

**AY 2022**

**Master's Program (Enrollment in April 2022)  
Kobe University Graduate School of Engineering  
Special Entrance Examination  
for International Students**

**Application Guide  
Term 2**

There may be changes to the application guidelines due to the novel coronavirus (COVID-19) situation. If there are any such changes, we will inform you through the website below.

Please check our website again before applying for the entrance examination.

<http://www.eng.kobe-u.ac.jp/eng-ofc/kym/examinee.html>

**Graduate School of Engineering  
Kobe University**

## **Kobe University Graduate School of Engineering**

Kobe University Graduate School of Engineering was established as part of the reorganization of the Graduate School of Science and Technology in April 2007. Both the Master's and Doctoral Programs of the Graduate School of Engineering consist of five departments: Architecture, Civil Engineering, Electrical and Electronic Engineering, Mechanical Engineering, and Chemical Science and Engineering. A Master of Philosophy in Engineering is granted upon completion of the Master's Program at the Graduate School of Engineering.

A "Basic Policy for the English course of Undergraduate and Graduate School of Engineering" has been established. This policy aims to promote lectures in English or English with Japanese additional explanation.

### **Admission Policy of Kobe University Graduate School of Engineering**

Engineering refers to an academic discipline dedicated to developing an understanding of nature to serve humanity, pursuing the principles of nature to solve social issues, and building a sustainable society in which people can live in harmony with nature.

The Graduate School of Engineering promotes fundamental scientific research, engages in applied research that contributes to society, and conducts research and education for developing individuals demonstrating advanced and broad knowledge, extensive creativity, high ethical standards, and global mindedness. The Graduate School is committed to enrolling students from a wide range of backgrounds, including people who have conducted and published research at a company, laboratory, or the like, and international students.

The Graduate School of Engineering welcomes applications from those who meet the criteria below, in addition to the criteria set forth in the Admission Policy of Kobe University.

#### **The ideal applicants that the Master's Program of the Graduate School of Engineering hopes to accept are as follows:**

1. Students who show enthusiasm for identifying the principles underlying natural phenomena and wish to contribute towards human society through science and technology.

[Required competences: critical thinking, good judgement, expression, interest, and motivation.]

2. Students who possess high ethical standards and are able to understand and consider the impact of science and technology on human society.

[Required competences: critical thinking, good judgement, expression, interest, and motivation.]

3. Students who derive satisfaction from identifying novel challenges and finding creative solutions.

[Required competences: critical thinking, good judgement, expression, interest, and motivation.]

4. Students who use their international experience to increase their cultural awareness, particularly with respect to the potential applications of their research.

[Required competences: critical thinking, good judgement, expression, initiative, cooperativeness, interest, and motivation.]

5. Students who demonstrate a passion for acquiring advanced and specialized academic knowledge and capabilities in order to conduct cutting-edge research.

[Required competences: knowledge, technique, critical thinking, good judgement, expression, interest, and motivation.]

### **Basic Policy for the Selection of Students:**

In order to select students demonstrating the qualities above, in line with the Diploma Policy and Curriculum Policy of the Master's Program of the Graduate School of Engineering, the Graduate School assesses various competences in the entrance examinations below.

The General Entrance Examination, Entrance Examination for Recommended Candidates, Special Entrance Examination for Working Adults, and Special Entrance Examination for International Students are designed to assess knowledge, technique, critical thinking, good judgement, expression, initiative, cooperativeness, interest, and motivation.

For admissions enquiries please contact the Master's Program of the Graduate School of Engineering:

Kobe University Graduate School of Engineering, Student Affairs Section  
1-1, Rokkodai-cho, Nada-ku, Kobe 657-8501

Tel: +81-(0)78-803-6350

E-mail: [eng-kyomugakusei@office.kobe-u.ac.jp](mailto:eng-kyomugakusei@office.kobe-u.ac.jp)

Graduate School of Engineering Website: <http://www.eng.kobe-u.ac.jp/>

Kobe University Website: <https://www.kobe-u.ac.jp/>

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### **◎ Attachments (A set of required forms for the application as designated by the Graduate School of Engineering)**

- Application Form
- Curriculum Vitae
- ID for the Examination
- Administration Form
- Letter of Provisional Acceptance

# I Application Guide for Special Entrance Examination for International Students to the Master's Programs (Enrollment in April 2022) of the Graduate School of Engineering

## 1. Enrollment Quota

Department	Enrollment Quota	Note
<b>Department of Architecture</b>	A Few (Undefined)	A few students of each department can select the Digital Medical Engineering Creation Course. (See page 21)
<b>Department of Civil Engineering</b>	A Few (Undefined)	
<b>Department of Electrical and Electronic Engineering</b>	A Few (Undefined)	
<b>Department of Mechanical Engineering</b>	A Few (Undefined)	
<b>Department of Chemical Science and Engineering</b>	A Few (Undefined)	

## 2. Required Qualifications

The eligible individual must be a foreigner with International Student alien residential status (or be eligible for this status in April 2022) and fully meet the condition or conditions under one of the following items.

- (1) The individual has completed an undergraduate program or will have completed an undergraduate program by March 31, 2022. Notwithstanding the foregoing, any individual who has graduated from an undergraduate program of Kobe University Faculty of Engineering or is currently enrolled in the program with a prospective graduation date is excluded in the case of the Department of Electrical and Electronic Engineering.
- (2) The individual has completed sixteen years of academic curricula outside of Japan or will have completed the curricula by March 31, 2022.
- (3) The individual has completed the aforementioned sixteen years of academic curricula offered by institutions outside Japan as correspondence programs while living in Japan or will have completed the curricula by March 31, 2022.
- (4) Applicants who have received a bachelor's degree by completing a three-year or longer program at a foreign university accredited by the respective foreign government, or designated by the Minister of MEXT (this includes applicants who have completed an appropriate program offered by the respective foreign educational facility through distance learning while residing in Japan, and applicants who have completed an appropriate foreign educational program at an educational facility in Japan as specified in the previous category).
- (5) The individual has been recognized as having the academic ability equivalent to or better than the ability of individuals who have completed an undergraduate curriculum, based on an application evaluation by the Kobe University Graduate School of Engineering on an individual basis, and the individual is going to be 22 years of age or older by March 31, 2022.

(Note 1) See page 17 if applying based on item (5) above.

(Note 2) The individual who may be eligible based on item (5) above is a graduate of a junior college, technical

college, or vocational school or has completed a curriculum offered by a school in the "miscellaneous" category.

### 3. Application Term

The application term starts on Tuesday, January 4, 2022 and ends on Friday, January 7, 2022.

Applications are accepted from 9:30 a.m. to 4:00 p.m. (except for 12:00 p.m. to 1:00 p.m.)

In the case of mailed applications, the application must be delivered to the Graduate School by 5:00 p.m. on Friday, January 7, 2022.

**\* The Examination Admission Card and other documents will be mailed at a later time.**

### 4. Application Procedures

The applicant must collect, complete as may be required, and submit the documents as listed below:

Application Document	Applicants required to submit documents	Notes
Application Form / Curriculum Vitae	All the applicants	<p>A form designated by the Graduate School. The forms are specific to each respective department.</p> <p>Please use a pen or a ballpoint pen with black ink to fill out the forms. Ensure that the Certificate of Payment of the examination fee (must be with a dated post office stamp) is attached to the designated area on the Application Form.</p> <p><b>&lt;Completing the field of education and research&gt;</b></p> <p>Please refer to the "Educational and Research Fields, Faculty, and Research Subjects (Keywords)" (page 25-29) and choose the field of your education and research to complete the Application form for special entrance examination for international students. The fields of education and research are instructed by each department as below.</p> <ol style="list-style-type: none"> <li>1. Department of Architecture Complete the boxes for the desired field of education and research with the number of your most desired field of education and research (one field only).</li> <li>2. Department of Civil Engineering Complete the box for the desired field of education and research with the number of your most desired field of education and research (one field only).</li> <li>3. Department of Electrical and Electronic Engineering Complete the box for the desired field of education and research with</li> </ol>

Application Form / Curriculum Vitae	All the applicants	<p>the number of your most desired field of education and research (one field only).</p> <p>4. Department of Mechanical Engineering Complete the box for the desired field of education and research with the field code of your most desired field of education and research (one field only).</p> <p>5. Department of Chemical Science and Engineering Complete the boxes for the desired field of education and research (faculty member in charge) with the number of your most desired field of education and research (one field only).</p>
ID for the Examination (with one photo) Administration Form (with one photo)	All the applicants	A form designated by the Graduate School. Glue your photo in the designated area. (The photo must be cut to 4.0 cm x 3.0 cm and taken within the last three months with the applicant facing front without any head covering and background, and may be monochrome or in color. Digital photos must be printed on the special paper for photo prints and of sufficient quality.)
Address Stickers (Two stickers)	All the applicants	A form designated by the Graduate School. For mailing a notice and documents for enrollment procedures for the successful applicants.
Special Envelope for Examination Application Documents	All the applicants	The designated envelope must include the applicant's mailing address, first and last names, zip code, and postage stamp/stamps worth 354 JPY. (For mailing the Examination Admission Card)
Examination Fee 30,000 JPY	All the applicants	Transfer the fee from your nearest post office with the attached transfer form and glue the Certificate of Payment in the designated area on your Application Form. (See "Payment Methods of the Fees for the Entrance Examination for the Master's Programs from a Location Overseas" on page 19 if the fund is transferred from a foreign bank.) The fee is not collected if you are an international student awarded a Japanese Government Scholarship at the time of application and continue (or are scheduled) to be an international student with a Japanese Government Scholarship after enrollment.
Recommendation referral from the academic supervisor of the university that you have graduated from	Applicable students only	Prepared by the professor you studied with at your university or any other institution that you graduated from. If the referral is written in a language other than English, please attach an English or Japanese translation of the document. (Not required for the students currently enrolled in the Kobe University Faculty of Engineering or Graduate School of Engineering.)

Academic Transcript	Applicable students only	Prepared by the dean (or the president) of your university or any other institution that you have graduated from. (Not required if the applicants have the required qualification (5) or the applicants are expected to graduate from the Faculty of Engineering of Kobe University by March 31, 2022.) If the transcript is written in a language other than English, please attach an English or Japanese translation of the document.
Certificate of Graduation (Prospective) or Certificate of Completion (Prospective)	Applicable students only	Prepared by the dean (or the president) of your university or any other institution that you graduated from. (Not required if the applicants have the required qualification (5) or the applicants are expected to graduate from the Faculty of Engineering of Kobe University by March 31, 2022.) If the transcript is written in a language other than English, please attach an English or Japanese translation of the document.
A document proving the unofficial acceptance prepared by the faculty member of the education and research field of your first choice	All the applicants	Submit the document (no format specified) prepared by the relevant faculty members of the Graduate School of Engineering.
Notification on elective subjects	Applicants for Department of Architecture, Applicants for Department of Civil Engineering, Applicants for Department of Electrical and Electronic Engineering, and Applicants for Department of Mechanical Engineering	Complete the Special Subject (1) and Special Subject (2) in the case of Applicants for the Department of Architecture, and Special Subject (2) in the case of Applicants for the Department of Civil Engineering, the Department of Mechanical Engineering, and the Department of Electrical and Electronic Engineering in the area for elective notification included in " Survey Items for the Applicants of Special Entrance Examination for International Students".
Original of TOEIC Official Score Certificate* or Original of TOEFL Test Taker (Examinee) Score Report	Applicants for Department of Architecture	Applicants who submit the TOEIC Score must submit the original version of the TOEIC Official Score Certificate in addition to a copy of this certificate (A4 size). If you submit the TOEFL Test Score, you must submit the original version of the TOEFL Test Taker (Examinee) Score Report in addition to a copy of this report (A4 size). After we check the copy against the original, we will return the original version to you when we send you the Examination Admission Card. If you only submit the original version, we will not return it to you.

	Applicants for Department of Architecture	<p>For TOEFL we only accept TOEFL-iBT (internet Based Test, except for TOEFL-iBT Special Home Edition) and TOEFL PBT (Paper Based Test), and for TOEIC, we only accept TOEIC Listening &amp; Reading Test. Any score for a TOEIC-IP Test or TOEFL-ITP administered for groups is not acceptable. Furthermore, the applicants who submit a TOEFL Test Taker (Examinee) Score Report must make an arrangement to send the Institutional Score Report (Official Score Report) to Kobe University (DI code : B071 ). TOEIC Official Score Certificate or TOEFL Test Taker (Examinee) Score Report is considered valid if it is issued for a test taken within the last two years calculating from the day of the scheduled enrollment examination. Any official certificate without the photo of the applicant is not acceptable.</p> <p>Please visit our Department of Architecture website for more details. (<a href="http://www.arch.eng.kobe-u.ac.jp/">http://www.arch.eng.kobe-u.ac.jp/</a>) (in Japanese)</p>
Original of TOEIC Official Score Certificate* or Original of TOEFL Test Taker (Examinee) Score Report	Applicants for Department of Civil Engineering	<p>Applicants who submit the TOEIC Score must submit the original version of the TOEIC Official Score Certificate in addition to a copy of this certificate (A4 size). If you submit the TOEFL Test Score, you must submit the original version of the TOEFL Test Taker (Examinee) Score Report in addition to a copy of this report (A4 size). After we check the copy against the original, we will return the original version to you when we send you the Examination Admission Card. If you only submit the original version, we will not return it to you.</p> <p>For TOEFL we only accept TOEFL-iBT (internet Based Test, except for TOEFL-iBT Special Home Edition) and TOEFL PBT (Paper Based Test), and for TOEIC, we only accept TOEIC Listening &amp; Reading Test. Any score of TOEIC-IP Test or TOEFL-ITP administered for groups is not acceptable. Furthermore, applicants who submit a TOEFL Test Taker (Examinee) Score Report must make arrangements to send the Institutional Score Report (Official Score Report) to Kobe University (DI code : B071 ). TOEIC Official Score Certificate or TOEFL Test Taker (Examinee) Score Report is considered valid if it is issued for a test taken within the last two years calculating from the day of the scheduled enrollment examination. Any official certificate without the photo of the applicant is not acceptable.</p> <p>You may replace the Original of TOEIC Official Score Certificate or TOEFL Test Taker (Examinee) Score Report with the submitted one if you send (by post) or submit directly the new one to the Department Office of Civil Engineering by one week before the examination day. (If you send it by post, it must arrive there by one week before the examination day.)</p> <p>Please visit our Department of Civil Engineering website for more details. (<a href="http://www.shimin.eng.kobe-u.ac.jp/">http://www.shimin.eng.kobe-u.ac.jp/</a>) (in Japanese)</p>

<p>Original of TOEIC Official Score Certificate* or Original of TOEFL Test Taker (Examinee) Score Report</p>	<p>Applicants for Department of Electrical and Electronic Engineering</p>	<p>Applicants who submit the TOEIC Score must submit the original version of the TOEIC Official Score Certificate in addition to a copy of this certificate (A4 size). If you submit the TOEFL Test Score, you must submit the original version of the TOEFL Test Taker (Examinee) Score Report in addition to a copy of this report (A4 size). After we check the copy against the original, we will return the original version to you when we send you the Examination Admission Card. If you only submit the original version, we will not return it to you.</p> <p>For TOEFL we only accept TOEFL-iBT (internet Based Test, except for TOEFL-iBT Special Home Edition) and TOEFL PBT (Paper Based Test), and for TOEIC, we only accept TOEIC Listening &amp; Reading Test conducted in Japan. Any score for a TOEIC Test administered outside Japan or a TOEIC-IP Test or TOEFL-ITP administered for groups is not acceptable. Furthermore, applicants who submit a TOEFL Test Taker (Examinee) Score Report must make arrangements to send the Institutional Score Report (Official Score Report) to Kobe University ( DI code : B071 ) . TOEIC Official Score Certificate or TOEFL Test Taker (Examinee) Score Report is considered valid for the application if it is issued for a test taken after April 1, 2018. Any official certificate without the photo of the applicant is not acceptable. Please visit our Department of Electrical and Electronic Engineering website for more details. (<a href="http://www.eedept.kobe-u.ac.jp/">http://www.eedept.kobe-u.ac.jp/</a>) (in Japanese)</p>
	<p>Applicants for Department of Mechanical Engineering</p>	<p>Applicants who submit the TOEIC Score must submit the original version of the TOEIC Official Score Certificate in addition to a copy of this certificate (A4 size). If you submit the TOEFL Test Score, you must submit the original version of the TOEFL Test Taker (Examinee) Score Report in addition to a copy of this report (A4 size). After we check the copy against the original, we will return the original version to you when we send you the Examination Admission Card. If you only submit the original version, we will not return it to you.</p> <p>For TOEFL we only accept TOEFL-iBT (internet Based Test, except for TOEFL-iBT Special Home Edition) and TOEFL PBT (Paper Based Test), and for TOEIC, we only accept TOEIC Listening &amp; Reading Test. Any score of TOEIC-IP Test or TOEFL-ITP administered for groups is not acceptable. Furthermore, applicants who submit a TOEFL Test Taker (Examinee) Score Report must make arrangements to send the Institutional Score Report (Official Score Report) to Kobe University ( DI code : B071 ) . TOEIC Official Score Certificate or TOEFL Test Taker (Examinee) Score Report is considered valid if it is issued for a test taken within the last two years calculating from the day of the scheduled enrollment examination. Any official certificate without the photo of the applicant is not acceptable. Please visit our Department of Mechanical Engineering website for more details. (<a href="http://www.mech.eng.kobe-u.ac.jp/">http://www.mech.eng.kobe-u.ac.jp/</a>) (in Japanese)</p>

<p>Original of TOEIC Official Score Certificate* or Original of TOEFL Test Taker (Examinee) Score Report</p>	<p>Applicants for Department of Chemical Science and Engineering</p>	<p>Applicants who submit the TOEIC Score must submit the original version of the TOEIC Official Score Certificate in addition to a copy of this certificate (A4 size). If you submit the TOEFL Test Score, you must submit the original version of the TOEFL Test Taker (Examinee) Score Report in addition to a copy of this report (A4 size). After we check the copy against the original, we will return the original version to you when we send you the Examination Admission Card. If you only submit the original version, we will not return it to you.</p> <p>For TOEFL we only accept TOEFL-iBT (internet Based Test, except for TOEFL-iBT Special Home Edition) and TOEFL PBT (Paper Based Test), and for TOEIC, we only accept TOEIC Listening &amp; Reading Test. Any score for a TOEIC-IP Test or TOEFL-ITP administered for groups is not acceptable. Furthermore, the applicants who submit a TOEFL Test Taker (Examinee) Score Report must make an arrangement to send the Institutional Score Report (Official Score Report) to Kobe University (DI code : B071) . TOEIC Official Score Certificate or TOEFL Test Taker (Examinee) Score Report is considered valid for the application if it is issued for a test taken after April 1, 2018. Any official certificate without the photo of the applicant is not acceptable.</p>
<p>Permission for examination entry</p>	<p>Applicant currently enrolled in a graduate school; Applicant currently employed by a company</p>	<p>Individuals currently enrolled in a graduate school (except for individuals with prospective completion by March 2022) must submit permission for examination entry issued by the chief faculty member of his/her graduate school, and individuals currently employed by a company or any organization of a similar nature must submit permission issued by his/her line manager.</p>
<p>Residence Certificate or the like</p>	<p>Applicant who is a foreigner (only applicable if the applicant is an alien resident of Japan)</p>	<p>An applicant who is a foreigner and an alien resident of Japan must submit a photocopy of his/her residence certificate (the certificate is valid only if issued within the last 30 days from the day of submission) or any other equivalent document (submit a photocopy of both sides of your resident card).</p>
<p>Certificate of Japanese Government Scholarship Student</p>	<p>Applicable students only</p>	<p>If you are an international student awarded a Japanese Government Scholarship, include a letter to that effect issued by the university where you are currently enrolled. (Not required for students currently enrolled in the Kobe University Faculty of Engineering or Graduate School of Engineering.)</p>

\*Special notes regarding the application documents

- As a general rule, the documents submitted must be the originals, and no photocopy of the document will be acceptable. (Except where indicated that the photocopy is acceptable, or when it is necessary to submit the photocopy with the original version.)
- Any insufficiently prepared document is rejected, so please use extra caution for any item that is incomplete or includes inaccurate information.

- In the event an applicant falsified the application details or failed to satisfy the eligibility requirements for the application, the enrollment shall be revoked, even if the person has been successfully enrolled.
- As a general rule, application documents shall not be returned to the applicant. (Except where indicated that the documents will be returned.)
- TOEIC Official Score Certificate of TOEIC Listening & Reading Test is the only acceptable certificates. TOEIC Speaking & Writing Tests, TOEIC Speaking Test, TOEIC Bridge Listening & Reading Tests, TOEIC Bridge Speaking & Writing Tests are not accepted.

## 5. Submission Address for the Application

Kobe University Graduate School of Engineering, Student Affairs Section, 1-1, Rokkodai-cho, Nada-ku, Kobe 657-8501

Tel: +81-(0)78-803-6350

If you apply via postal mail, please use the registered express mail service.

Also, please add the text "Application Documents to the Master's Degree Program (Enrollment in April 2022) of XXXX (note: name of the department) at Graduate School of Engineering Inside" in red on the front of the envelope.

## 6. Methods, Dates, and Place of Examination

The decision on enrollment is made based on the overall evaluation of the results of a written examination and an interview. Please take note that any candidate who has not undergone the written examination or interview is exempted from the evaluation for enrollment. See the table on the appendix (pages 13 to 16) for the subjects of the written examination and the date, time, and venue of the interview.

## 7. Publication of Successful Applicants

10:00 a.m. on Tuesday, February 15, 2022 (currently scheduled)

The successful applicants will be announced on the website of Graduate School of Engineering. (<http://www.eng.kobe-u.ac.jp/eng-ofc/kym/examinee.html>)

In addition to the publication, a notice of the results will be mailed to the successful applicants.

The offices will not respond to any inquiries by phone about the results.

## 8. Admission Procedures

### (1) Procedure for Enrollment

The procedure for enrollment will be completed by post.

### (2) Period and Documents for Admission Procedures

The period for enrollment procedures is scheduled for mid-March of 2022. The detailed schedule will be mailed (via postal services) by late February of 2022, together with the documents required for enrollment.

### (3) Payments upon Admission

Category	Amount	Notes
Admission Fee	282,000 JPY	Please make the payment within the enrollment period.

Tuition Fee	for First Semester	267,900 JPY	The tuition fee is due in April. The payment method is an account transfer from the account indicated on the Account Transfer Request of Tuition to Kobe University. [If the tuition has been revised in the program of your curriculum, the revised tuition is applicable as of the time of the revision.]
	Annual Tuition	535,800 JPY	

(Note 1) The prices indicated above are the actual prices for AY 2021.

(Note 2) The paid admission fee is not refundable on any basis.

## 9. Important Notes

### (1) General Notes

- (i) An applicant may apply to one department only. An applicant may not apply to two or more departments.
- (ii) No revisions to the information as written and completed at the time of the application are allowed thereafter. The paid examination fee is not refundable on any basis, except for the instance where the application documents have not been submitted, or where the application has been rejected.
- (iii) Please bring your Examination Admission Card with you on the day of your examination.
- (iv) The applicant may use a watch or clock with timekeeping functions only.
- (v) The Graduate School does not make any referral to any lodging facility for the examination.
- (vi) If you are physically impaired and require special attention, please notify the Graduate School of it two weeks prior to your application.

### (2) Important Notes to Applicants

For applicants to the Department of Architecture, the applicant may not bring or present any material to demonstrate previous professional achievements (e.g. completed works) in the interview for the Master's Degree Program (Enrollment in April 2022) at the Graduate School.

## 10. Screening of the Applicants under Eligibility (5)

An eligibility evaluation is administered for applicants seeking to apply under this eligibility. (See page 17)

## 11. Handling of Personal Data

- (1) Kobe University complies with legislation such as the "Act on the Protection of Personal Information Held by Independent Administrative Legal Entity" in using applicants' personal information, and handles it based on the "Guideline on the Control of Personal Information Held by Kobe University."
- (2) Personal information including the individual results of screening shall be used for screening (application procedures, conducting screening), announcement of successful applicants, enrollment procedures, future screening methods, and surveys/research aimed at improving university education. The results of these surveys/research will be published without information that could identify specific individuals.
- (3) The personal information of enrolled students provided for the application will be used for supporting the students after enrollment (health management, tuition fee exemption or scholarship application), educational purposes (registration, academic instruction), tuition-fee related matters, and other corresponding work.
- (4) Part of these operations may be outsourced to an agency (hereafter referred to as "Agency"). In cases where operations are outsourced, all or part of the personal information provided will be provided to such an Agency under a nondisclosure obligation within a certain limit necessary for the Agency to

execute the operations.

## 12. Control and Prevention of Infectious Diseases

- (1) Submission of a certificate demonstrating inoculation and an antibody test against measles and rubella:

Kobe University has implemented the *Measles and Rubella Registration Policy*, and all newly enrolled Kobe University students must submit one of the following three certificates (①, ②, or ③) to prevent a possible outbreak of measles and rubella on campus.

Please note that students admitted into the following schools should submit either ① or ③:

School of Medicine (Faculty of Medicine and Faculty of Health Sciences),  
the Graduate School of Medicine, or the Graduate School of Health Sciences.

- ① A vaccination certificate to prove that you were inoculated against measles and rubella (twice each after one year of age) .
- ② A vaccination certificate to prove that you were inoculated with measles and rubella vaccines each within the last five years (since April 2017).
- ③ An antibody certificate verifying that you have sufficient antibody titer in your blood (refer to the chart next page) to prevent the development of measles and rubella, based on the results of an antibody test performed within the last five years (since April 2017).

- \* For ① and ②, it can be a combined vaccine of measles and rubella vaccines (e.g., MR vaccine).
- \* For ① and ②, the certificate must be issued by an accredited medical institution, and state the type of vaccine and the date of inoculation.
- \* For ③, the certificate must specify the measuring method and the measured values of antibody titer in your blood (refer to the next page), and it must satisfy the judging standard listed in the chart. A blood test report sheet itself can be accepted for submission.  
If the antibody titer in your blood is insufficient, you must receive the necessary vaccination, and submit either ① or ②.
- \* You may submit a combination of ①, ②, and ③ (e.g., ① for measles, and ③ for rubella).
- \* If the antibody titer level is below requirements, yet you cannot be inoculated with vaccines for some reason (e.g. illness or body composition), please submit an official document (for example, a certificate issued by the doctor) explaining why.

### <Submission Period and Place of Submission>

- All successful undergraduate and graduate applicants enrolling in April (except the Graduate School of Medicine, the Graduate School of Health Sciences, and the Graduate School of Maritime Sciences):  
Submit the certificate when you register at the Medical Center for Student Health (Rokkodai) during your routine medical check-up scheduled for April.
- All successful graduate applicants enrolling in April (the Graduate School of Medicine, the Graduate School of Health Sciences, and the Graduate School of Maritime Sciences):  
Submit the certificate to the following institution by the designated date:  
Students of the Graduate School of Medicine should submit directly to the Medical Center for Student Health, Kusunoki Branch, by April 18.  
Students of the Graduate School of Health Sciences should submit directly to the Physical and Mental Health Consultation Office (Myodani Campus), by April 18.  
Students of the Graduate School of Maritime Sciences should submit directly to the reception desk on the date of the medical check-up for Maritime Sciences students.  
Please note that medical check-ups for students enrolling in the following schools in April take place on different dates on their own campuses than the aforementioned routine medical check-up schedule. The schools are the Graduate School of Medicine, Graduate School of Health Sciences, and the Graduate School of Maritime Sciences.
- Successful applicants enrolling in October:  
Submit the certificate when you register at the Medical Center for Student Health (Rokkodai) during the routine medical check-up scheduled for mid-late October.

- (2) Submission of a certificate demonstrating inoculation and an antibody test against epidemic parotiditis and chickenpox (Only for successful applicants enrolling in the School of Medicine including both the Faculty of Medicine and the Faculty of Health Sciences; the Graduate School of Medicine; and the Graduate School of Health Sciences):

In addition to the measles and rubella certificate, successful applicants enrolling in the School of Medicine (the Faculty of Medicine and the Faculty of Health Sciences), the Graduate School of Medicine, and the Graduate School of Health Sciences, are also required to submit a certificate regarding epidemic parotiditis and chickenpox. A designated form for the certificate is available at the Academic Affairs Section.

The certificate must state that either you were inoculated against epidemic parotiditis and chickenpox (twice each after one year of age), or verify that you have sufficient antibody titer in your blood to prevent development of epidemic parotiditis and chickenpox based on an antibody test performed within the last five years (since April 2017).

If the antibody titer in your blood is insufficient, you must receive a necessary vaccination (twice each after one year of age), by the due date for the certificate submission.

If the antibody titer level is below requirements, yet you cannot be inoculated with vaccines for some reason (e.g., illness or body composition), please submit an official document (for example, a certificate issued by the doctor)

explaining why.

<Submission Period and Place of Submission>

- Successful undergraduate and graduate applicants enrolling in April  
(Only for the School of Medicine including the Faculty of Medicine and the Faculty of Health Sciences; the Graduate School of Medicine, and the Graduate School of Health Sciences):  
By end of July of your first year, submit the certificate to the following:  
Students of the School of Medicine (both the Faculty of Medicine and the Faculty of Health Sciences) should submit directly to the Medical Center for Student Health (Rokkodai).  
Students of the Graduate School of Medicine should submit directly to the Medical Center for Student Health, Kusunoki Branch.  
Students of the Graduate School of Health Sciences should submit directly to the Physical and Mental Health Consultation Office (Myodani Campus).  
(Attention: For those who are enrolled in the School of Medicine but miss the submission deadline, you may not be able to participate in the initial on-site clinical training program etc.)
- Successful graduate applicants enrolling in October  
(Only for the Graduate School of Medicine and the Graduate School of Health Sciences):  
Submit the certificate by end of December of your first year to the following:  
Students of the Graduate School of Medicine should submit directly to the Medical Center for Student Health, Kusunoki Branch.  
Students of the Graduate School of Health Sciences should submit directly to the Physical and Mental Health Consultation Office (Myodani Campus).

**Measuring Methods and Judging Standards for Protective Antibodies in Blood**

	Measuring Method	Judging Standard	Remarks
Measles	IgG – EIA method	8.0 ≧ positive (16.0 ≧ ) *	Positive result by one of these three methods. * For the School of Medicine (both the Faculty of Medicine and the Faculty of Health Sciences), the Graduate School of Medicine, and the Graduate School of Health Sciences: Positive result by one of these three methods, and must achieve values shown in brackets.
	PA method	256x ≧ positive	
	NT method	4.0x ≧ positive (8x ≧ ) *	
Rubella	HI method	32x ≧ positive	Positive result by one of these two methods. (HI method is recommended)
	IgG – EIA method	8.0 ≧ positive	
Epidemic Parotiditis (Mumps)	IgG – EIA method	4.0 ≧ positive	Only for the following schools: School of Medicine (Faculty of Medicine, Faculty of Health Sciences), Graduate School of Medicine, and Graduate School of Health Sciences
Chickenpox	IgG – EIA method	4.0 ≧ positive	Only for the following schools: School of Medicine (Faculty of Medicine, Faculty of Health Sciences), Graduate School of Medicine, Graduate School of Health Sciences Positive result by one of these four methods (IgG – EIA method is recommended)
	IAHA method	4-fold ≧ positive	
	NT method	4-fold ≧ positive	
	Antigen skin test	5mm ≧ positive	

Make sure the above methods are followed when the antibody titer is measured in your blood. The protective antibody value differs according to the measuring method used. Please note that **the judging standards are higher than the usual standards used at medical institutions.**

Students who wish to enter the School of Medicine (the Faculty of Medicine and the Faculty of Health Sciences), the Graduate School of Medicine, and the Graduate School of Health Sciences should be aware that they are required to have an even higher level of protective antibody values listed in brackets against measles.

Before you visit a medical institution, please make an appointment and confirm that the antibody test and/or the vaccine you need are available at that institution.

When you visit a doctor at a medical institution, make sure you present this guidebook so your doctor can issue the necessary certificate(s). (Please make sure you confirm with your doctor the measuring methods and judging standards when measuring the antibody titer in your blood.)

\* Points to Consider when Submitting a Certificate:

- ① Please submit the original certificate and one set of copies (A4 size).
- ② If the certificate is written in a language other than Japanese or English, please attach a document that

shows either a Japanese or English translation.

For further information, please refer to:

Medical Center for Student Health, Kobe University      Tel: 078-803-5245

Student Support Division, Student Affairs Department, Kobe University Tel: 078-803-5219

### **13. Other Information**

The Graduate School has exemption programs from admission fee and tuition fees, as well as scholarship programs as part of the educational support.

## Appendix

### Subjects, Date, and Place of Examinations

#### Subjects (for Special Entrance Examination for International Students)

English translation for the written exam is available. Please make a request for English translation with the application form. If the applicants for the Department of Architecture and Civil Engineering request an English translation, the written examinations will be provided in both English and Japanese. If the applicants for the Department of Electrical and Electronic Engineering and Mechanical Engineering request an English translation, the written examinations will be provided only in English.

Department	Subjects				Items to be used except for writing stationery
	Special Subject (1)	Special Subject (2)	Foreign Language	Interview	
Department of Architecture	The applicant applying for a faculty member of group A must take Architectural Planning, Urban Planning and History of Architecture examinations.	The applicant applying for a faculty member of group B must take Building Structure and Structural Material examinations. The applicant applying for a faculty member of group C must take the Environmental Engineering examination.	(Note 1) English	Interview	Not Available A rental calculator will be supplied.
Department of Civil Engineering	Mathematics (linear algebra, differential and integral calculus, differential equations, and probability and statistics)	(Note 2) Structural Mechanics, Hydraulics, Soil Mechanics, Infrastructure Planning and Management Select two of the four subjects listed above	(Note 3) English	Interview	Scale A rental calculator will be supplied.
(Note 4) Department of Electrical and Electronic Engineering	Mathematics (linear algebra, differential and integral calculus, ordinary differential equations, complex function theory, and Fourier analyses) Electromagnetics Electric and Electronic Circuits	Materials Science and Engineering, Quantum Physics, Electric Power Engineering, Automatic Control, Information Theory, Logic Circuit (Note 5) Select two of the six subjects listed above	(Note 6) English	Interview	Scale
Department of Mechanical Engineering	Mathematics (linear algebra, differential and integral calculus, ordinary differential equations, complex function theory, and Fourier analyses)	Mechanics of Materials Fluid Dynamics Thermodynamics Fundamental Mechanics and Vibration Production Engineering and Control Engineering Select three of the five subjects listed above	(Note 7) English	Interview	Not Available

Department of Chemical Science and Engineering	Evaluated by Interview	(Note 8) English	Interview	Not Available
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(Note 1) Evaluated by the TOEIC or TOEFL Score. For information on score validity, please refer to “4. Application Documents”.

Please visit our Department of Architecture website for more details.

(<http://www.arch.eng.kobe-u.ac.jp/>) (in Japanese)

(Note 2) Please visit our Department of Civil Engineering website for an overview of the problems covered in the Special Subject examinations. (<http://www.shimin.eng.kobe-u.ac.jp/>)(in Japanese)

(Note 3) Evaluated by the TOEIC or TOEFL Score. For information on score validity, please refer to “4. Application Documents”.

Please visit our Department of Civil Engineering website for more details. (in Japanese)

(<http://www.shimin.eng.kobe-u.ac.jp/>)

(Note 4) Please visit our Department of Electrical and Electronic Engineering website for an overview of the problems covered in the Special Subject examinations. (<http://www.eeddept.kobe-u.ac.jp/>) (in Japanese)

(Note 5) Select two subjects out of the Special Subjects (2) listed below and designated by the education and research field of your first preference for the Department of Electrical and Electronic Engineering.

Education and Research Field Number	Special Subject (2)
1-4B	Materials Science and Engineering, Quantum Physics, Electric Power Engineering
5	Quantum Physics, Electric Power Engineering, Automatic Control
6-10	Automatic Control, Information Theory, Logic Circuit

(Note 6) Evaluated by the score for the TOEIC test or TOEFL test. For information on score validity, please refer to “4. Application Documents”. Any official certificate without the photo of the applicant is not acceptable.

(Note 7) Evaluated by the TOEIC or TOEFL Score. For information on score validity, please refer to “4. Application Documents”.

Please visit our Department of Mechanical Engineering website for more details.

(<http://www.mech.eng.kobe-u.ac.jp/>) (in Japanese)

(Note 8) Evaluated by the TOEIC or TOEFL Score. For information on score validity, please refer to “4. Application Documents”.

### Examination Dates (for Special Entrance Examination for International Students)

#### Department of Architecture

Date	Time	Subjects
Jan. 26 (Wed)	10:30–12:30	Special Subject (1): Architectural Planning; Urban Planning and History of Architecture (Only for the applicant applying for a faculty member of group A) Special Subject (2): Building Structure and Structural Material (Only for the applicant applying for a faculty member of group B) Special Subject (2): Environmental Engineering (Only for the applicant applying for a faculty member of group C)
	14:00–	Interview

#### Department of Civil Engineering

Date	Time	Subjects
Jan. 26 (Wed)	9:30–10:30	Special Subject (2): Structural Mechanics
	11:00–12:00	Special Subject (2): Hydraulics
	13:00–14:00	Special Subject (1): Mathematics
	14:30–15:30	Special Subject (2): Soil Mechanics
	16:00–17:00	Special Subject (2): Infrastructure Planning and Management
Jan. 27 (Thu)	10:00–13:00	Interview

#### Department of Electrical and Electronic Engineering

Date	Time	Subjects
Jan. 26 (Wed)	9:30–11:00	Special Subject (1): Mathematics
	11:30–13:00	Special Subject (2)
	14:30–16:30	Special Subject (1): Electromagnetics Electric and Electronic Circuits
Jan. 27 (Thu)	14:00–17:00	Interview

Department of Mechanical Engineering

Date	Time	Subjects
Jan. 26 (Wed)	9:30–11:00	Special Subject (1): Mathematics
	12:30–13:30 13:45–14:45 15:00–16:00	Special Subject (2): Mechanics of Materials Fluid Dynamics Thermodynamics Fundamental Mechanics and Vibration Production Engineering and Control Engineering  Select three of the five subjects listed above (Note)
	16:15–	Interview

(Note) Exam of each subject is one hour in length and you have 15 minutes rest interval between each subject.

Department of Chemical Science and Engineering

Date	Time	Subjects
Jan. 26 (Wed)	13:00–	Interview

**Place of Examination**

Kobe University Graduate School of Engineering Building (address: 1-1, Rokkodai-cho, Nada-ku, Kobe. See the back of your Examination Admission Card for access to the venue).

## Screening of the Applicants under Eligibility (5)

### 1. Required Qualifications

The individual must have been verified to have the academic ability equivalent to or better than the ability of the individuals who have completed an undergraduate curriculum after an application qualification evaluation by the Kobe University Graduate School of Engineering on an individual basis, and the individual is going to be 22 years of age or older by March 31, 2022.

(Note) The individual who has been "approved to have the academic ability equivalent to or better than the ability of the individuals who have completed an undergraduate curriculum after an application qualification evaluation by the Kobe University Graduate School of Engineering on an individual basis" refers to individuals who have graduated from a junior college, technical college, or vocational school, or have completed a curriculum offered by a school in the "miscellaneous" category, and have been approved to have the academic ability equivalent to or better than the ability of the individuals who have completed an undergraduate curriculum after an application qualification evaluation on an individual basis.

### 2. Application Eligibility Evaluation

An eligibility evaluation is administered by the Kobe University Graduate School of Engineering on an individual basis for an applicant seeking to apply under this eligibility.

#### (1) Application procedures

Application term: from Wednesday, December 1, 2021 to Friday, December 3, 2021.

Applications are accepted from 9:30 a.m. to 4:00 p.m. (except for 12:00 p.m. to 1:00 p.m.)

#### (2) Submission address of the application documents for eligibility evaluation:

Kobe University Graduate School of Engineering,  
Student Affairs Section, 1-1, Rokkodai-cho, Nada-ku, Kobe 657-8501  
Tel: +81-(0)78-803-6350

In the case of mailed applications, the application must be sent via registered express service and delivered to the Graduate School by 5:00 p.m. Friday, December 3, 2021.

Also, please add "**Application Documents for the Eligibility Evaluation of Master's Degree Program (Enrollment in April 2022) at Graduate School of Engineering Inside**" in red color written on the front of the envelope.

#### (3) Documents to submit

- (i) Application for Eligibility Evaluation (the form designated by the Graduate School)
- (ii) Certificate of graduation issued by the last educational institution attended (in Japanese or English)
- (iii) Academic Transcript issued by the last educational institution attended (in Japanese or English)
- (iv) Envelope designated for response (a standard size envelope with the applicant's mailing address, first and last names clearly indicated, and attached with the postage stamp/stamps of 344 JPY)

#### (4) Evaluation Method

The applicant is evaluated by the documents.

#### (5) Notice of the results of application eligibility evaluation

The results will be notified to the applicant by Wednesday, December 22, 2021.

### **3. Application Procedures**

If you have qualified for application eligibility through the application eligibility evaluation, please complete the application procedures pursuant to this Application Guide. (In this instance, the academic transcript or certificate of graduation (or completion) included in the list of application documents are not required.)

If you have already been certified for application eligibility through the application eligibility evaluation in the same academic year for the Kobe University Graduate School of Engineering Special Entrance Examination for International Students (Term 1, AY2022), you are not required to take this procedure again. In that case, please inform the Student Affairs Section about your previous evaluation result by November 30 , 2021.

### **4. How to Request the Documents for Application Eligibility Evaluation**

(i) Make sure that the application is based on application eligibility (5), and (ii) request the documents from the Kobe University Graduate School of Engineering, Student Affairs Section, by sending the form with the clearly indicated name of the school that you last graduated from and the other information and with an envelope (size K2: 33.2 cm long and 24.0 cm wide) for a response with your zip code, mailing address, first and last names indicated, and with the postage stamp/stamps of 380 JPY. It should be noted that "Application Documents for the Eligibility Evaluation of Master's Degree Program (Enrollment in April 2022) at Graduate School of Engineering Inside" must be written in red on the envelope.

## Payment Methods of the Entrance Examination Fees for the Master's Programs of Kobe University Graduate School of Engineering from a Location Overseas

Please access the Application Fee Payment System of Kobe University from the URL shown below or the QR code, and pay with a credit card or Alipay.

The credit card holder does not have to be the applicant, but please be sure to enter the applicant's information in the Customer information field.

Please print the Incoming email of payment completion and attach it to the application form.

<https://tinyurl.com/yxt4p2dv>



### 【Items】

Application fee ¥30,000

Remittance fee ¥660

【Handling credit cards, etc. at the payment system of Kobe University】



## **II Information on the Master's Program Curricula (Enrollment in April 2022) of the Graduate School of Engineering**

### **1. Educational Philosophy and Objectives**

The Graduate School of Engineering aims to develop applied research activities that contribute to society and at the same time promote fundamental scientific research activities based on the belief that engineering should give back its scientific progress to society. To enable the Graduate School to achieve its aim, five departments are established: the Department of Architecture to create living space in society that excels in safety, comfort, convenience, and balance with the environment; the Department of Civil Engineering to promote safety and symbiosis with the environment in urban and suburban spaces; the Department of Electrical and Electronic Engineering to construct the foundation for the information society with electronic materials, electronic information devices, and data processing technology; the Department of Mechanical Engineering to create the various kinds of machinery including energy, transportation, and production machinery and robots; and the Department of Chemical Science and Engineering to invent and explore the mechanism of functional materials and to create and advance the material production processes. The objective of the first term of the Master's Programs at the Graduate School is to engage in education and research to cultivate talent with broad knowledge and an interdisciplinary viewpoint, in particular professionals of excellence with multiple points of view and abundant creativity. The objectives for the second term of the programs are to further expand and explore education in the first term of the respective departments, and at the same time promote education and research to nurture researchers and faculty members at higher educational institutions and expert professionals of more advanced levels.

### **2. Approach and Features of Program Curricula**

The first term of the programs offers a kind of education that attracts a wide breadth of talent and that is aligned with the talent cultivation policy after the completion of the programs. The second term of the programs continues to deliver higher levels of technical education that is consistent with the first term, whereas the newly enrolled students from the second term are provided guidance on an individual basis. The features of the Graduate School curricula include the following.

The Graduate School is currently offering Master's Programs that cover highly specialized and diverse academic areas of engineering to successfully satisfy the students' ambition for improvement, and now it is introducing coursework, multi-major education, and industry-academia collaborative education featuring work experience.

Establishing multi-major courses:

Cross-department sub-courses are established to cultivate engineering professionals equipped with multiple points of view and abundant creativity and to offer students an option to develop talent from education by multiple departments, in addition to that of the principal department. The completion of each sub-course will be accredited if the requirements have been met, and the students will be awarded with certificates of completion. The accredited units, however, will be treated separately from the requirements of the first term.

#### Digital Medical Engineering Creation Course:

In order to develop advanced medical devices that provide solutions to the various problems that Japan's healthcare system is facing today, there is a need for human resources who can create innovations by acquiring fundamental knowledge for device development from both life and medical science perspectives, and who are able to capture the needs of the medical field and translate them into commercialization. In response to this, Kobe University will offer a new course, the Digital Medical Engineering Creation Course, in April 2021 at the Graduate School of Engineering, as a place for creative education to achieve the full potential of the medicine and engineering collaboration. This cross-disciplinary educational program will be implemented across multiple graduate schools of Kobe University (Graduate School of Engineering, Graduate School of Medicine, Graduate School of Health Sciences, etc.). In this course, students will learn about concept development and manufacturing of new devices, with a specific emphasis on medical device development that enables practical applications in the medical field.

This course has the following features. (i) Students will develop specialized knowledge and multifaceted thinking in life/medical science and engineering fields through a cross-disciplinary curriculum and team-based development practices in collaboration with different disciplinary fields. (ii) Students will be able to experience needs identification through visits to the sites of medical operations. (iii) Students will gain a broad range of hands-on experience, such as medical device development and robot hand control, through practical training at the Medical Device Hands-on Studio in Kobe University research hospital.

If students meet the requirements of the course, they will receive a certificate of completion. The course is designed for students who are interested in advanced medical technology and the application of engineering principles to medicine. Those who are able to set their own goals and tackle their challenges with an inquiring mind are encouraged to participate in this course.

#### Fostering Interdisciplinary Viewpoints:

The Graduate School promotes the cultivation of interdisciplinary viewpoints by designating a required elective subject of Advanced Science and Technology A that is established as a subject common to five natural science graduate schools (science, engineering, system informatics, agricultural science, and maritime sciences).

#### Master's Degree Accreditation Procedures:

A midterm presentation meeting on the progress and future plan of the research will be held in the second term of the first year to the first term of the second year to offer proper guidance for the drafting of master's degree theses. Furthermore, the progress of the students in learning technical knowledge will be verified in the second term of the second year before moving forward to the submission and evaluation of the master's degree theses (including the presentation meeting for the master's degree theses). The midterm presentation meeting on the progress of research and the presentation meeting for the master's degree theses will be held by the respective departments to establish a system for each department as a whole to work on the research and guidance. The presentation meeting for the master's degree theses is held in the first year in the case of earlier completion.

### 3. Departments, Divisions, and Fields of Education and Research

(Department)	(Division)	(Education and Research Field)
Department of Architecture	Spatial Design	4 fields
	Architectural Planning	3 fields
	Engineering of Building Structures	3 fields
	Architectural Environmental Engineering	2 fields
Department of Civil Engineering	Engineering of Human Safety	6 fields
	Engineering of Environmental Symbiosis	6 fields
Department of Electrical and Electronic Engineering	Physical Electronics	5 fields
	Computer and Information Engineering	5 fields
Department of Mechanical Engineering	Heat Transfer and Fluid Engineering	3 fields
	Materials Physics and Mechanics	3 fields
	System Design	3 fields
	Innovative Materials and Nano Engineering	2 fields
Department of Chemical Science and Engineering	Applied Chemistry	3 fields
	Chemical Engineering	3 fields
(Total) 5 departments	14 divisions	51 fields

#### **4. Department Details**

##### Department of Architecture

Architecture is one of the most universal fields of learning, concerning the creation of housing, architectural facilities, and other bases of human life. In order to address the emerging architectural challenges, it is necessary to foster human resources capable of "spatial design" to study basic fields of architecture, such as design and planning, structural engineering, and environmental engineering, and to provide specific solutions for the challenges by integrating the learning from the basic fields.

The curriculum at the Department of Architecture provides education and undertakes research in order to produce practical talents to create safer and enhanced space for living comprising (i) integrated and practical design encompassing architectural and environmental design, management of structural engineering and designing; structural and information systems, and environmental management, (ii) basic theory of the architectural design including history and theory of architecture, conservation and restoration theory for historical environments, dwellings and planning of housing and areas, urban and architectural safety and architectural planning, and basic theory of urban planning; (iii) broad range of research and education for improvement of safety and resilience of building structures against natural and human-made hazards and for advanced structural design, performance evaluation, proposal and application of novel technologies: structural controls and high-performance materials; and the (iv) analysis and control of acoustical, thermal, aerial and lighting environment of buildings.

##### Department of Civil Engineering

The Department of Civil Engineering enrolls students who intend to be in charge of the public services that are much-needed in society, and develops practical and highly skillful talents with comprehensive cross-disciplinary points of view and technical knowledge across the traditional civil engineering areas. The department sees the broad engineering area encompassing urban redevelopment, citizen participation, and internationalization as the new Civil Engineering for the 21st century. The department delivers education and research related to safety in urban and regional areas, and to environmental symbiosis based on education on environmental conservation and maintenance and restoration of urban facilities. We aim to create cities and areas that are safe against natural and social disasters and symbiotic with nature. The Department of Civil Engineering has two divisions including the Human Safety Engineering Division and Environmental Symbiosis Engineering Division.

##### Department of Electrical and Electronic Engineering

The current expectations for fundamental research at universities are the highest ever in the electrical and electronic engineering fields as the fields are facing critical research subjects, including the development of nano-structured materials; neo-functional materials; quantum effect materials and devices; ultra-gigabit scale chips; large capacity communication shifting from terabit to petabit; next-generation super capacity computers; artificial intelligence attempting to achieve the functionality of human brain; development of new electric energy technology; and the application of electrical and electronic engineering technologies to the environment, medical, safety, and bioengineering fields.

The Department of Electrical and Electronic Engineering is designed to meet these expectations, and based on a new concept where electronic physics and electronic information are functionally integrated. The notable feature is an organization that allows for integrated education and research at graduate school from hardware and software to systems at the electronics and information engineering. The basic study and research subjects include the physical properties of electronic materials and device physics; the theory

and technology of exchange, transfer, and processing of data; conversion, transfer, and control of electromagnetic energy; and the basics of new energy systems. The department aims to organize curricula with a wider variety of subjects in order to cultivate talents with higher levels of basic academic capability in specialized fields and basic research capability.

#### Department of Mechanical Engineering

Mechanical engineering is an academic field that forms the foundation to support industrialized society and information society. The department provides education and research in machines and related fields to design, manufacture, and control a highly complicated mechanical system while maintaining harmony with society and the environment. This is achieved by integrating and synthesizing many advanced and sophisticated technology elements both from the hardware and software of environment, energy, nanotechnology, robotics, design systems, and production systems. During the program of the first term, the department nurtures talents with high levels of basic academic capability in specialized fields and basic research capability, as well as an ethical and cosmopolitan way of thinking, to be leader of society in the future. The department then cultivates talents with interdisciplinary ways of thinking to be able to carry out unique research and development in the second term. To achieve this, the Department of Mechanical Engineering offers four divisions including Heat Transfer and Fluid Engineering, Materials Physics and Mechanics, System Design and Innovative Materials and Nano Engineering.

#### Department of Chemical Science and Engineering

The Department of Chemical Science and Engineering freely integrates subjects from a broader area from fundamental chemistry at micro and molecular levels to the addition and expression of functionality of chemical substances as the amalgamated form of molecules, creation of substances, engineering method of application of biological functions, and to the actual macro-level industrial production and production technologies and systems based on a new set of standards thereby seeking to cultivate researchers and engineers to lead the chemical industry in the future on a global level. The department offers education and research on the analysis of structure and physical properties in the orders of molecule to nano, creation of highly functional substance and materials, biomaterial including application technologies of biological functions, development of bioreactors, chemistry technology, production technology, advancing isolation and refining technologies, and analysis and application of processing system as a whole. To achieve this, the Department of Chemical Science and Engineering has two divisions: Applied Chemistry and Chemical Engineering.

## 5. Education/Research Fields, Staff and The Study Contents(Keyword)

As of November 1, 2021

Department	Number	Education/Research Fields	Staff	The Study Contents	
Architecture	A Group (Note2)	1	History and Theory of Architecture	SUEKANE, Shingo	Theory and Design of Architecture
		2		NAKAE, Ken	History of Modern Architecture, Theory of Architecture
		3	Urban and Regional Planning	YAMAZAKI, Juichi (Note1)	Living Environmental Planning and Design, Regional and Dwelling Planning
		4		KURIYAMA, Naoko	Urban Landscape Policy, Urban Planning, Urban Design, Urban Regeneration, Community Planning
		5	Architectural Design and Environmental Design	TSUKIHASHI, Osamu	Practical Theory for Architecture and Urban Design
		6		KOSHIMA, Yusuke	Architecture and Environmental Design
		7	Planning for the Built Environment and Disaster Risk Reduction	KONDO, Tamiyo	Planning for the Built Environment, Housing Policy, Post-disaster Housing Recovery
	B Group (Note 2)		Structural Engineering and Design (Note3)	Undecided	Undecided
		8	Reinforced Concrete Structures	SUN, Yuping	Earthquake-Resilient Structures, Reinforced Concrete Structures, Concrete-Filled Steel Tubular Structures, Seismic Design, Seismic Retrofit, Wind-Resistance Engineering
		9		OHTANI, Yasuhiro (Note1)	Life-cycle Management of Building, Damage and Fracture Process, Composite and/or Hybrid Structures, Recycled Material, Stress Analysis
		10		FUJINAGA, Takashi	Steel-Concrete Composite Structures, Hybrid Structures, Seismic Retrofitting
		11	Steel Structures	TANAKA, Tsuyoshi	Steel Structures, Composite Structures, Connections
		12		NAMBA, Hisashi	Seismic Behavior of Steel and Timber Structures
		13	Structural Dynamics and Mechanics	FUJITANI, Hideo	Resilience of buildings, Structural control, Performance evaluation of seismic control structure, Retrofit by response control
		14		MUKAI, Yoichi	Structural Control, Structural Monitoring, Structural Analysis, Impulsive Action, Wooden Structure
	15	Structural and Information Systems	YAMABE, Yuichiro	Structural Planning, Optimization of Structural System, Behavioral Simulation	
	C Group (Note 2)	16	Planning of Acoustical and Lighting Environments	SAKAGAMI, Kimihiro	Measurement, analysis and evaluation of acoustic environment, Numerical acoustic simulation, Control of acoustic environment
		17		SATO, Hayato	Evaluation of sound environment, Speech transmission performance, Auditory guide signal, Speech privacy
		18	Thermal Environmental Planning	TAKADA, Satoru	Architectural environmental system, Simultaneous heat and moisture transfer, Thermal comfort, Heat transfer in buildings, Hygrothermal material properties
		19	Environmental Management	TAKEBAYASHI, Hideki	Urban Thermal Environment, Heat Island, Wind Environment, Green Roof, Energy Conservation
20		SUZUKI, Hirotaka		Lighting Environment Planning, Visual Environment Analysis, Daylighting, Lampshade Design	

(Note1) The faculty member is scheduled to retire in March 2023.

(Note2) The years of practical experience which you can acquire through this master course to apply for the Architect licence examination vary depending on A,B and C group. Please visit Department of Architecture website for more details. (<http://www.arch.kobe-u.ac.jp/>)

(Note3) Please do not choose this Education/Research Field because the staff is undecided.

Department	Divisions	Number	Education/Research Fields	Staff	The Study Contents(Keyword)
Civil Engineering	Engineering of Human Safety	C1	Structural Engineering for Urban Safety	AKUTAGAWA, Shinichi	Rock engineering, Tunnel engineering, Infrastructure maintenance, On-Site Visualization
		C2		MIKI, Tomohiro	Structural concrete, Maintenance, Nonlinear analysis, Seismic performance evaluation, Residual Performance evaluation, Image analysis
		C3	Geotechnical Engineering for Human Safety	KATAOKA, Satsuki	Geotechnical Engineering, Geomaterial Properties, Geotechnical Engineering for Disaster Prevention, Recycle Material
		C4	Transport Systems Engineering	OTAZAWA, Toshimori	Infrastructure Economics, Regional Science
		C5		SEYA, Hajime	Geographic information science, Spatial econometrics, Spatial statistics, Travel behavior analysis
		C6	Geotechnical Engineering for Disaster Reduction	TAKEYAMA, Tomohide	Geotechnical Engineering, Soil-water coupled FEM, Soil-water coupled SPH, Liquefaction, Landslide, Large-scale simulation
		C7	Earthquake disaster mitigation engineering	NAGAO, Takashi	Earthquake engineering, Evaluation of earthquake ground motion, Earthquake resistance analysis, Structural design engineering, Performance-based design, Reliability-based design
		C8		KUWATA, Yasuko	Lifeline earthquake engineering, Strong ground motion assessment, Seismic response analysis, Experiment on buried pipe, Earthquake disaster prevention, Seismic risk assessment
		C9	River Basin Management Engineering	KOBAYASHI, Kenichiro	Hydrology, Hydraulic Engineering, River engineering, GIS, Urban flood inundation analysis, Economic loss estimation, Evacuation behavior, Ensemble flood prediction
	Engineering of Environmental Symbiosis	C10	Environmental Fluid Engineering	UCHIYAMA, Yusuke	Coastal engineering, Coastal oceanography, Ocean waves, Turbulence, Ocean modeling, Ocean environment
		C11		SAITO, Masahiko	hydraulics, groundwater hydrology, environmental groundwater modeling, seepage flow simulation, multi-phase flow analysis
		C12	Aquatic and Environmental Engineering	NAKAYAMA, Keisuke	Environmental Engineering, Applied Ecology, Environmental Fluid Dynamic, Climate Change, Solitary Wave, Internal Wave
		C13	Geosphere Environmental Engineering	OISHI, Satoru	Information Civil Engineering, Application of Meteorology to Disaster Mitigation, Quantitative Precipitation Estimation by Electromagnetic wave, Hydrology, Water Resources
		C14		KAJIKAWA, Yoshiyuki	Meteorology, Climatology, Climate Change, Monsoons, Diagnostic study, Numerical Simulation, Deep Convection, Heavy rainfall
		C15		KATO, Shoji	Geotechnical Engineering for Unsaturated Soils, Soil Mechanics for Unsaturated Soils, Soil material technology, In-Situ and Laboratory test for Unsaturated Soils, Foundation Disaster Prevention, Analysis of Mechanical Properties of Granular Materials
		C16		YAMAURA, Tsuyoshi	Meteorology, Climatology, Climate Change, Monsoons, Diagnostic study, Numerical Simulation, Computational Science
		C17	Geo-environmental Engineering	IIZUKA, Atsushi	Unsaturated and Saturated Soil Water Coupling Analysis, Quality Evaluation of Earth Structure, Geomaterials for Reducing Environmental Impact
		C18		TACHIBANA, Shinya	Geo-environmental Engineering, Geo-environmental Risk Evaluation, Geo-multiphysics, Constitutive Modeling of Geomaterials
		C19		ZENITANI, Seiji	Space physics, Plasma physics, Numerical simulation, Computational Fluid Dynamics
		C20	Urban Preservation Engineering	MORIKAWA, Hidenori	Concrete Engineering, Structural Diagnostics, Maintenance, Prestressed Concrete Bridge
		C21		HASHIMOTO, Kunitaro	Steel structure, Hybrid structure, Connection, Load carrying capacity, Seismic design, Corrosion, Fatigue
		C22	Urban Systems Engineering and Management	KOIKE, Atsushi	Infrastructure Planning and Management, Project Evaluation, Applied Economics, Cost Benefit Analysis
		C23		SEGI, Shunsuke	Relation between Transportation Infrastructure and Spatial Distribution of Population and Industries, Investment and Operation Strategy of Infrastructures, Urban Economics, Transportation Economics
		C24		TSURUTA, Hiroki	Value Engineering, Consensus Building, Social System, Industrial System, Resilience, Design Thinking, System Thinking
		C25		GION, Keiko	Science Communication, Systems Thinking, Genetic Engineering

Department	Number	Education/Research Fields	Staff	The Study Contents (Keyword)
Electrical and Electronic Engineering	1	Mesoscopic Materials	FUJII, Minoru; SUGIMOTO, Hiroshi	Nano-photonics materials, Nano-electronics materials, Nano-electronics devices, Plasmonics, Silicon photonics
	2	Photonic Materials	KITA, Takashi; KOJIMA, Osamu; HARADA, Yukihiro	Quantum nano-photonics, quantum wells/wires/dots, opto electronics, 3rd generation solar cells, photonic devices, ultrafast spectroscopy, optical nonlinear materials, ultrafast optical communication devices, quantum information, next generation luminescent devices
	3	Quantum Functional Engineering	KITAMURA, Masatoshi; HATTORI, Yoshiaki	Organic electronics, Organic transistors, Organic-inorganic hybrid devices, Oxide semiconductor devices, Flexible electronics materials, Surface-property control, Gas sensors
	4 A	Nano-Structure Electronics	SOUMA, Satofumi	Computational nanoelectronics, nano material design, ultimate CMOS design, spin/molecular electronics device design, computational design of highly-efficient quantum structure solar cells.
	4 B		ONO, Tomoya	Computational Materials & Device Design, Power Electronics, Spintronics, Molecular Electronics, First-Principles Electronic-Structure & Transport- Property Calculation, Surface & Interface Physics
	5	Electromagnetic Energy Physics	TAKENO, Hiromasa; YONEMORI, Hideto	electromagnetic phenomena, space propulsion, nuclear fusion, energy conversion, power electronics, power system control, wireless power transfer, intensive electromagnetic wave
	6	Integrated Circuit Information	NUMA, Masahiro; KUROKI, Nobutaka	Integrated Circuit Design, High Performance System Design, LSI CAD, Digital Signal Processing, Image Processing, Visual Information Processing, Multimedia Recognition
	7	Computer Engineering	TSUKAMOTO, Masahiko; TERADA, Tsutomu	Wearable computing, Ubiquitous computing, Entertainment computing, Human-Computer Interaction, Sensor network, activity/context recognition
	8	Information and Communication Engineering	MORII, Masakatu; SHIRAISHI, Yoshiaki	Internet Applications, Mobile Communications, Ubiquitous Networks, Network Security, Computer Security, Information Hiding, Data Compression, Cryptography, Coding Theory, Information Theory
	9	Algorithms	YAMAGUCHI, Kazuaki	algorithms, data structures, data retrieval, data analysis, information visualization, graph theory, combinatorial optimization, complexity theory, discrete mathematics, geographic information processing
10	Intelligent Learning Theory	OZAWA, Seiichi; OMORI, Toshiaki; TAMEI, Tomoya	Computational Intelligence, Machine Learning, Statistical Learning Theory, Neural Networks, Probabilistic Information Processing, Dynamical System Estimation, Pattern Recognition, Data Mining, Information Security, Motor Control & Learning, Rehabilitation Engineering	

Department	Divisions	Fields Code	Education/Research Fields	Staff	The Study Contents (Keyword)
Mechanical Engineering	HEAT TRANSFER AND FLUID ENGINEERING	MH-1	Advanced Fluid Engineering	IMAI, Yohsuke KATAOKA, Takeshi ISHIDA, Shunichi	Computational biomechanics, Biofluid mechanics, Computational fluid dynamics, Digestive fluid mechanics, Capsules and cells, GPU computing, Nonlinear flow phenomena, Water wave, Internal gravity wave, Breaking wave, Acoustic wave, Stratified fluid
		MH-2	Multiphase Fluid Dynamics	TOMIYAMA, Akio HAYASHI, Kosuke KURIMOTO, Ryo	Bubble dynamics, Drop dynamics, Mass transfer, Computational multiphase flow dynamics, Nuclear thermalhydraulics, Gas-to-liquid, Multiphase flows in microchannels, Two-phase pipe flows
		MH-3	Energy Conversion Engineering	ASANO, Hitoshi MURAKAWA, Hideki SUGIMOTO, Katsumi	Boiling and condensation heat transfer, Heat exchanger, Thermal control devices, Ultrasonic measurement, Neutron radiography, Fuel cell, Refrigerating and heat pump system, Geothermal utilization
	MATERIALS PHYSICS AND MECHANICS	MM-1	Structural Safety Evaluation	SAKAGAMI, Takahide SHIOZAWA, Daiki OGAWA, Yuki	Structural integrity evaluation, Inverse problem, Non-destructive evaluation, Maintenance engineering, Infrared measurement, Terahertz electromagnetic waves measurement
		MM-2	Fracture Control Engineering	TAGAWA, Masahito TANAKA, Hiroshi	Space materials, Space environmental effect, Electric propulsion, Beam-induced surface reaction, Strength and fracture of engineering materials, Fracture mechanics, Fatigue of materials, Micromaterial, Metallic material, Composite material
		MM-3	Structural and Functional Materials	TANAKA, Katsushi HASEBE, Tadashi	Utilizing surfaces and interfaces to improve performance of materials, Heat resistance structural materials, Functional materials for energy harvesting devices, Multiscale simulations for analysis and predicting material performances
	SYSTEM DESIGN	MA-1	Function-Oriented Robotics	YOKOKOHJI, Yasuyoshi TAZAKI, Yuichi NAGANO, Hikaru	Robotic Hand, Teleoperation System, Haptic Device, Hydraulic Robot, Biomechanics of Human Hand, Walking Robot, Mobile Robot, Environment Recognition, Map Generation, Model Predictive Control
		MA-2	Sensing Device Engineering	KANNO, Isaku HIDA, Hirotaka	Thin film, Sensor, Actuator, Piezoelectric device, micro-TAS, Plant in a chip, Energy harvesting, Thin-film battery, micro-robot, Acoustic device, Piezoelectric thin film, Ferroelectric thin film, Photocatalyst thin film
		MA-3	Advanced Manufacturing Systems	SHIRASE, Keiichi SATO, Ryuta NISHIDA, Isamu	High speed and high precision machining, End-milling operation, Die and mold, Dental prosthetics, Autonomous and intelligent machine tool, Multi-axis and multi-tasking machine tool, On machine measurement, CAD/CAM, Modal analysis, Mathematical model, Simulation, Motion control, Positioning, Linear motor, Ball screw, Power consumption, Process planning
	Innovative Materials and Nano Engineering	MI-1	Nano Electro Mechanical Systems	ISONO, Yoshitada SUGANO, Koji UESUGI, Akio	MEMS/NEMS (Micro/nanomachine), Microsensor, Microactuator, Experimental nanomechanics, Semiconductive nanowire, Multiphysics, Micro physical measurement, Surface plasmon, Bio/chemical sensor, Microfluidic device
		MI-2	Materials Design and Fabrication Engineering	MUKAI, Toshiji IKEO, Naoko	Macro-and Micro-structure design, Microstructure modification, Strengthening mechanism, Lightweight structural materials, Metallic biomaterials, Bio-degradable materials, Implant device

Department	Number	Education/Research Fields	Staff	Keywords
Chemical Science and Engineering	1	Creative Materials Chemistry	MORI, Atsunori; OKANO, Kentaro	Transition metal catalysis, Polymer syntheses, Advanced organic materials
	2		MIZUHATA, Minoru; MAKI, Hedeshi	Inorganic materials, Electrochemistry, Materials for energy conversion, Highly concentrated solution, Molten salt chemistry, Liquid phase deposition, Relaxative auto-dispersion, Solid-liquid coexisting systems, Hetero-phase effect, Nanomaterials
	3		OKADA, Etsuji (Note1)	Heterocyclic chemistry, Fluorine chemistry, Biologically active substances, Functional materials, Exploratory research on medicines and agrochemicals
	4	Smart Materials Chemistry	NISHINO, Takashi; MATSUMOTO, Takuya	Polymer property, Polymer structure, Polymer surface and interface, Composite, Adhesion
	5		ISHIDA, Kenji; Horike, Shohei	Material physical chemistry, Thin film growth, Organic electronics and optics, Dipole engineering, Molecular sensor and actuators, Molecular nanotechnology
	6	Functional Materials Chemistry	MINAMI, Hideto; SUZUKI, Toyoko	Polymer synthesis, Soft matter, Polymer particles, Interface, Heterogeneous polymerization
	7		KAJINAMI, Akihiko	Amorphous material chemistry, Inorganic polymer chemistry, Functional material chemistry, Inorganic energy chemistry, Environmental analytical chemistry
	8		OOYA, Tooru	Biofunctional materials, Drug delivery system, Cell/Tissue engineering, Biomaterial
	9	Separation and Reaction Engineering	MATSUYAMA, Hideto; KAMIO, Eiji	Membrane separation, Separation based on reaction and diffusion, Control of microporous structure, Water treatment, Gas separation
	10		NISHIYAMA, Satoru (Note1); ICHIHASHI, Yuichi; TANIYA, Keita	Catalyst, Catalytic reaction engineering, Selective oxidation, Selective reduction, Surface science, Material science, Photocatalyst, Photocatalysis, Energy conversion, Green chemistry
	11		MARUYAMA, Tatsuo; Morita Kenta	Interface, Surface functionalization, Surfactant, Polymer, Biomolecule
	12	Process Engineering	OHMURA, Naoto; KOMODA, Yoshiyuki;	Process intensification, Process dynamics, Reactor, Functional film
	13		SUZUKI, Hiroshi; HIDEMA, Ruri	Rheology, Complex fluid, Latent heat transportation, Drag reduction, Microfluidics
	14	Biochemical Engineering	YAMAJI, Hideki; KATSUDA, Tomohisa	Bioprocess, Bioreactor, Cell culture engineering, Recombinant protein production, Bioseparation
	15		OGINO, Chiaki; TANAKA, Tsutomu	Bioproduction, Biorefinery, Synthetic bioengineering, Protein engineering, Nanobio technology

(Note1) The faculty member is scheduled to retire in March 2023.