applicant for **IGP-D4** must satisfy one of the following conditions.

- 1. The applicant must have received a master's degree, a professional degree or a degree that is equivalent to the aforementioned degrees outside Japan. Those who expect to have a master's degree or its equivalent conferred before enrollment may also apply.
- 2. The applicant must have enrolled in the Master's program at Graduate School of Science and Technology at Keio University **as an international student** and **completed** the program. Those who **expect to complete** the program before enrollment may also apply.
- 3. Exceptions are made when the Graduate School of Science and Technology of Keio University has deemed that the applicant has the equivalent or more academic skills as those who have received a master's degree or a professional master's degree.

### **Application Documents**

### Master's program

The applicant for the Master's program is required to submit all of the following documents.

Online application system website: http://webentry.st.keio.ac.jp/IGP

# Application documents 1-4 must be submitted online and hard copies must be submitted by postal mail service by the deadline.

- 1. Application form
- 2. Financial statement
- 3. Statement of purpose
- 4. Copy of email communications between you and your prospective supervisors

### 5. Letters of recommendation

Two letters of recommendation are required. These recommendations must be from those in positions to appraise the applicant's potential for graduate study.

You can send reference request to your recommenders via online application, or you can provide your references with a paper recommendation form. The paper recommendation form can be downloaded at the following website:

http://www.st.keio.ac.jp/english/admissions/application/index.html

Recommenders are required to upload the letter via online application, or enclose it in an envelope, seal it, sign it across the seal and return it to the applicant or send it directly to the Admissions Office.

Those applying for the ADB Scholarship must obtain at least one letter of recommendation from a supervisor at work that includes information about the applicant's occupation.

# Official test scores of 6 and 7 must be submitted directly to the Admissions Office from the Educational Testing Service (ETS) by the deadline.

### 6. GRE Test Score

### The institution code of Keio is 3843. No department code is necessary.

All applicants are required to take the Graduate Record Examination (GRE). GRE scores are valid for five years and must be taken before submitting your application. The scores must be valid on the application deadline. If there is a GRE Subject Test that is relevant to the field of study you wish to pursue, it is recommended that you take the Subject Test and submit the results. If the applicant whose native language is not English takes the GRE General Test, the Quantitative Section of the GRE will be the main criteria for evaluation.

Applicants who are concerned that the scores will not arrive on time should submit an original score report to the Admissions Office. This will be returned to the applicant after the admissions process is completed.

### 7. TOEFL Test Scores

### The institution code of Keio for the TOEFL is 6154. No department code is necessary.

TOEFL is required of all applicants whose first language is not English. Only TOEFL scores taken within two years prior to the application deadline are valid.

Exceptions are granted to those who have received a degree from an institution where all instruction is provided in English. Students who have received degrees from schools where all courses are provided in English must submit a document that certifies this instead of the TOEFL score.

Applicants who are concerned that the scores will not arrive on time should submit an original score report to the Admissions Office. This will be returned to the applicant after the admissions process is completed.

# Application documents 8 - 10 must be provided by the applicant's home institution and sent directly to the Admissions Office. Documents submitted by the applicant will not be reviewed. All the documents must be sealed.

### 8. Transcript request form

The prescribed form can be downloaded at the following website:

http://www.st.keio.ac.jp/english/admissions/application/index.html

It must be filled out by the registrar of the applicant's home institution to provide us with the supplementary information about your academic records of **undergraduate** study. Please forward it to the registrar at the same time as you request your academic transcripts of your undergraduate program.

9. Original or certified true copy of the Academic transcripts of undergraduate courses (English or Japanese)

10. Original or certified true copy of the Certificate of (expected) graduation from a university (English or Japanese)

### Ph.D. Program

The applicant for the Ph.D. program is required to submit all of the following in order to be considered for admission. Online application system website: http://webentry.st.keio.ac.jp/IGP

Application documents 1-4 must be submitted online and hard copies must be submitted by postal mail service by the deadline.

- 1. Application form
- 2. Financial statement
- 3. Research plan
- 4. Copy of email communications between you and your prospective supervisors
- 5. Letters of recommendation

Two letters of recommendation are required. These recommendations must be from persons in positions to appraise the applicant's potential for graduate study.

You can send reference request to your recommenders via online application, or you can provide your references with a paper recommendation form. The paper recommendation form can be downloaded at the following website: http://www.st.keio.ac.jp/english/admissions/application/index.html

Recommenders are required to upload the letter via online application, or enclose it in an envelope, seal it, sign it across the seal and return it to the applicant or send it directly to the Admissions Office.

Those who correspond to the condition number 2 of the "**Eligibility for Admission**" may submit only one letter of recommendation written by his/her supervisor in the Graduate School of Science and Technology at Keio University.

Application documents 6-9 must be provided by the applicant's home institution(s) and sent directly to the Admissions Office. Documents submitted by the applicant will not be reviewed. All the documents must be sealed.

### 6. Transcript request form

The prescribed form can be downloaded at the following website:

http://www.st.keio.ac.jp/english/admissions/application/index.html

It must be filled out by the registrar of the applicant's home institution to provide us with the supplementary information about your academic records of **undergraduate** study. Please forward it to the registrar at the same time as you request your academic transcripts of the undergraduate program.

- 7. Original or certified true copy of the Academic transcripts of undergraduate course (English or Japanese)
- 8. Original or certified true copy of the Academic transcripts of master's course (English or Japanese)
- 9. Original or certified true copy of the Certificate of (expected) graduation or degree from a graduate school (English or Japanese)

The type of the degree awarded must be specified on the certificate.

Those who correspond to the condition numbers 2 and 3 for IGP-D12 and condition number 2 for IGP-D4 of the "Eligibility for Admission" are not required to submit this certificate.

#### Note

- A) Please check the accuracy of all materials before mailing. Incomplete application will not be processed.
- B) All documents must be submitted in English or Japanese. **Documents in a language other than English or Japanese** must be accompanied by English or Japanese translations certified by a notary public or the school issuing the original document.
- C) Write your name as it appears on your passport or on your birth certificate.
- D) Submitted documents will not be returned under any circumstances.

### **Application Fee**

10,000 Japanese Yen

The application fee must be paid by the deadline of each application period by one of the methods indicated below. Application documents will not be accepted until the application fee is received.

### 1. Credit Card

Access the website below, click "Payment by Credit Card", and follow the payment procedures.

http://www.st.keio.ac.jp/english/admissions/application/index.html

When the credit card payment is completed, print out the screen and submit it with other application documents.

#### 2. Overseas Remittance / Bank Transfer

Please remit the application fee to the following account by **Telegraphic Transfer** and email the remittance receipt to the Admissions Office (ao\_st\_inquiry@info.keio.ac.jp) as soon as you complete the payment.

Please fill in 'Application Fee' for the 'Purpose of Remittance' section, and your name for the 'Message to Payee' section.

### Note:

- All bank charges must be paid by the applicant.
- Money Transfers from Western Union and MoneyGram Not Accepted

Payee's Bank	Suruga Bank
Branch	Yokohama Hiyoshi Branch
Bank Address	2-1-4 Hiyoshi, Kohoku-ku, Yokohama, Kanagawa 223-0061, JAPAN
Account Type	Ordinary Account
Account Number	434256
Name of Account	Keio Yagamiguchi
SWIFT Code	SRFXJPJT
Method of Payment	Advise and Pay
Currency	Japanese Yen (we do not accept any currency other than Japanese yen)

#### 3. Cash (inside Japan only)

Application fee is payable in cash at the Admissions Office, or sent to the Admissions Office using registered mail. Make sure to write the applicant's name on the envelope.

### **Refund of Application Fee**

In principle, the application fee cannot be refunded. However, a refund may be considered under special circumstances, such as:

- 1. Applicants paid the application fee, but did not file an application (that is, application documents were not sent, or the application was incomplete or missing required documents).
- 2. Application fee was mistakenly paid twice.

Those to whom 1 or 2 applies should contact the Admissions Office. The fee will be refunded to the applicant's bank account. Bank charge will be deducted from the amount.

### **Submission of Application Documents**

Application documents must be submitted to the Admissions Office, or sent by post to the address given below.

Admissions Office

Graduate School of Science and Technology, Keio University

3-14-1 Hiyoshi, Kohoku-ku, Yokohama, Kanagawa 223-8522, JAPAN

Phone: +81-45-566-1468

### (1) All application documents must be received by the Admissions Office by the deadline of each application period.

- (2) All applications must be sent by traceable and express mail service such as Express Mail Service (EMS), FedEx, and DHL.
- (3) You can check your application status on your "My Page".

### **Announcement of Results**

You can view your application result on "My Page".

If you have applied for MEXT or ADB scholarship, you will be receiving a separate email announcing your scholarship result. The scholarship result is usually sent to the relevant students after the admission result.

### **Enrollment Registration**

All necessary documents and instructions to complete enrollment procedures will be provided with the application result letter. Registration must be completed by its specified deadline. The university will not provide the visa supporting documents until the payment of tuition fees is confirmed.

### **Academic Fees**

The school fees are decided every academic year according to the sliding scale. In accordance with University Regulations, any increase is based on rise in wages of public servants notified in the National Personnel Authority Recommendation. All students are required to pay the requisite amount of fees every year during the enrollment in Keio University.

The academic fees required upon admission in 2017 are listed below.

\*The academic fees for 2018 admission are yet to be determined.

### <Master's Program>

Trade 5 1 0 Stant			
	April 2017 Entrance	September 2017 Entrance	
	(April 2017 to March 2018)	(September 2017 to March 2018)	
Registration Fee	60,000 yen	30,000 yen	
Tuition Fee	1,010,000 yen	505,000 yen	
Student Health Insurance Union Fee*2	2,600 yen	1,350 yen	
TOTAL	1,072,600 yen	536,350 yen	
(Installment Payment *1)	(Spring : 536,350 yen)		
	(Fall : 536,250 yen)		

<Ph.D. Program>

12 11/2 / 1 1 081 41112		
	April 2017 Entrance	September 2017 Entrance
	(April 2017 to March 2018)	(September 2017 to March 2018)
Registration Fee	60,000 yen	30,000 yen
Tuition Fee	660,000 yen	330,000 yen
Student Health Insurance Union Fee*2	2,600 yen	1,350 yen
TOTAL	722,600 yen	361,350 yen
(Installment Payment *1)	(Spring : 361,350 yen)	
	(Fall: 361,250 yen)	

<sup>\*1:</sup> Fees excluding the Student Health Insurance Union Registration Fee (100 yen) can be paid in two installments in spring and fall semesters.

No initial fee is required from:

- Students enrolling in the Ph.D. Program within less than one year after completing a master's program at a graduate school of Keio University (excluding students entering/completing professional degree program).
- Students enrolling in the Graduate School of Science and Technology of Keio University straight after completing a graduate school of Keio University.

### **Contact Information**

Admissions Office (AO)

Graduate School of Science and Technology, Keio University

3-14-1 Hiyoshi, Kohoku-ku, Yokohama, Kanagawa 223-8522 JAPAN

Tel:+81-45-566-1468 Fax: +81-45-566-1469

URL: http://www.st.keio.ac.jp/english/index.html

Email: ao\_st\_inquiry@info.keio.ac.jp

<sup>\*2:</sup> The Student Health Insurance Union Fee includes an initial fee of 100 yen, which is collected only in the student's first year.

### **Application Document Checklist** Documents you need to submit online as well as via postal mail service **Application Form** ☐ Financial Statement ☐ (Applicants for master's program) Statement of Purpose ☐ (Applicants for Ph.D. program) Research Plan ☐ Copy of e-mail communications between you and your prospective supervisor ☐ ADB scholarship application form (if applicable) Documents submitted online or via postal mail service ☐ Letter of recommendation Documents submitted by the applicants' home institution(s) via postal mail service ☐ Transcript Request Form ☐ Academic transcripts of undergraduate program ☐ (Applicants for master's program) Certificate of (Expected) completion for undergraduate program ☐ (Applicants for Ph.D. program) Academic transcripts for master's program ☐ (Applicants for Ph.D. program) Certificate of (Expected) completion for master's program (Applicants for master's program)

All the application documents must be sent to the address given below to be received by the deadline.

**Admissions Office** Graduate School of Science and Technology, Keio University 3-14-1 Hiyoshi, Kohoku-ku, Yokohama, Kanagawa, 223-8522, Japan Phone: +81-45-566-1468

Official test scores provided by the testing agency via postal mail service

☐ GRE official score report ☐ TOEFL official score report