

## Degree Programs Conducted in English

Osaka University, Graduate School of Engineering  
offers the following Master's Degree and Doctoral Degree  
programs which are conducted in English

[Enrollment in October 2018]

For Japanese Government (Monbukagakusho/MEXT) Scholarship Students

The Osaka University Graduate School of Engineering (GSE) offers the following special programs which are conducted in English. The programs encompass both master's and doctoral courses. Students are expected to enroll in both courses sequentially to obtain both master's and doctoral degrees.

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## **Biotechnology Global Human Resource Development Program**

### **1. Program Summary**

The aim of this program is to expose young scientists to state-of-the-art research techniques and in-depth knowledge of advanced biology, chemistry, physics and bioengineering, so that they may harness the potential of biotechnology applicable to Japanese industries as well as academia.

### **2. Important Program Features**

- (1) English will be used for all the lectures, instructions, and research-related activities. In the Basic Courses, students will acquire a solid background in advanced biotechnology. In the Project-based Training Course students will acquire the ability to design and execute research in a critical manner. In the Advanced Research Proposal Course students will acquire the ability to propose original research plans independently as a scientist. Through immersion in Special Research students will have ample time during the remaining four years to attain their Master's and Doctoral Degrees in Engineering.
- (2) The Basic Courses, which will be held in the first semester of the master's program, will deal with a wide range of subjects: advanced biotechnology, and basics and applications in the fields of "Biotechnology," "Life Science," and "Biochemistry."
- (3) In the first semester of the master's program, students will take the Project-based Training Course. This course is designed to prepare students as research engineers with the ability to conceive innovative ideas, by synthesizing knowledge from different disciplines, and the techniques for devising research plans towards realizing these ideas. In this course, each student will choose one laboratory different from their own, and will produce a short-term research work under the supervision of the professor of that laboratory.
- (4) All students will conduct their Special Research in the second, third, and fourth semester of the master's program, under the supervision and instruction of his/her professor.
- (5) In the first semester of the doctoral program, students will take the Advanced Research Proposal Course. This course is designed to prepare students as a research scientist with the ability to propose original research plans independently, so that they can complete their doctoral dissertation. In this course, each student will propose a research plan in a field different from their own, make a presentation, and have discussions with members of faculty, and doctoral program students of related fields to gain diversified/multiple perspectives. During the period of the doctoral program, the student will devote themselves to Special Research while expanding their knowledge by taking the Advanced Biotechnology Exercise and Advanced Biotechnology Seminar courses.
- (6) For Special Research in the master's and doctoral programs, each student will choose one laboratory among Bioenvironmental Science (Watanabe Lab.), Cell Technology (Muranaka Lab.), Bioprocess Systems Engineering (Kino-oka Lab.),

Bioresource Engineering (Fukusaki Lab.), Biochemical Engineering (Omasa Lab.), Biomolecular Science and Engineering (Nagai Lab.), and Applied Microbiology (Fujiyama Lab.). Students can change their laboratory after completion of the master's program, if they wish to do so.

- (7) Improving Japanese skill is also required during the course. N4 level Japanese Language Proficiency Test is required for obtaining the master's degree and N3 level is required for obtaining the doctoral degree.

### 3. Requirements for the Completion of the Course and Obtaining the Degree

#### (1) Master's Program

- ① Requirements for completion of the program: completion of two compulsory courses, the Project-based Training Course, and Safety Education Course for a total of no less than 30 credits; completion of **Special Research**; N4 level certificate of the Japanese Language Proficiency Test; acceptance of the master's thesis by the faculty; and passing of the final examination of the course.
- ② Degree: Master of Engineering

#### (2) Doctoral Program

- ① Requirements for completion of the course: completion of Seminar on Frontier Research Proposal to acquire two compulsory credits; completion of Courses of Frontier Biotechnology Exercises and Frontier Biotechnology Seminars to acquire a minimum of four credits; completion of **Special Research**; N3 level certificate of the Japanese Language Proficiency Test; successful defense of doctoral dissertation and passing of the final examination of the program.
- ② Degree: Doctor of Philosophy in Engineering

### 4. Admission Quota

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### 5. Program HP

[http://www.bio.eng.osaka-u.ac.jp/gh\\_resour\\_prog/index.html](http://www.bio.eng.osaka-u.ac.jp/gh_resour_prog/index.html)

## **International Program of Maritime and Urban Engineering**

### **1. Program Summary**

The aim of this program is to educate students to become young scientists of the new generation with basic knowledge and state-of-the-art research skills necessary for: disaster prevention, protection of marine and urban environments; the development of new energies and energy-saving technologies; and for the realization of a synthesized scheme of space, ocean, and land.

### **2. Important Program Features**

(1) English will be used for all the lectures, instruction, and research-related activities. In the Basic Courses in the first year, students will acquire a solid background in maritime and urban engineering. Through immersion in Special Research, students will have ample time during the remaining four years to attain their Master's and Doctoral degrees in Engineering. The Basic Courses in the first two semesters consist of specially designed lectures which can be categorized into the following three systems.

- 1) Disaster Prevention and Safety Engineering
- 2) Environmental Symbiosis and Energy Saving
- 3) Development and Design of Space, Land and Ocean

Each student can take these special lectures or the lectures to be provided by preexisting courses of Naval Architecture & Ocean Engineering, Civil Engineering, and Architectural Engineering.

(2) Students will conduct their Special Research from the third semester (the second year) of the master's program under the supervision and instruction of their professors. In this scheme, each student will choose one research theme from the following categories:

- ① Marine Interdisciplinary Engineering
- ② Comprehensive Spatial Design
- ③ Urban Synthetic System Design
- ④ Naval Architecture
- ⑤ Ocean Systems Engineering
- ⑥ Structural and Geotechnical Engineering
- ⑦ Civil and Social Systems Engineering
- ⑧ Architectural Structures and Strength
- ⑨ Environmental and Human Engineering in Architecture

(3) In the master's program, students will be encouraged to participate in the cross-boundary special seminars and make a presentation on the progress of their Special Research. At the end of the master's program, the achievement and academic level will be checked. If the level does not meet certain criteria, they will go through a short-term intensive course for further education.

(4) At the start of the doctoral program, students will propose their research plan by themselves, review the latest research on their topic, and make a presentation which will be followed by discussions with professors and associate professors.

(5) During the period of the doctoral program, students will conduct the Special Research, while expanding their knowledge by attending lectures and seminars.

Each student will be required to make a presentation (at least once during the doctoral program) on the progress of their Special Research, at an international research meeting which will be organized, prepared, and chaired by students every year.

### **3. Requirements for the Completion of the Course and Obtaining the Degree**

#### (1) Master's Program

- ① Requirements for completion of the course: Completion of lectures and seminars for a total of no less than 30 credits; completion of Special Research; submission and defense of the master's thesis; and passing of the final examination of the program.
- ② Degree: Master of Engineering

#### (2) Doctoral Program

- ① Requirements for completion of the program: Completion of lectures and seminars for a total of no less than four credits; satisfactory performance in Qualification Test Part I ; defense of the doctoral dissertation; and passing of Qualification Test Part II of the program.
- ② Degree: Doctor of Philosophy in Engineering

### **4. Admission Quota**

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### **5. Program HP**

<http://maritime-urban.naoe.eng.osaka-u.ac.jp/>

## 6. Application Requirements

(The following items are common to the all programs.)

- (1) Nationality: The applicant's nationality must be of a country which has diplomatic relation with the Japanese government.
- (2) Age: The applicant must be less than 35 years of age as of April 1, 2018 (i.e. born no earlier than April 2, 1983).
- (3) Educational background: The applicant has graduated from a Japanese university or is recognized as possessing academic abilities equivalent to those of university graduates by his/her arrival in Japan. Applicants recognized as possessing academic abilities equivalent to those of university graduates must fulfill one of the following qualifications:
  - ① The applicant must have a bachelor's degree or an equivalent degree granted upon completion of an academic program of either a foreign university or a foreign educational institution whose term of study is at least 3 years or more, by September 30, 2018.
  - ② The applicant has completed or (is expected to complete) 16 years of formal education (18 years of formal education for the applicant who wishes to enter a doctoral program in medicine, dentistry, veterinary medicine, or a 6-year course pharmacy).
  - ③ The applicant is no younger than 22 years of age as of September 30, 2018, and is recognized as possessing academic abilities equivalent to those of university graduates, by passing "the Preliminary Examination of Applicant's Qualifications" conducted by Osaka University (See Note 6).
- (4) Language ability: The applicant must have a good command of English. Those whose formal education has been conducted in a language other than English must submit a certificate of English proficiency. Acceptable certificates include official test scores of the TOEFL, TOEIC, IELTS or CPE official test scores.
- (5) Health: Applicants must be physically and mentally healthy enough to pursue study at university.
- (6) Attendance: The recipient of the scholarship must be able to travel to and arrive in Japan early in October 2018.

Notes:

- (1) This is a 5-year program consisting of both the master's and doctoral programs. Any applicant who wishes to leave this program after obtaining their master's degree should not apply.
- (2) Active members of the military and civilians employed by the military will be refused.

- (3) Admission will be revoked if arrival in Japan by the designated date is unavailable.
- (4) Recipients of any other scholarships will not be considered for this scholarship.
- (5) Admission will be revoked for applicants who are found to fail to meet the educational qualifications as specified in the application requirements by September 30, 2018.
- (6) Applicants who fall under (3)-③ must take the “Preliminary Examination of Applicant’s Qualification” in advance. Such applicants must consult the Student Support Affairs Section at the Student Affairs Division, by October 31. The Student Support Affairs Section will announce details concerning the documents required for this procedure. Applicants will be informed of the results as soon as they are available.
- (7) Admission will be revoked for applicants who reside in Japan and continue to (or expect to) do so on and after their acceptance to graduate school recommendation (the starting month of scholarship provision) as he/she will not be considered “a new study abroad student” (Not withholding those returning to their country of nationality solely to fulfill requirements for application to government sponsored scholarship).
- (8) Admission will be revoked for applicants who expect to continue being registered in Japanese universities as privately financed international students in 2017, and remain to do so after their acceptance to graduate school recommendation (the starting month of scholarship provision).

## 7. Application Procedures

Note:

Every applicant must find, well in advance, a supervisor suitable for the research field in which the applicant is interested, and contact him/her by email to confirm whether the field is adequately fitting to his/her laboratory.

### (1) Period of Application

The application forms and other materials must be submitted to the Student Support Affairs Section, Student Affairs Division, Graduate School of Engineering, Osaka University by post or by hand, to be reached strictly by the following deadline.

**November 20, 2017 to December 8, 2017 4:00 p.m. (Japan time)**

### (2) Forms and Certificates to Submit

Materials	Details
(1) Application Form	<ul style="list-style-type: none"> <li>• Fill out the prescribed “Application for Admission” form.</li> <li>• A photograph (4cm×3cm) should be affixed to the first page. It should be taken within the last 3</li> </ul>

	months and should show the upper part of the body, without hat, in a frontal pose.
(2) Statement of Purpose	<ul style="list-style-type: none"> <li>• A Statement of Purpose of the applicant (no more than three double-spaced, typed pages on A4 paper), stating their research proposal</li> </ul>
(3) Certificate of (Expected) Graduation / Completion	<ul style="list-style-type: none"> <li>• A certificate or certified true copy of certificate from the last school the applicant attended. The certificate should be the original document (not a copy).</li> </ul> <p>Notes:</p> <ol style="list-style-type: none"> <li>(1) Applicants who (are expected to) have master's degree should submit the original certificates of (expected) graduation/completion for both bachelor's and master's degrees.</li> <li>(2) Applicants whose last schools issue graduation (completion) certificates and degree certificates in separate sheets should submit both in the original forms.</li> </ol>
(4) Certified Academic Records	<ul style="list-style-type: none"> <li>• Certified Academic Records from the last school the applicant attended. The transcript should be the original document (not a copy).</li> </ul> <p>Note: Applicants who (are expected to) have master's degrees should submit Academic Records for both bachelor's and master's degrees, certified by the universities the applicants attended.</p>
(5) Certificate of English Proficiency	<ul style="list-style-type: none"> <li>• Attach TOEFL, TOEIC, IELTS or CPE official test scores as certification except for the cases below.</li> <li>- Applicants whose first language is English.</li> <li>- Applicants who have graduated from a university or a graduate school located in an English speaking country.</li> <li>- Applicants who have completed an undergraduate or graduate degree program where the language of instruction and examination was English. In this case, an official statement from the school will be required, confirming the use of English as the language of instruction and examination.</li> </ul>
(6) Letter of Recommendation	<ul style="list-style-type: none"> <li>• No less than two letters of recommendation from different recommenders. The letter should be addressed to <b>the President of Osaka University and at least one of the letters must be</b> from the dean or head of the faculty or school which the applicant attended, the president (rector) of the university or institution the applicant attended.</li> </ul>
(7) Certificate of Citizenship (A4 size paper)	<ul style="list-style-type: none"> <li>• The applicant can submit a copy of the passport as well.</li> </ul>

(8) Abstract of Graduation Thesis	• The abstract of the applicant's graduation thesis or equivalent document, including figures etc.
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Notes on submission:

- (1) Application documents should be typed or handwritten in BLOCK letters on A4 size paper in English. For documents in a language other than English, an English translation must be attached.
- (2) Preliminary candidates for the MEXT Scholarship will be requested to additionally submit the "Application Documents for MEXT Scholarship" after the initial screening of application documents. Prescribed application forms will be sent to the preliminary candidates by e-mail in the end of January 2018.
- (3) Once application documents have been received, they will not be returned.

## 8. Selection and Announcement of the Results

- (1) By the end of January 2018, Graduate School of Engineering (GSE), Osaka University will select preliminary candidates for the MEXT Scholarship from the entire pool of applicants by reviewing application materials and documents. These preliminary candidates will be notified and interviewed by the representative professors. The interviews will be finished by the end of February 2018.
- (2) The Japanese Government will review these preliminary candidates for the final selection of MEXT Scholarship students.
- (3) Successful applicants will be notified by post in the end of July 2018. Notifications will be sent to the address specified in the application form. They will then be registered as a master student of the Osaka University GSE.
- (4) Unsuccessful applicants will be notified by the middle of March 2018. We do not reply to individual inquiries regarding admission decisions.

## 9. Term of Scholarship

5 years (2 years + 3 years\*)

\*The scholarship will be terminated if a student falls under one of the following cases: unsatisfactory academic achievement; failure to finish the master's program within 2 years; failure to pass the entrance examination of the doctoral program.

## 10. Scholarship Benefits

- (1) Allowance: 147,000 JPY / month
- (2) Transportation to Japan: Each grantee will be provided, according to his/her itinerary and route as designated by Ministry of Education, Culture, Sports, Science and Technology (MEXT), with an economy class air ticket from the international airport closest to his/her place of residence to Kansai International Airport. Expenses such as transportation from his/her place of residence to the international airport, airport tax, and any special taxes on overseas travel will NOT be provided.

- (3) Transportation from Japan: Each grantee returning to his/her home country within the last payment month of his/her scholarship will be provided, upon application, with an economy class air ticket for a flight from Kansai International Airport to the international airport closest to his/her place of return.
- (4) Application fee, admission fee and tuition: exempt.

Notes:

- (1) The amount of allowance is subject to change, depending on the Japanese government budget of each year.
- (2) Insurance premiums for travel to/from Japan shall be borne by the grantee. The airport the grantee departs from or returns to must be an airport of the country of his/her nationality.

### **11. Semester Starting Date**

October 1, 2018

※ The classes may start at a later date.

### **12. Notes**

- (1) Incomplete documents will not be accepted.
- (2) The content of submitted documents cannot be changed after the application procedure has been completed.
- (3) Applications may be rejected or admission may be revoked even after matriculation, if any information or material in the application is found to be fraudulent.
- (4) Breach of the pledge to MEXT will be a cause for termination of the scholarship.
- (5) Recipients must follow the rules of Osaka University. The scholarship will be terminated if a recipient is officially reprimanded by the university or fails to demonstrate his/her ability to complete his/her studies.
- (6) Successful applicants will be strongly advised to learn about Japan (the people, society, culture, and geography) as well as the University prior to their arrival in Japan.

### **13. Further Information and Inquiries**

All inquiries to:

Student Support Affairs Section  
Student Affairs Division  
Graduate School of Engineering  
Osaka University

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Osaka 565-0871, JAPAN  
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