April 2026 and October 2025 Enrollment

Graduate School of Chemical Sciences and Engineering Hokkaido University

Master's Degree Program (Master's Course)

Application Guidelines

(Including International Student Admission Information)

If you have any questions regarding the application process, contact the office below.

Administration Office, Graduate School of Chemical Sciences and Engineering, Hokkaido University (CSE Office)

Kita 13, Nishi 8, Kita-ku, Sapporo, 060-8628 Japan

Tel: +81-11-706-7247 c-sougou@cse.hokudai.ac.jp

April 2025

Table of Contents

| Overview of the Graduate School of Chemical Sciences and Engineering and |
|--|
| the Division of Chemical Sciences and Engineering |
| Admission Policy1 |
| I Consul Administra |
| I. General Admission |
| 1. Admission Quotas 3 |
| 2. Application Qualifications |
| 3. Preliminary Review of Application Qualifications (Application Period, Etc.)4 |
| 4. Application Method |
| 5. Application Documents |
| 6. Where to Apply8 |
| 7. Submission of English Scores |
| 8. Selection Method |
| 9. Examination Schedule, Etc9 |
| 10. Examination Subject |
| 11. Announcements of the Result |
| 12. Enrollment Procedures and Expenses |
| 13. Important Notes |
| 14. Long-Term Study Program |
| 15. Others |
| 16. Notes to foreign applicants |
| II. International Student Admission |
| 1. Admission Quotas |
| 2. Application Qualifications 13 |
| 3. Preliminary Review of Application Qualifications (Application Period, Etc.)14 |
| 4. Application Method |
| 5. Application Documents |
| 6. Where to Apply |
| 7. Submission of English Scores |
| 8. Selection Method 18 |
| 9. Examination Schedule, Etc. 18 |
| 10. Announcements of the Result 18 |
| |
| 11. Enrollment Procedures and Expenses 18 |
| 12. Important Notes |
| 13. Long-Term Study Program |
| 14. Others |
| 15. Notes to foreign applicants |
| Application Qualifications (for October Enrollment)20 |
| Information on the Long-Term Study Program |
| Handling of Personal Information |
| List of Instructors and Their Fields of Research |

Overview of the Graduate School of Chemical Sciences and Engineering and the Division of Chemical Sciences and Engineering

Hokkaido University reorganized the Department of Chemistry in its Graduate School of Science along with three chemistry-related divisions in its Graduate School of Engineering (the divisions of Chemical Process Engineering, Biotechnology and Macromolecular Chemistry, and Materials Chemistry) to form the Graduate School of Chemical Sciences and Engineering and the Division of Chemical Sciences and Engineering in April 2010 (admission quotas in master's course: 129; admission quotas in doctoral course: 38).

In the Graduate School of Chemical Sciences and Engineering, chemistry and biochemistry professors of science and engineering who are affiliated with the Faculty of Science, Faculty of Engineering, Research Institute for Electronic Science, Institute for Genetic Medicine, Institute for Catalysis, and the Institute for Chemical Reaction Design and Discovery work closely together on research and education activities. Researchers affiliated with the National Institute for Materials Science, National Institute of Advanced Industrial Science and Technology, and RIKEN participate as instructors in related fields. These diversely experienced instructors offer not only specialized lectures in the Molecular Chemistry and Engineering Course, Materials Chemistry and Engineering Course, and Biological Chemistry and Engineering Course established within the Division of Chemical Sciences and Engineering but also a rich diversity of classes, including lectures in English, such as those on basic specialized subjects of graduate school education in science and engineering fields. As a result, they are able to provide instruction and research guidance so that students will be able to view the field of chemistry from both the perspectives of science and engineering and contribute to society in related fields.

Admission Policy

1. Educational goals

By providing a systematic education that integrates research findings into the various fields of chemistry, such as molecular chemistry, materials chemistry, and biochemistry, the Graduate School of Chemical Sciences and Engineering strives to equip students with both basic and advanced, specialized knowledge in the field of chemistry; to cultivate individuals with broad-based knowledge, a strong sense of discernment, and the ability to use their knowledge in practical applications to meet the needs created by trends toward internationalization, advanced developments in science and technology, and interdisciplinary approaches; and to nurture students who have the depth of knowledge and skills necessary for conducting basic and applied research and who will therefore be well equipped to conduct innovative research going forward.

2. Ideal student image

(Master's Course)

(1) Knowledge/skills

Prospective students are expected to have previously acquired advanced expertise in chemistry or related fields and undertaken original research and development.

(2) Critical-thinking, judgment, and expressive abilities

To respond to internationalization, the sophistication of science and technology, and interdisciplinization, the Graduate School requires prospective students to possess not only a basic background in related fields but also the motivation to acquire diverse knowledge and develop critical thinking, judgment abilities, and practical abilities.

(3) Collaboration

Prospective students are expected to be independent and motivated to learn and work in collaboration with people from various backgrounds.

(4) Prerequisites

Before enrolling in the Graduate School, students are expected to have knowledge and abilities at the undergraduate level in chemistry or related fields.

(Doctoral course)

(1) Knowledge/skills

Prospective students are expected to have previously acquired advanced expertise in chemistry or related fields and undertaken original research and development.

(2) Critical-thinking, judgment, and expressive abilities

To respond to internationalization, the sophistication of science and technology, and interdisciplinization, the Graduate School requires prospective students to possess not only a basic background in related fields but also the motivation to acquire diverse knowledge and develop critical thinking, judgment abilities, and practical abilities

(3) Collaboration

Prospective students are expected to be independent and motivated to learn and work in collaboration with people from various backgrounds.

(4) Prerequisites

Before enrolling in the Graduate School, students are expected to have acquired knowledge and research abilities at the master's level in chemistry or related fields.

3. Basic policy for admission selection

At the Graduate School of Chemical Sciences and Engineering, we admit students who desire to specialize in the fields of science and engineering and obtain a master's or doctoral degree in the field of general chemistry, as well as students who seek a doctoral degree while working. Details such as the evaluation method are specified in the application guidelines. To measure language proficiency, which is indispensable for success on the international stage, we request the submission of scores for an English test that is conducted globally.

(1) Master's program

General selection

Besides requiring comprehensive academic abilities related to the basics of chemistry, we conduct written and oral examinations related to specialization; evaluate basic specialized subjects in molecular chemistry, material chemistry, and biochemistry; and evaluate advanced, specialized knowledge in specialized subjects, as well as judgment ability and level of proficiency in the background of related fields, to ascertain practical ability. In addition, through oral examinations, we evaluate candidates' attitude of independence, willingness to collaborate with diverse people, motivation for the future, and ability to learn and research at the undergraduate level. Selection will be made by comprehensively judging the examination results, including language ability based on the English test score.

The written test may be exempted for those who have demonstrated excellent academic performance at their previous academic institution or who have outstanding achievements, such as research and development at companies.

• Entrance examination for international students

Considering the level of education overseas, we evaluate expertise and operational ability in basic or related fields of chemistry through an oral examination. Prospective students are expected to have an attitude of independence, be willing to collaborate with various people, and have motivation for the future. Language ability will also be evaluated based on the score of the English test.

(2) Doctoral program (general selection / examination for working adults / international student selection/ AGS selection)

An oral examination is conducted to evaluate expertise and operational ability in chemistry and related fields, as well as basic research abilities for advancing original research in the doctoral program, with the addition of presentation ability. Prospective students are expected to have an attitude of independence, be willing to collaborate with various people, and have motivation for the future. Language ability will also be evaluated based on the score of the English test.

I. General Admission

1. Admission Quotas

| Division | No. of Admission Quota | School Web Site | |
|-----------------------------------|------------------------|-----------------------|--|
| Chemical Sciences and Engineering | 129 | www.cse.hokudai.ac.jp | |

Note:

Please contact the research advisor of your first choice Research Lab for details about research field prior to your application.

2. Application Qualifications (for those who wish to be admitted in April 2026)

- (1) Individuals who have graduated or expect to graduate from a Japanese university by March 2026
- (2) Individuals who have been awarded or expect to be awarded a bachelor's degree pursuant to Article 104, Clause 7, of the School Education Act (Act No. 26, 1947) by March 2026 (hereinafter referred to as "individuals with a bachelor's degree from the National Institution for Academic Degrees and University Evaluation")
- (3) Individuals who have completed or expect to complete 16 years of school education in a foreign country by March 2026 (hereinafter referred to as "individuals from a foreign educational system")
- (4) Individuals who have completed or expect to complete 16 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country by March 2026 (hereinafter referred to as "individuals from a foreign educational system via correspondence course")
- (5) Individuals who have completed a coursework of a foreign university at an educational institution in Japan that is positioned within the school education system of that foreign country as an educational body with a university course or who expect to complete such coursework by March 2026 (The completion of the coursework needs to be considered equivalent to the completion of 16 years of school education in that foreign country. In addition, the educational institution is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology.) (Hereinafter referred to as "individuals who have completed coursework in a school designated as equivalent to a university")
- (6) Individuals who have received, or are expected to receive by March 31, 2026, a degree equivalent to a bachelor's degree from a university or a school in a foreign country (as stipulated in Article 11, Item 5, either which has been evaluated by an authority certified by the government of the country concerned or an authority concerned in regard to the overall performance of its education and research activities, or which has been separately designated by the Minister of Education, Sports, Science and Technology as an educational establishment equivalent to the above) upon completion of a program or a course of study requiring 3 or more years (including completion of a correspondence course of a foreign institute taken in Japan, and completion of a course of study designated in the preceding item at a foreign educational establishment within the public education system of the country concerned).
- (7) Individuals who have completed a specialized course at a specialized training college on or after the date determined by the Japanese Minister of Education, Culture, Sports, Science, and Technology (The course must be designated by the minister, and the course term must be four years or more. It also must meet other standards established by the minister.) and individuals who expect to complete such a course by March 2026.
- (8) Individuals designated by the Minister of Education, Culture, Sports, Science, and Technology (1953 Notice No. 5, Ministry of Education, Science and Culture)

- (9) Individuals who, by March 2026, have attended a Japanese university for three years or more or individuals who, as of March 2026, meet one of the following:
 - Those who have completed 15 years of school education in a foreign country
 - Those who have completed 15 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country
 - Those who have completed a coursework of a foreign university at an educational institution in Japan that is positioned within the school education system of that foreign country as an educational body with a university course (The completion of the coursework needs to be considered equivalent to the completion of 15 years of school education in that foreign country. In addition, the educational institution is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology)

Furthermore, all individuals who apply to this qualification need to be deemed by this graduate school to have achieved excellent grades in the subjects prescribed by Hokkaido University (hereinafter referred to as "individuals who apply through the early admission system").

(10) Applicants who are recognized by the graduate school as possessing the equivalent or greater academic skill as that of a Japanese university graduate based on an individualized admission qualification investigation and who will be 22 years of age as of March 31, 2026 (hereinafter referred to as "individuals who apply through an individualized admission qualification investigation")

Notes:

- 1. See page 20 for application qualifications if you wish to be admitted in October 2025.
- 2. If you have any questions regarding the application qualifications contact the Administration Office of the Graduate School of Chemical Sciences and Engineering (hereafter referred to as "CSE office").

3. Preliminary Review of Qualifications (Application Period, Etc.) May 23 (Fri.) 9:00 a.m. – May 29 (Thu.) 5:00 p.m., 2025 (Japan Standard Time)

We will conduct a preliminary review of application qualifications before the admission examination if applicants fall under one of the following categories:

- (7) Individuals who have completed a specialized course at a specialized training college
- (9) Individuals who apply through the early admission system
- (10) Individuals who apply through an individualized admission qualification investigation

Individuals who fit one of the above-mentioned descriptions should submit Application Form of Preliminary Review of Qualifications and Resume (prescribed forms) and documents indicated in section 5 "Application Documents," with the exception of item No. 1 (Admission application, resume, examination admission card, and examinee photo card), No.6 (English score reporting form and the score sheet of an English-language proficiency examination), No.7 (Envelope in which the examination admission card is to be mailed), and No.8 (Envelope to be used for the notification of examination results and other information) to the address specified in section "6. Where to Apply" by registered mail or bringing it to the office between the above-mentioned period. Applicants must contact the Administration Office (c-sougou@cse.hokudai.ac.jp) to request the application form well before the application deadline.

Notes:

The results of the preliminary review of application qualifications will be mailed out in mid-June 2025. Those who are deemed eligible to apply for the program must apply online (https://e-apply.jp/e/hokudai-cse), pay the examination fee as per section 4 "Application Method" and then mail required documents to the Administration Office.

Those who have passed the preliminary review of qualifications must submit documents listed in section No.1 (admission application, resume, examination admission card, and examinee photo card), No.5 (English score reporting form and the score sheet of an English-language proficiency examination), No.6 (Envelope in which the examination admission card is to be mailed), and No.7 (Envelope to be used for the notification of examination results and other information).

Note that Japanese government (MEXT) scholarship students, China Scholarship Council (CSC) supported students and Hokkaido University Special Grant Program international students (as well as those who are expecting to receive one of these scholarships) may be exempt from paying the examination fee. If there is a possibility that you will be eligible for an exemption, please contact the CSE office in advance.

4. Application Method

Our application process consists of three steps: (1) online application (https://e-apply.jp/e/hokudai-cse), (2) payment of the examination fee, (3) submission of application documents by mail. If you fail to complete any of these steps in the required timeframe, your application will not be processed and will be cancelled.

<<Online Application and Payment Period>>

June 9 (Mon.) 10:00 a.m. - June 23 (Mon.) 5:00 p.m., 2025 (Japan Standard Time)

<<Examination Fee>>

Applicants are required to pay the examination fee (30,000 yen) after registering online. Applicants must pay a service fee of 500 yen in addition to the examination fee.

Available payment methods include: credit card; China Pay; convenience store; bank or post office ATM. Please note that applicants cannot make a payment for the fee through teller. For further details on payment methods, see the application website.

Japanese government (MEXT) scholarship students, China Scholarship Council (CSC) supported students and Hokkaido University Special Grant Program international students (as well as those who are expecting to receive one of these scholarships) may be exempt from paying the examination fee. If there is a possibility that you will be eligible for an exemption, please contact the CSE office in advance.

The examination fee is non-refundable except for the following cases:

- 1. Applicants who paid the fee but cancelled their application (including cases where an application was rejected or application documents were not submitted by the deadline)
- 2. Applicants paid the fee more than once by mistake
- 3. Applicants who are exempt from the examination fee mistakenly paid the fee.

<< Document Submission Period>>

June 16 (Mon.) - June 23 (Mon.), 2025

After the payment of the examination fee, download the application form, resume, examination admission card, examinee photo card, English score report form and Research laboratory preference indication form as a PDF from the application website. Then, print single-sided and submit together with other application documents. Please note that these forms become available after you complete the payment of the examination fee.

When mailing the application documents, be sure to attach the mailing address label (appearing on the last page of the PDF) to the mailing envelope and send the documents by registered mail. The postmark deadline of submission is June 23 (Mon.). Please note that you cannot submit in-person at the Administration Office.

5. Application Documents

| J• 11 | ppiication Document | 3 | | | | | |
|-------|---|-----|------------|---------------------------------|-------|------|---|
| | | | | plica | | | |
| | | | Qua | ılifica | tions | | |
| No. | Documents to Be Submitted | (1) | (2) (8) | (3) (4) (5) (6) (7) | (9) | (10) | Notes |
| 1 | Admission application, resume, examination admission card, and examinee photo card | 0 | 0 | 0 | 0 | 0 | Prescribed forms |
| 2 | A recommendation letter from your prospective supervisor | | Δ | Δ | Δ | Δ | Unspecified format This is required only for international student applicants. Excluding those in Application Qualification (1). |
| 3 | Transcript from the applicant's (undergraduate) university or other school | 0 | 0 | 0 | 0 | 0 | Those who have graduated (or expect to graduate) from a college of technology should submit transcripts of general and advanced courses. |
| 4 | Certificate of graduation (or expected graduation) or completion (or expected completion) * This is not required of graduates (or prospective graduates) or currently enrolled students of School of Science or School of Engineering, of Hokkaido University. | 0 | 0 | 0 | | 0 | (a) Those who have graduated (or expect to graduate) from a college of technology should submit a certificate of diploma conferment issued by the National Institution for Academic Degree and University Evaluation or a certificate of expected application for diploma conferment issued by the president of the college of technology. (b) Those who graduated or will graduate from a university in People's Republic of China (excluding Hong Kong and Macau) must submit the following documents. Graduates: a. Online Verification Report of Higher Education Qualification Certificate (教育部学历证书电子注册备案表) b. Graduation Diploma (毕业证书) and Degree Diploma (学位证书) Expected Graduates: a. Online Verification Report of Student Record (教育部学籍在线验证报告) * Obtain documents "a" above by requesting it at "中国高等教育学历证书查询": https://www.chsi.com.cn/xlcx/bgys.jsp . Also, be sure that there are 15 or more days left until the expiration date of the online verification at the time of its submission.1 |
| 5 | Certificate of enrollment | | | | 0 | | |
| 6 | English score reporting form and the score sheet of an English-language proficiency examination (TOEFL test or TOEIC test) | 0 | 0 | 0 | 0 | 0 | Pursuant to section 7, "Submission of English Scores," applicants must submit the English score reporting form (prescribed form) and the score sheet of an English-language proficiency examination (TOEFL test or TOEIC test) taken in or after April 2023. |

| | | (| | plica lifica | | | |
|----|---|-------------|-------------|-------------------|-------------|------|---|
| No | Documents to Be Submitted | | (2) (8) | (3) (4) (5) | | (10) | Notes |
| 7 | Envelope in which the examination admission card is to be mailed | 0 | 0 | 0 | 0 | 0 | Not required if applicants are not in Japan • Prepare an envelope (120mm x 235mm). • Download the "Label for admission ticket" from our website and print it in color. • Please write your postal code, address and name. Also, please seal 410 yen stamp on the envelope. |
| 8 | Envelope to be used for the notification of examination results and other information | 0 | 0 | 0 | 0 | 0 | Not required if applicants are not in Japan • Prepare an envelope (240mm x 332mm). • Download the "Label for results notification" from our website and print it in color. • Please fill out your postal code, address and name. No need to attach stamps. |
| 9 | Research laboratory preference indication form | 0 | 0 | 0 | 0 | 0 | Prescribed form Select and indicate the order of your laboratory preferences (top five) from the "List of Instructors and Their Fields of Research." |
| 10 | A recommendation letter from your academic advisor at the last university attended, etc. | | \triangle | \triangle | 0 | Δ | Unspecified format *Applicants with application qualification (9) and International students applicants are required. Excluding those in Application Qualification (1). * This is not required for those who are currently enrolled, such as research students, who wish to study under the guidance of the same academic advisor after enrolling in the master's degree program. |
| 11 | Envelope in which preliminary review results are to be mailed to the applicant | | | \triangle | 0 | 0 | Required only for Applicants of Preliminary Review of Application Qualifications (Not required if applicants are not in Japan.) • Prepare a self-addressed envelope (120mm x 235mm). • Please seal 110 yen stamp on the envelope. |
| 12 | A copy of your Residence card | Δ | \triangle | Δ | \triangle | Δ | This is required only for international student applicants. Those who live outside of Japan should submit a copy of their passport. |
| 13 | Certificate of completion or withdrawal from a graduate school, and a graduate school transcript | Δ | \triangle | Δ | \triangle | Δ | This is required only for international student applicants who have been enrolled in a graduate school program at some point in the past. |
| 14 | Letter of approval for taking the entrance examination | \triangle | \triangle | Δ | Δ | Δ | Unspecified format This is required only for currently employed public officials who are expecting to remain employed while attending. The letter must be issued by someone who has authority over human resource matters at their place of employment. |
| 15 | A document verifying that the applicant possesses the equivalent or greater academic skill as that of a university graduate | | | | | 0 | Unspecified format Example: Documents explaining the applicant's international activities, practical experience, history of learning languages, etc.; research papers; patent reports; documents indicating the acquisition of various certificates; and recommendation letters from relevant professors |

Note: O indicates that the document is required;

 $\boldsymbol{\Delta}$ indicates that the document only needs to be submitted by specified individuals.

6. Where to Apply

Administration Office, Graduate School of Chemical Sciences and Engineering, Hokkaido University (CSE Office)

Kita 13, Nishi 8, Kita-ku, Sapporo, 060-8628 Japan

Tel:(+81)-11-706-7247

7. Submission of English Scores

Submit your English score reporting form (prescribed form) at the time of application. Also, submit your English score sheets as follows.

Either of the English-language proficiency examination score sheets listed in (a) or (b) below, from examinations taken in or after April 2023. In the case of (c), please consult with CSE Office in advance.

(a) TOEFL test official score sheet

Submit a Test Taker Score Report sent to the examinee by the U.S. Educational Testing Service (ETS). A printout of test results posted online shall be considered invalid.

On the Score Report Preferences screen shown during the process of applying to take the TOEFL iBT test, be sure to select "Web-accessible Score Report and a printed copy mailed to you" to ensure that a Test Taker Score Report is mailed to you.

If you do not have a Score Report ready by the time that you apply for admission, please order a Test Taker Score Report from ETS and have it send out to you. And at the same time, please request an Official Score Report from ETS and have it send out to us the Graduate School of Chemical Sciences and Engineering, Hokkaido University. Our Institution code is C327.

The Test Taker Score Report may not be delivered to you within the application period, in which case by means of sending us the Official Score Report, a late submission will be accepted only if you have taken the test four weeks before the application deadline (Monday, May 26, 2025). When you order an additional Test Taker Score Report, it may not be delivered to you within the application period, in which case a late submission will be accepted only if you have already had ETS send us the Official Score Report four weeks before the application deadline (Monday, May 26, 2025).

Please note that once the Test Taker Score Report has been delivered to you, please submit it to the CSE office as soon as possible. You may send it by registered mail or bring it to the CSE office.

(b) TOEIC test score sheet

Submit the Official Score Certificate or printed Digital official Score Certificate.

(c) Those who have graduated from a university where English is the primary language of instruction may omit their score sheet by submitting a medium of instruction certificate from their degree granting university. For more details, please contact the Administration Office.

Important Notes

- (a) If you submit more than one score sheet, the best score submitted shall be used. Individuals who have already submitted scores at the time of application may submit new scores between July 24 (Thu.) 9:00 a.m. (JST) and July 28 (Mon.) 5:00 p.m. (JST), 2025, by registered mail or bringing it to the office.
- (b) Scores for TOEFL ITP, TOEIC IP, TOEIC Bridge, etc. are invalid.

(c) English score sheet will be returned after the exam date.

8. Selection Method

Admission decisions will be made comprehensively based on the examination results (written and oral), the score of TOEFL test/TOEIC test, academic transcript, etc.

9 Examination Schedule, Etc.

August 6 (Wed.) - August 7 (Thu.), 2025

Note:

The oral examination schedule, examination venue, and other details will be provided when the examination admission card is sent out.

| Examination Date | Time | Exa | mination Subject | Examination Venue |
|------------------|---|---|---|---|
| Aug. 6(Wed.) | 9:30 a.m. to 12:00 noon 1:30 to 4:00 p.m. | Written examination Written examination | Comprehensive basic subjects and specialized basic subjects Specialized subjects | To be specified when the examination admission card is sent out |
| Aug.7(Thu.) | ug.7(Thu.) From 9:00 a.m. or from 1:00 p.m. | | ral examination | Sent out |

Notes:

- (1) If you have studied in a special program approved by the Graduate School of Chemical Sciences and Engineering, you may be exempt from taking the entrance examination. Also, the content of an applicant's academic transcripts may exempt them from taking the written examination. Those who are exempt shall be notified in mid-July.
- (2) For details regarding examination topics, see section 10, "Examination Subjects."

10. Examination Subjects

| 0.1.1.1 | Examination | Subject Category | | | |
|---------------------------------------|---------------------------------|--|--|--|--|
| Schedule | Subject | Cluster A (Science) | Cluster B (Engineering) | | |
| | Comprehensive Basic Subjects | Comprehensive Basic C | hemistry (required) | | |
| Aug. 6(Wed.) 9:30 a.m. to 12:00 noon | Specialized Basic Subjects | Select 4 questions from among the 6 questions in 6 subjects. - Basic physical chemistry - Basic organic chemistry - Basic inorganic chemistry - Basic analytical chemistry - Basic biochemistry - Basic molecular biology | Select 2 subjects and 4 questions from among the 5 subjects and 10 questions Basic chemical engineering - Thermodynamics and reaction kinetics - Applied analytical chemistry - Applied organic chemistry - Biochemistry | | |
| Aug. 6(Wed.) 1:30 to 4:00 p.m. | Specialized Subjects | Select 4 questions from among the 8 questions in 6 subjects - Physical chemistry(2 questions) - Organic chemistry(2 questions) - Inorganic chemistry(1 question) - Analytical chemistry(1 question) - Biochemistry(1 question) - Molecular biology(1 question) | Select 2 of 6 subjects - Chemical engineering - Organic synthetic chemistry - Quantum chemistry - High polymer chemistry - Inorganic materials chemistry - Molecular bioengineering | | |

Notes:

- (1) The comprehensive basic subject section will ask general questions to assess the candidate's basic knowledge of chemistry. The same questions will be asked of those in both clusters A and B
- (2) Applicants must select their preferred subject category (cluster A or B) at the time of application, and must take the tests of the selected subject category. Applicants may not change their subject category after submitting their application.

11. Announcement of the results

The examination admission numbers of those who passed the examination will be posted in the entrance hall of the School of Engineering and our website (https://www.cse.hokudai.ac.jp/) around 10:00 a.m. on **August 29 (Fri.)**, **2025**. In addition, all examinees will be notified of their results individually (results will not be provided over the phone).

12. Enrollment Procedures and Expenses

Details regarding enrollment procedures are provided in the notifications mailed to those who have been accepted.

Enrollment fee: ¥282,000

First semester tuition for academic year 2026: ¥267,900 (estimated)

Total annual amount: ¥535,800 (estimated)

Notes:

- 1. If any revision is made while the student is enrolled, the new amount will be applied from the time of the revision.
- 2. If the enrollment fee is not paid during the admission procedure period, the applicant will be treated as having no intent to enroll.
- 3. If tuition is not paid for one semester, the student will be expelled, and his/her record of enrollment will be deleted. If you are having problems paying tuition due to financial hardship, you may be eligible for a tuition exemption or deferral.

13. Important Notes

- (1) Be sure to bring your examination admission card with you on the day of the entrance examination and place it on your desk.
- (2) Incomplete applications may not be accepted. Be sure that there are no errors in your application.
- (3) If the name on your certificate of graduation or other documents is different from your current name, for example, your surname has changed, attach a certificate of family registry or other official document that verifies the change.
- (4) If any falsified information is found in the application documents, the applicant's admission may be revoked.
- (5) Submitted documents are not returnable to the applicants for any reason.
- (6) Our graduate school generally does not allow dual enrollment.

14. Long-Term Study Program

Our graduate school has a long-term study system. Those wishing to take advantage of this system should carefully read and follow the application instructions in the section entitled "Information on the Long-Term Study Program" on page 23.

15. Others

- (1) Examination admission cards will be sent out around in **mid-July 2025** to those whose applications have been accepted.
- (2) Applicants who are physically disabled and who may need special accommodations to take examinations and attend classes should notify the CSE office of their condition by June 23 (Mon.), 2025.

16. Notes to foreign applicants

(1) About your visa and residential status

Studying at Hokkaido University as an international student requires you to obtain a 'Student' visa. Please note in advance that the 'Certificate of Eligibility (COE)' needed for a 'Student' visa application may take more than 3 months to be issued after its application. Please refer to our university website, too.

Japanese:https://intl-student-handbook.oia.hokudai.ac.jp/preparation/visa

English:https://intl-student-handbook.oia.hokudai.ac.jp/en/preparation-en/visa-en

(2) About Security Export Control

Hokkaido University conducts strict screenings on exporting goods and providing skills (including incoming international students) by establishing 'Hokkaido University Security Export Control Regulations (北海道大学安全保障輸出管理規程)' based on 'Foreign Exchange and Foreign Trade Act (外国為替及び外国貿易法)'.

In case you are subject to our regulations, you may be restricted from learning or researching your desired fields of education.

For further details of regulations regarding Security Export Control, please refer to the Ministry of Economy, Trade and Industry website below.

Ministry of Economy, Trade and Industry (METI) website: https://www.meti.go.jp/policy/anpo/

II. International Student Admission

1. Admission Quotas

| Division | No. of Admission Quota | School Web Site |
|-----------------------------------|------------------------|-----------------------|
| Chemical Sciences and Engineering | Several | www.cse.hokudai.ac.jp |

2. Application Qualifications (for those who wish to be admitted in April 2026)

Individuals who are recognized as possessing the skills and capabilities required based on a recommendation from a specialized professor (hereinafter referred to as "the prospective supervisor") in our graduate school whom the applicant would like to have as his/her research advisor after enrollment and individuals who fulfill one of the following application qualifications:

- (1) Individuals who have completed or expect to complete 16 years of school education in a foreign country by March 2026.
- (2) Individuals who have completed or expect to complete 16 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country by March 2026.
- (3) Individuals who have completed a coursework of a foreign university at an educational institution in Japan that is positioned within the school education system of that foreign country as an educational body with a university course or who expect to complete such coursework by March 2026 (The completion of the coursework needs to be considered equivalent to the completion of 16 years of school education in that foreign country. In addition, the educational institution is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology.)
- (4) Individuals who have received, or are expected to receive by March 31, 2026, a degree equivalent to a bachelor's degree from a university or a school in a foreign country (as stipulated in Article 11, Item 5, either which has been evaluated by an authority certified by the government of the country concerned or an authority concerned in regard to the overall performance of its education and research activities, or which has been separately designated by the Minister of Education, Sports, Science and Technology as an educational establishment equivalent to the above) upon completion of a program or a course of study requiring 3 or more years (including completion of a correspondence course of a foreign institute taken in Japan, and completion of a course of study designated in the preceding item at a foreign educational establishment within the public education system of the country concerned).
- (5) Individuals who, by March 2026, have attended a university for three years or more or individuals who, as of March 2025, meet one of the following:
 - Those who have completed 15 years of school education in a foreign country
 - Those who have completed 15 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country
 - Those who have completed a coursework of a foreign country at an educational institution in Japan that is positioned within the school education system of that foreign country as an educational body with a university course (The completion of the coursework needs to be considered equivalent to the completion of 15 years of school education in that foreign country. In addition, the educational institution is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology.)

Furthermore, all individuals who apply to this qualification need to be deemed by this graduate school to have achieved excellent grades in the subjects prescribed by Hokkaido University

(6) Applicants who are recognized by the graduate school as possessing the equivalent or greater

academic skill as that of a university graduate based on an individualized admission qualification investigation and who will be 22 years of age as of March 31, 2026

Notes:

- 1. Applicants must contact their prospective supervisor in advance.
- 2. See page 20 for application qualifications if you wish to be admitted in October 2025.
- 3. If you have any questions regarding the application qualifications, contact the Administration Office of the Graduate School of Chemical Sciences and Engineering (hereafter referred to as "CSE office").

3. Preliminary Review of Qualifications (Application Period, Etc.)

May 23 (Fri.) 9:00 a.m. - May 29 (Thu.) 5:00 p.m., 2025 (Japan Standard Time)

We will conduct a preliminary review of application qualifications before the admission examination if applicants fall under either (5) or (6).

Individuals who fit one of the categories must submit Application Form of Preliminary Review of Qualifications and Resume (prescribed forms) and documents indicated in section 5, "Application Documents," with the exception of item No. 1 (Admission application, resume, examination admission card, and examinee photo card), No.5 (English score reporting form and the score sheet of an English-language proficiency examination), No.7 (Envelope in which the examination admission card is to be mailed), and No.8 (Envelope to be used for the notification of examination results and other information) to the address specified in section "6. Where to Apply" by registered mail or bringing it to the office between the above-mentioned period. Applicants must contact the Administration Office (c-sougou@cse.hokudai.ac.jp) to request the application form well before the application deadline.

Notes:

The results of the preliminary review of application qualifications will be mailed out in mid-June 2025. Those who are deemed eligible to apply for the program must apply online (https://e-apply.jp/e/hokudai-cse), pay the examination fee as per section 4 "Application Method" and then mail required documents to the Administration Office.

Those who have passed the preliminary review of qualifications must submit documents listed in section No.1 (admission application, resume, examination admission card, and examinee photo card), No.5 (English score reporting form and the score sheet of an English-language proficiency examination), No.7 (Envelope in which the examination admission card is to be mailed), and No.8 (Envelope to be used for the notification of examination results and other information)

Note that Japanese government (MEXT) scholarship students, China Scholarship Council (CSC) supported students and Hokkaido University Special Grant Program international students (as well as those who are expecting to receive one of these scholarships) may be exempt from paying the examination fee. If there is a possibility that you will be eligible for an exemption, please contact the CSE office in advance.

4. Application Method

Our application process consists of three steps: (1) online application (https://e-apply.jp/e/hokudai-cse), (2) payment of the examination fee, (3) submission of application documents by mail. If you fail to complete any of these steps in the required timeframe, your application will not be processed and will be cancelled.

<<Online Application and Payment Period>> June 9 (Mon.) 10:00 a.m. - June 23 (Mon.) 5:00 p.m., 2025 (Japan Standard Time)

<< Examination Fee>>

Applicants are required to pay the examination fee (30,000 yen) after registering online. Applicants must pay a service fee of 500 yen in addition to the examination fee.

Available payment methods include: credit card; China Pay; convenience store; bank or post office ATM. Please note that applicants cannot make a payment for the fee through teller. For further details on payment methods, see the application website.

Japanese government (MEXT) scholarship students, China Scholarship Council (CSC) supported students, and Hokkaido University Special Grant Program international students (as well as those who are expecting to receive one of these scholarships) may be exempt from paying the examination fee. If there is a possibility that you will be eligible for an exemption, please contact the CSE office in advance.

The examination fee is non-refundable except for the following cases:

- 1. Applicants who paid the fee but cancelled their application (including cases where an application was rejected or application documents were not submitted by the deadline)
- 2. Applicants paid the fee more than once by mistake
- 3. Applicants who are exempt from the examination fee mistakenly paid the fee.

<<Document Submission Period>> June 16 (Mon.) - June 23 (Mon.), 2025

After the payment of the examination fee, download the application form, resume, examination admission card, examinee photo card, and English score report form as a PDF from the application website. Then, print single-sided and submit together with other application documents. Please note that these forms become available after you complete the payment of the examination fee.

When mailing the application documents, be sure to attach the mailing address label (appearing on the last page of the PDF) to the mailing envelope and send the documents by registered mail. The postmark deadline of submission is June 23 (Mon.). Please note that you cannot submit in-person at the Administration Office.

5. Application Documents

| No. | Documents to Be Submitted | Notes |
|-----|--|---|
| 1 | Admission application, resume, examination admission card, and examinee photo card | Prescribed forms |
| 2 | A recommendation letter from your prospective supervisor | Unspecified format |
| 3 | A transcript from the applicant's (undergraduate) university | |
| 4 | A certificate of graduation (or expected graduation) | Those who graduated or will graduate from a university in People's Republic of China (excluding Hong Kong and Macau) must submit the following documents. Graduates: a. Online Verification Report of Higher Education Qualification Certificate (教育部学历证书电子注册备案表) b. Graduation Diploma(毕业证书)and Degree Diploma(学位证书) Expected Graduates: a. Online Verification Report of Student Record (教育部学籍在线验证报告) * Obtain documents "a" above by requesting it at "中国高等教育学历证书查询": https://www.chsi.com.cn/xlcx/bgys.jsp . Also, be sure that there are 15 or more days left until the expiration date of the online verification at the time of its submission. |
| 5 | English score reporting form and the score sheet of an English-language proficiency examination (TOEFL test or TOEIC test) | Pursuant to section 7, "Submission of English Scores," applicants must submit the English score reporting form (prescribed form) and the score sheet of an English-language proficiency examination (TOEFL test or TOEIC test) taken in or after April 2023. |
| 6 | A recommendation letter from your academic advisor at the last university attended | This is not required for those who are currently enrolled, such as research students, who wish to study under the guidance of the same academic advisor after enrolling in the master's degree program. |
| 7 | Envelope in which the examination admission card is to be mailed | Not required if applicants are not in Japan • Prepare an envelope (120mm x 235mm). • Download the "Label for admission ticket" from our website and print it in color. • Please write your postal code, address and name. Also, please seal 410 yen stamp on the envelope. |
| 8 | Envelope to be used for the notification of examination results and other information | Not required if applicants are not in Japan Prepare an envelope (240mm x 332mm). Download the "Label for results notification" from our website and print it in color. Please fill out your postal code, address and name. No need to attach stamps. |
| 9 | Envelope in which preliminary review results are to be mailed to the applicant | Required only for Applicants of Preliminary Review of Application Qualifications (Not required if applicants are not in Japan) • Prepare a self-addressed envelope (120mm x 235mm). • Please seal 110 yen stamp on the envelope. |
| 10 | Certificate of completion or withdrawal from a graduate school, and a graduate school transcript | This is required only if you had enrolled in a graduate school program in the past. |
| 11 | A copy of your Residence card or your foreign resident registration card | Those who live outside of Japan should submit a copy of their passport. |
| 12 | Other required documents from the accepting professor | |

6. Where to Apply

Administration Office, Graduate School of Chemical Sciences and Engineering, Hokkaido University (CSE Office)

Kita 13, Nishi 8, Kita-ku, Sapporo, 060-8628 Japan

Tel: 011-706-7247

7. Submission of English Scores

Submit your English score reporting form (prescribed form) at the time of application. Also, submit your English score sheets as follows.

Either of the English-language proficiency examination score sheets listed in (a) or (b) below, from examinations taken in or after April 2023. In the case of (c), please consult with CSE Office in advance.

(a) TOEFL test official score sheet

Submit a Test Taker Score Report sent to the examinee by the U.S. Educational Testing Service (ETS). A printout of test results posted online shall be considered invalid.

On the Score Report Preferences screen shown during the process of applying to take the TOEFL iBT test, be sure to select "Web-accessible Score Report and a printed copy mailed to you" to ensure that a Test Taker Score Report is mailed to you.

If you do not have a Score Report ready by the time that you apply for admission, please order a Test Taker Score Report from ETS and have it send out to you. And at the same time, please request an Official Score Report from ETS and have it send out to us the Graduate School of Chemical Sciences and Engineering, Hokkaido University. Our Institution code is C327.

The Test Taker Score Report may not be delivered to you within the application period, in which case by means of sending us the Official Score Report, a late submission will be accepted only if you have taken the test four weeks before the application deadline (Monday, May 26, 2025). When you order an additional Test Taker Score Report, it may not be delivered to you within the application period, in which case a late submission will be accepted only if you have already had ETS send us the Official Score Report four weeks before the application deadline (Monday, May 26, 2025).

Please note that once the Test Taker Score Report has been delivered to you, please submit it to the CSE office as soon as possible. You may send it by registered mail or bring it to the CSE office.

(b) TOEIC test score sheet

Submit the Official Score Certificate or printed Digital official Score Certificate.

(c) Those who have graduated from a university where English is the primary language of instruction may omit their score sheet by submitting a medium of instruction certificate from their degree granting university. For more details, please contact the Administration Office.

Important Notes

- (a) If you submit more than one score sheet, the best score submitted shall be used. Individuals who have already submitted scores at the time of application may submit new scores between July 24 (Thu.) 9:00 a.m. (JST) and July 28 (Mon.) 5:00 p.m. (JST), 2025, by registered mail or bringing it to the office.
- (b) Scores for TOEFL ITP, TOEIC IP, TOEIC Bridge, etc. are invalid.

(c) English score sheet will be returned after the exam date.

8. Selection Method

Admission decisions will be made based on a comprehensive review of the applicant's knowledge of the subject matter, foreign language skills, etc.

9. Examination Schedule, Etc.

August 6 (Wed.) and August 7 (Thu.), 2025

Note

The oral examination schedule, examination venue, and other details will be provided when the examination admission card is sent out.

| Examination Date | Examination Subject | Examination Venue |
|-----------------------------------|---------------------|---|
| Aug. 6 (Wed.) or Aug. 7 (Thu.) | Oral Examination | To be specified when the examination admission card is sent out |

10. Announcements of the Result

The examination admission numbers of those who passed the examination will be posted in the entrance hall of the School of Engineering and our website (https://www.cse.hokudai.ac.jp/) around 10:00 a.m. on August 29 (Fri.), 2025. In addition, all examinees will be notified of their results individually (results will not be provided over the phone).

11. Enrollment Procedures and Expenses

Details regarding enrollment procedures are provided in the notifications mailed to those who have been accepted.

Enrollment fee: ¥282,000

First semester tuition for academic year 2026: \(\frac{\pma}{2}\)67,900 (estimated)

Total annual amount: ¥535,800 (estimated)

Notes:

- 1. If any revision is made while the student is enrolled, the new amount will be applied from the time of the revision.
- 2. If the enrollment fee is not paid during the admission procedure period, the applicant will be treated as having no intent to enroll.
- 3. If tuition is not paid for one semester, the student will be expelled, and his/her record of enrollment will be deleted. If you are having problems paying tuition due to financial hardship, you may be eligible for a tuition exemption or deferral.

12. Important Notes

- (1) Be sure to bring your examination admission card with you on the day of the entrance examination and place it on your desk.
- (2) Incomplete applications may not be accepted. Be sure that there are no errors in your application.
- (3) If any falsified information is found in the application documents, the applicant's admission may be revoked.
- (4) Submitted documents are not returnable to the applicants for any reason.
- (5) Our graduate school generally does not allow dual enrollment.

13. Long-Term Study Program

Our graduate school has a long-term study system. Those wishing to take advantage of this system should carefully read and follow the application instructions in the section entitled "Information on the Long-Term Study Program" on page 23.

14. Others

- (1) Examination admission cards will be sent out around in **mid-July 2025** to those whose applications have been accepted.
- (2) Applicants who are physically disabled and who may need special accommodations to take examinations and attend classes should notify the CSE office of their condition by June 23 (Mon.), 2025.

15. Notes to foreign applicants

(1) About your visa and residential status

Studying at Hokkaido University as an international student requires you to obtain a 'Student' visa. Please note in advance that the 'Certificate of Eligibility (COE)' needed for a 'Student' visa application may take more than 3 months to be issued after its application. Please refer to our university website, too.

Japanese:https://intl-student-handbook.oia.hokudai.ac.jp/preparation/visa

English:https://intl-student-handbook.oia.hokudai.ac.jp/en/preparation-en/visa-en

(2) About Security Export Control

Hokkaido University conducts strict screenings on exporting goods and providing skills (including incoming international students) by establishing 'Hokkaido University Security Export Control Regulations (北海道大学安全保障輸出管理規程)' based on 'Foreign Exchange and Foreign Trade Act (外国為替及び外国貿易法)'.

In case you are subject to our regulations, you may be restricted from learning or researching your desired fields of education.

For further details of regulations regarding Security Export Control, please refer to the Ministry of Economy, Trade and Industry website below.

Ministry of Economy, Trade and Industry (METI) website: https://www.meti.go.jp/policy/anpo/

Application Qualifications (for October Enrollment)

*For any questions, please contact Administration Office at Graduate School of Chemical Science and Engineering

I. General Admission

- (1) Individuals who have graduated or expect to graduate from a Japanese university by September 2025.
- (2) Individuals who have been awarded or expect to be awarded a bachelor's degree pursuant to Article 104, Clause 7, of the School Education Act (Act No. 26, 1947) by September 2025 (hereinafter referred to as "individuals with a bachelor's degree from the National Institution for Academic Degrees and University Evaluation")
- (3) Individuals who have completed or expect to complete 16 years of school education in a foreign country by September 2025 (hereinafter referred to as "individuals from a foreign educational system")
- (4) Individuals who have completed or expect to complete 16 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country by September 2025 (hereinafter referred to as "individuals from a foreign educational system via correspondence course")
- (5) Individuals who have completed a coursework of a foreign university at an educational institution in Japan that is positioned within the school education system of that foreign country as an educational body with a university course or who expect to complete such coursework by September 2025 (The completion of the coursework needs to be considered equivalent to the completion of 16 years of school education in that foreign country. In addition, the educational institution is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology.)
 - (Hereinafter referred to as "individuals who have completed coursework in a school designated as equivalent to a university")
- (6) Individuals who have received, or are expected to receive by September 30, 2025, a degree equivalent to a bachelor's degree from a university or a school in a foreign country (as stipulated in Article 11, Item 5, either which has been evaluated by an authority certified by the government of the country concerned or an authority concerned in regard to the overall performance of its education and research activities, or which has been separately designated by the Minister of Education, Sports, Science and Technology as an educational establishment equivalent to the above) upon completion of a program or a course of study requiring 3 or more years (including completion of a correspondence course of a foreign institute taken in Japan, and completion of a course of study designated in the preceding item at a foreign educational establishment within the public education system of the country concerned).
- (7) Individuals who have completed a specialized course at a specialized training college on or after the date determined by the Japanese Minister of Education, Culture, Sports, Science, and Technology (The course must be designated by the minister, and the course term must be four years or more. It also must meet other standards established by the minister.) and individuals who expect to complete such a course by September 2025.
- (8) Individuals designated by the Minister of Education, Culture, Sports, Science, and Technology (1953 Notice No. 5, Ministry of Education, Science and Culture)
- (9) Individuals who, by September 2025, have attended a Japanese university for three years or more or individuals who, as of September 2025, meet one of the following:
 - Those who have completed 15 years of school education in a foreign country

- Those who have completed 15 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country
- Those who have completed a coursework of a foreign university at an educational institution in Japan that is positioned within the school education system of that foreign country as an educational body with a university course (The completion of the coursework needs to be considered equivalent to the completion of 15 years of school education in that foreign country. In addition, the educational institution is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology)

Furthermore, all individuals who apply to this qualification need to be deemed by this graduate school to have achieved excellent grades in the subjects prescribed by Hokkaido University (hereinafter referred to as "individuals who apply through the early admission system").

(10) Applicants who are recognized by the graduate school as possessing the equivalent or greater academic skill as that of a Japanese university graduate based on an individualized admission qualification investigation and who will be 22 years of age as of September 30, 2025 (hereinafter referred to as "individuals who apply through an individualized admission qualification investigation")

II. International Student Admission

- (1) Individuals who have completed or expect to complete 16 years of school education in a foreign country by September 2025.
- (2) Individuals who have completed or expect to complete 16 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country by September 2025.
- (3) Individuals who have completed a coursework of a foreign university at an educational institution in Japan that is positioned within the school education system of that foreign country as an educational body with a university course or who expect to complete such coursework by September 2025 (The completion of the coursework needs to be considered equivalent to the completion of 16 years of school education in that foreign country. In addition, the educational institution is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology.)
- (4) Individuals who have received, or are expected to receive by September 30, 2025, a degree equivalent to a bachelor's degree from a university or a school in a foreign country (as stipulated in Article 11, Item 5, either which has been evaluated by an authority certified by the government of the country concerned or an authority concerned in regard to the overall performance of its education and research activities, or which has been separately designated by the Minister of Education, Sports, Science and Technology as an educational establishment equivalent to the above) upon completion of a program or a course of study requiring 3 or more years (including completion of a correspondence course of a foreign institute taken in Japan, and completion of a course of study designated in the preceding item at a foreign educational establishment within the public education system of the country concerned).
- (5) Individuals who, by September 2025, have attended a university for three years or more or individuals who, as of September 2025, meet one of the following:
 - Those who have completed 15 years of school education in a foreign country
 - Those who have completed 15 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country
 - Those who have completed a coursework of a foreign country at an educational institution in Japan that is positioned within the school education system of that foreign country as an educational body with a university course (The completion of the coursework needs to be

considered equivalent to the completion of 15 years of school education in that foreign country. In addition, the educational institution is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology.)

- Furthermore, all individuals who apply to this qualification need to be deemed by this graduate school to have achieved excellent grades in the subjects prescribed by Hokkaido University
- (6) Applicants who are recognized by the graduate school as possessing the equivalent or greater academic skill as that of a university graduate based on an individualized admission qualification investigation and who will be 22 years of age as of September 30, 2025.

Information on the Long-Term Study Program

1. Overview

This system is available to students who would not be able to complete the program within the standard course term (two years) due to full-time employment or other circumstances (including responsibilities related to the care of elderly or disabled family members or the raising of children) and therefore want a longer period of time to conduct their studies systematically. Students must file an application and may be approved for a systematically planned course of study (hereinafter referred to as "long-term study") after an individual review.

2. Eligibility

Individuals who are applying for the long-term study program must meet one of the terms listed below, be unable to make a commitment to full-time studies as a consequence of the circumstances described, and would therefore like to extend in advance the number of years over which they will conduct their studies (research).

- (1) Individuals who are engaged in full-time employment, such as those currently employed by government agencies or companies (excluding those who will continue to receive salaries while being relieved of their work duties), and self-employed individuals
- (2) Individuals who are engaged in temporary or part-time employment that is deemed by this graduate school to adversely affect their studies
- (3) Individuals who have responsibilities, such as raising children or caring for other family members, that are deemed by this graduate school to adversely affect their studies to the same degree as the responsibilities listed in item (2) above
- (4) Individuals who have visual impairments, hearing impairments, physical disabilities, or other disabilities and are deemed by the graduate school to be adversely affected by their disabilities, causing their graduate school studies to suffer for a long term.

3. Enrollment Period

The allowable length of period under the long-term study program is up to four years for the master's degree program. Study periods for long-term study applicants are approved in one-year increments.

The maximum length of enrollment (including the period for time off, etc.) for a student who has been approved for long-term study is up to an additional two years beyond the approved long-term study period in the master's degree program, the same maximum length of time as students under the standard term of study.

The period of time off that this graduate school will allow is the same for students under either the standard term of study or long-term study program, i.e., two years for master's students.

4. Application Procedures

(1) Application Deadline

In general, those wishing to apply for the long-term study program should apply at the time they submit their admission applications.

(2) Submission of Documents

Submit the following documents to CSE Office

- (a) An application for long-term study (form 1)
- (b) A long-term study plan (form 2)
- (c) Documents verifying your reasons for needing long-term study approval
- (3) Review and Notification of Results

Applications for the long-term study program will be reviewed by the graduate school, and applicants will be notified of the results of that review with the notification of examination results.

5. Contraction or Extension of the Long-Term Study Period

If deemed necessary by the graduate school, approval may be granted for a contraction or extension of the long-term study period once, and only once, during the student's period of enrollment. However, the long-term study period can only be contracted from four years to three years (one year beyond the standard two-year course term).

6. Tuition

The tuition of students who have been approved for the long-term study program shall be calculated in annual amounts by dividing the total tuition for the standard term of study (annual tuition \times 2 years) by the number of years for which the long-term study has been approved. In cases where the tuition amount is revised or a change to the long-term study period is approved, tuition will be recalculated at that time. However, any tuition already paid will not be adjusted retroactively.

*Be sure not to pay the tuition for your current term of study until you are notified of whether your application for the long-term study program or a change thereof has been approved.

7. Other

To request an application form or clarify any issues, contact CSE Office

Handling of Personal Information

- (1) All personal information collected by Hokkaido University will be completely protected in compliance with the Act on the Protection of Personal Information Held by Independent Administrative Agencies, etc., and other related acts and pursuant to the Hokkaido University Personal Information Management Regulations.
- (2) Names, addresses, and other personal information provided to the university through application procedures will be used solely for (a) enrollee selection, (b) the announcement of exam results, (c) admission procedures, (d) surveys and research on enrollee selection methods, and (e) related processes.
- (3) Some of these processes may be outsourced by the university to a contracted service provider (hereinafter referred to as "contractor"). All or some of the personal information provided by applicants may be provided to the contractor only as needed to perform the tasks for which it has been contracted.
- (4) Personal information obtained through application procedures will be used only for those who are admitted for (a) school administration purposes (student registration, academic counseling, etc.), (b) student support services (health management, scholarship applications, etc.), and (c) tuition and other administrative purposes.
- (5) Of the personal information described in item (4) above, only names and addresses will be used to facilitate communication with students from the Hokkaido University Frontier Foundation and organizations related to Hokkaido University, such as (a) the Hokkaido University Athletic Union, and (b) the Hokkaido University School of Engineering and School of Science Alumni Association.

Graduate School of Chemical Sciences and Engineering, Hokkaido University

List of Instructors and Their Fields of Research

| No. | lecular Chemistry | | | | |
|-----------|--|---|-----------------------------------|--|----------------------------|
| | Laboratory | | Staff | Research Contents | Faculty |
| CT | oscopic Chemical Analyses | unit Unit | | research Contents | racuity |
| Ī | | Professor | TAKETSUGU Tetsuya | Development of "Predictive" Chemical Theory for Reaction, Electron, and Spectroscopy and | |
| 01 | Quantum Chemistry | Associate Professor | KOBAYASHI Masato | programs, as well as advanced computational chemistry applications. First principle excited state | Faculty of Science |
| | , and the second | Assistant Professor | IWASA Takeshi | reaction dynamics, theory guiding catalytic design with element strategy, development of a large- scale electronic structure theory, near-field molecular theory, reaction informatics. | |
| T | | Professor | MAEDA Satoshi | Development of new theories and computational programs aimed at predicting reaction pathways | |
| 02 | Theoretical Chemistry | | | in molecules and materials, and their applications. The main targets of the applications are organic reaction, photoreaction, enzyme reaction, catalysis, | Faculty of Science |
| | | Assistant Professor | MATSUOKA Wataru | and crystal phase transition. | |
| | | Professor | MURAKOSHI Kei | Surface electrochemistry; ultra sensitive detection and characterization of surfaces of target | |
| 03 | Physical Chemistry | Lecturer | FUKUSHIMA Tomohiro | materials under electrochemical potential control for novel energy conversion systems and | Faculty of Science |
| | | Assistant Professor | ITATANI Masaki | intelligent devices. Electrochemical synthesis of nano-materials with well-defined electronic/geometrical structurers for novel catalysis. | |
| 4 | | Assistant Professor | Ruifeng ZHOU | · · | |
| | . 1 . 10 | Professor Associate Professor | UENO Kosei RYUZAKI Sou | Light matter interaction. Ultrafast dynamics and photochemistry/optical physics of nanomaterials | D 1: 40: |
| 04 | Analytical Chemistry | | IMAEDA Keisuke | in microscopic regions using ultrashort pulse lasers. Chemical and biosensors using nanostructures. | Faculty of Science |
| \dashv | | Assistant 1 folessor | IWAEDA Reisuke | | |
| 05 | Analytical Chemistry (MIURA) | Associate Professor | MIURA Atsushi | Analytical chemistry and photochemistry in mesoscopic domains employing laser and microspectroscopy. Investigation of novel phenomena and development of advanced analytical methods through time: and space-resolved spectroscopy of single microparticles. | Faculty of Science |
| Fine | Chemical Reactions Unit | | | | |
| \exists | | Professor | INOKUMA Yasuhide | Structural organic chemistry on synthesis and structural analysis of unique functional molecules | P. 1: 6 |
| 06 | Organic Reaction | | | such as polyketones. Use of machine learning in organic chemistry. | Faculty of Engineering |
| \dashv | | | SENBOKU Hisanori | Synthetic organic chemistry, electroorganic synthesis, organofluorine chemistry. | |
| | | Professor | ITO Hajime | The research purpose of our laboratory is development of novel synthetic reactions, valuable catalytic process and new functional materials in the field of organoelement chemistry. We aim to | Faculty of |
| 07 | Organoelement Chemistry | Associate Professor | ISHIYAMA Tatsuo | challenge to establish a new chemistry frontier that includes organometallics, heteroatom | Engineering |
| 4 | | Associate Professor | KUBOTA Koji | chemistry and coordination chemistry. | |
| ne | Owania Synth:- | Professor Associate Professor | OHKUMA Takeshi ARAI Noriyoshi | Malagular gatalysis, gatalytis gaymmatris vasationticalithi- | Faculty of |
| υŏ | Organic Synthesis | Assistant Professor | ARAI Noriyoshi YURINO Taiga | Molecular catalysis, catalytic asymmetric reactions, practical organic synthesis. | Engineering |
| ᆉ | | Professor | SAWAMURA Masaya | | |
| 09 | Organometallic Chemistry | Associate Professor | SHIMIZU Yohei | Catalyst design using supramolecules, solid surfaces, and light for the development of transformative chemical reactions. Quantum chemical calculations for exploring chemical reaction | Faculty of Science |
| | | Assistant Professor | MASUDA Yusuke | mechanisms and catalyst design. | standy of science |
| \dashv | | Professor | SUZUKI Takanori | | |
| 10 | Organic Chemistry I | | | Structural and physical organic chemistry on novel heat and light responsive redox systems and strained molecules. | Faculty of Science |
| Ц | | Associate Professor | ISHIGAKI Yusuke | | |
| | - | Professor | Benjamin LIST | | |
| | | Professor | IWATA Satoru | | |
| | | Professor | MITA Tsuyoshi | Design and discovery of chemical reactions using computational, informational, and experimental | |
| | Chemical Reaction | Associate Professor Associate Professor | Chung-Yang HUANG Pavel SIDOROV | science. | ICReDD |
| 11 | Development | Associate Professor Associate Professor | Mingoo JIN | Development of novel reactions using organocatalysts. Development of materials and functional organic molecules. Prediction of chemical reactions based on chemical informatics. Development of | TOREDD |
| | ŀ | Associate Professor | Min GAO | automated reaction pathway search methods and electronic state dynamics simulation methods. | |
| | - | Associate Professor | Julong JIANG | | |
| | | Assistant Professor | AKAMA Tomoko | | |
| Cate | lytic Reactions Unit | | · | | |
| | | Professor | MURAYAMA Toru | Renewable energy utilization and environmental protection applications based on the precise | I |
| 12 | Catalytic Transformation | Associate Professor | ODA Akira | design of solid catalysts. Reactions at room temperature using gold nanoparticle catalysts, development of catalysts for energy-saving removal of pollutants from the atmospheric | Institute for Catalysis |
| \Box | | Assistant Professor | ISHIKAWA Hiroya | environment, and development of catalysts that promote the effective use of CO ₂ . | • |
| 10 | M | Professor | NAKANO Tamaki | Design and synthesis of chiral polymers and supramolecular systems having innovative functions such as pharmaceutical activities, light emission, electronic and ionic conduction, separation, and | Institute for |
| 13 | Macromolecular Science | Associate Professor | SONG Zhiyi | catalytic activities focusing on helical polymers, π-stacked polymers, liquid crystals, and | Catalysis |
| \dashv | | Professor | SHIMIZU Kenichi | biopolymers. | |
| | G . 1 . 135 | | TOYAO Takashi | Development of metal nanocluster catalyst for direct synthesis of chemicals. Development of | Institute for |
| 14 | Catalyst Material | Assistant Professor | Abhijit SHROTRI | supported metal catalysts for automobile emission control. Surface chemistry and surface spectroscopy for catalyst design. | Catalysis |
| | | Assistant Professor | ANZAI Akihiko | | |
| T | | Professor | HASEGAWA Jun-ya | Theoretical and computational chemistry for catalysis. Analysis of potential energy surface and | T |
| 15 | Catalysis Theory | Associate Professor | IIDA Kenji | dynamics of catalytic reactions. Development of chemical concepts, theoretical and AI models, and first principle molecular simulation method for catalytic reactions. Development and application of | Institute for Catalysis |
| | | Assistant Professor | MIYAZAKI Ray | large scale computational methods for catalytic reactions using electric power. | - |
| Cher | nical Process Engineering | Unit | | | |
| 16 | Chemical System | Professor | KIKUCHI Ryuji | Energy carrier direct power generation fuel cells. Green hydrogen production catalysts and devices. Electrochemical synthesis of ammonia. Electrochemical conversion of methane and ethane to | Faculty of |
| | Engineering | Associate Professor | TADA Shohei | valuable chemicals. Valuable chemicals synthesis by CO_2 hydrogenation. | Engineering |
| \dashv | | Professor | MUKAI Shin | | |
| | Material Design and | Associate Professor | NAKASAKA Yuta | Material design and engineering, adsorption engineering, separation engineering, precise structural controlling of porous materials, development of new production systems of | Faculty of |
| | Engineering | Assistant Professor | IWASA Nobuhiro | nanomaterials, development of devices for reaction, separation and energy storage using | Engineering |
| | | Assistant Professor | NAGAISHI Shintaro | nanomaterials, material recycling. | |
| | G. (.) (.) (.) | | | Reaction engineering, design and tuning of structures and reactive microenvironments of catalysts | Fig. 14 of |
| 寸 | Catalytic Reaction | Associate Professor | OGINO Isao | and separation materials for sustainable chemical processes, microwave-assisted synthesis of solid | Faculty of Engineering |
| | Engineering | | | catalysts and electrode materials. | |
| | Engineering | | | <u> </u> | |
| 18 | Engineering Chemical Energy Conversion Systems | | TSUBOUCHI Naoto | catalysts and electrode materials. Clean carbon technology for efficient reduction of CO ₂ emissions: fundamental research about advanced and novel technologies for biomass, low rank coals, heavy oil residues and low-valued | Faculty of Engineering |

| 3.0 | | | | | |
|------|-----------------------------------|---|----------------------------------|---|--------------------------------------|
| _ | terials Chemistry | and Enginee | | | 1 |
| | Laboratory | | Staff | Research Contents | Faculty |
| Mol | ecular Materials Chemistr | y Unit | T | T | ı |
| 20 | Chemical Informatics | Professor | TAKAHASHI Keisuke | Materials discovery through materials informatics. The aim of the research is to develop fully automated materials and catalysts using a combination of high throughput experiments and | Faculty of Science |
| | | Assistant Professor | Lauren TAKAHASHI | calculations, with the integration of artificial intelligence. | |
| 21 | Molecule & Life Nonlinear | Professor | KOMATSUZAKI Tamiki | Practical-oriented theoretical chemistry. The fundamental principles of chance and necessity of chemical reactions, and new concepts and methodologies to bridge theory and experiments for | Research Institute for Electronic |
| | Science | Assistant Professor | NISHIMURA Goro | biological molecular systems. | Science |
| 22 | Coordination Chemistry | Associate Professor | KOBAYASHI Atsushi | Creation of next-generation multifunctional devices based on the integration of organic and inorganic materials. The target is developments of artificial photosynthesis, photoelectric conversion, and photocatalytic systems and novel phenomena through multi-scale integration of organic molecules, metal complexes, polymers, semiconductor nanocrystals, metal thin films and etc. | Faculty of Science |
| 23 | Solid-State Chemistry | Associate Professor | HARADA Jun | Studies of structures, molecular motions, and phase transitions of molecular crystals: Development and functional control of molecular ferroelectric crystals. | Faculty of Science |
| Inor | ganic Materials Chemistry | 7 Unit | | | |
| | | Professor | MATSUI Masaki | | |
| 24 | Inorganic Chemistry | Associate Professor | KOBAYASHI Hiroaki | Solid-state ionic materials for next-generation battery applications. Low-temperature synthesis of complex metal oxdes. Crystal growth mechanisms in less noble metal electrodeposition. | Faculty of Science |
| | | Assistant Professor | NASU Akira | | |
| 25 | Structural Inorganic | Professor | MIURA Akira | Preparation of emerging functional ceramics, microstructure control of ceramics and their property | Faculty of |
| 20 | Chemistry | Associate Professor | MASUBUCHI Yuji | evaluation, new nitrides and chlorides for optical, electromagnetic and chemical application. | Engineering |
| 00 | Inorganic Synthesis | Professor | TADANAGA Kiyoharu | Development of functional inorganic materials using liquid phase. Preparation of nano-structured | Faculty of |
| 26 | Chemistry | Assistant Professor | FUJII Yuta | thin films and materials for energy conversion and storage by solution processes. | Engineering |
| | | Professor | SHIMADA Toshihiro | | |
| 27 | Solid State Chemistry | Assistant Professor | YOKOKURA Seiya | Synthesis and new functions of nano-structured solids and thin films including inorganic nanomaterials, organic semiconductors, spintronics devices and nanocarbons. | Faculty of Engineering |
| | | Assistant Professor | WAIZUMI Hiroki | | |
| 90 | Name Committee | Guest Professor | KUWATA Naoaki | Synthesis and control of functional properties of novel solid-state battery materials and ion | National Institute |
| 48 | Nano Ceramics | Guest Associate Professor | KUBOTA Kei | dynamics analysis. | for Materials Science |
| 29 | Applied Materials | Guest Professor | KIJIMA Norihito | Synthesis, crystal structure, and functional properties of morganic materials for energy storage. Precise synthesis of inorganic porous materials and their potential applications as adsorbents and eathlysts. | National Institute of Advanced |
| | Chemistry | Guest Professor | KIMURA Tatsuo | | Industrial Science and Technology |
| Froi | ntier Materials Chemistry | Unit | I | | |
| | | Professor | AOKI Yoshitaka | Design of proton/hydride ion conductive inorganic materials and related all-solid-state energy | |
| 30 | Energy Materials Chemistry | Associate Professor | TACHIKAWA Hiroto | conversion devices, and theoretical design of electronic materials by quantum theory and | Faculty of Engineering |
| | | Assistant Professor | JEONG Seongwoo | computational chemistry. | |
| | | Professor Associate Professor | HABAZAKI Hiroki FUSHIMI Koji | Electrochemical fabrication of nanostructure controlled materials and thin films and their | |
| 31 | Interfacial Electrochemistry | Assistant Professor | IWAI Mana | | Faculty of Engineering |
| | | Assistant Professor | KITANO Sho | storage devices. | |
| | | Professor | HASEGAWA Yasuchika | | |
| 32 | Advanced Materials Chemistry | Associate Professor | KITAGAWA Yuichi | Development of strong-luminescent and photofunctional advanced materials based on photochemistry and coordination chemistry. | Faculty of Engineering |
| | Ť | Assistant Professor | _ | | Ü |
| 0.0 | Matadal C | Professor | SADA Kazuki | Creation of innovative functions, structures, and reactions by controlling intermolecular forces in mixtures. Discovery and understanding of novel physical phenomena and development of novel | Frank, 60. |
| 33 | Material Chemistry | Assistant Professor Assistant Professor | MATSUOKA Keitaro TSUTSUMI Takuro | functional materials through collaboration between experimental chemistry, computational chemistry, and materials informatics. | Faculty of Science |
| | | Professor | NAGASHIMA Kazuki | Designed nanomaterials synthesis and nanostructure control based on inorganic chemistry and | D |
| | Interactive Functional | Associate Professor | YOMOGIDA Yohei | nanomaterial chemistry, exploration of nanoscale functional properties, creation of novel | Research Institute for Electronic |
| | Materials | Assistant Professor | OKA Sayuki | nano/microdevices, and application to large-area thin film devices and data science. Application examples include the artificial olfactory sensors and the optoelectronic devices. | Science |
| Fun | ctional Materials Chemist | ry Unit | • | | • |
| 0.5 | Interfacial Energy | Guest Professor | NOGUCHI Hidenori | Fundamental study of chemical electric energy conversion, including novel batteries, fuel cell catalysts, and microbial electrode catalysts. | National Institute |
| 35 | Conversion Materials Chemistry | Guest Professor | OKAMOTO Akihiro | In situ determination of geometric, electronic, and molecular structures at solid/liquid interfaces and electron transfer dynamics by ultrafast laser spectroscopy. | for Materials Science |
| 0.0 | Superconducting | Guest Professor | YAMAURA Kazunari | Aiming to develop quantum functional materials, we synthesize novel inorganic compounds, perform atomic-level structural analysis, and evaluate their physical properties to explore new | National Institute |
| 36 | Materials | Guest Associate Professor | TSUJIMOTO Yoshihiro | physical phenomena based on structure–property correlations. Our focus is primarily on transition metal oxides. | for Materials Science |
| 97 | Nanoscience | Guest Professor | SHIRAHATA Naoto | Our focus is on researching and developing new optoelectronic and electronic-functional materials that will contribute to advancements in nanoscience and nanotechnology. Our research is rooted in | National Institute for Materials |
| 31 | ranoscience | Guest Professor | KITAURA Ryo | physical and device science, with the aim of exploring new phenomena and applications. To achieve our goals, we utilize advanced material design and synthesis techniques, along with cutting edge nanoscopic analysis. | for Materials Science |
| 38 | Nano-Assembled | Guest Professor | YOSHIO Masafumi | Development of nanostructured functional materials that contribute to highly efficient energy conversion devices such as fuel cells, lithium ion batteries, and actuators, based on the | National Institute for Materials |
| | Materials Chemistry | Guest Professor | MASUDA Takuya | | Science |

| Bio | ological Chemistry | and Enginee | ring Course | | |
|------|----------------------------------|---------------------|---------------------------|--|--|
| No. | Laboratory | - | Staff | Research Contents | Faculty |
| Bior | nolecular Chemistry Unit | | | | ı |
| 39 | Biological Chemistry | Professor | SAKAGUCHI Kazuyasu | Functional regulation of tumor suppressor-related proteins through post-translational modification and localization. Function and evolution of oligomeric structure in tumor suppressor | Faculty of Science |
| 00 | Biological Chemistry | Assistant Professor | NAKAGAWA Natsumi | protein p53. Regulation of differentiation, metabolism, and function in innate immune cells.Fundamental principles of life and their applications. | racting of Science |
| | | Professor | ISHIMORI Koichiro | | |
| 40 | Biostructural Chemistry | Associate Professor | UCHIDA Takeshi | Functional and structural characterization and molecular design of proteins using spectroscopy. Exploring collective function of molecules derived from chemical reactions. | Faculty of Science |
| | | Assistant Professor | KAGEYAMA Yoshiyuki | r | |
| 41 | Molecular Biochemistry | Professor | ABE Kazuhiro | Structural and functional analysis to elucidate molecular mechanisms of membrane transport proteins including primary transporters, employing X-ray crystallography, cryo-EM SPA combined | Faculty of Science |
| | | Assistant Professor | Chai Chandru GOPALASINGAM | with various biochemical and biophysical analysis. | - 44 0, 4- 4- 4- 4- 4- 4- 4- 4- 4- 4- 4- 4- 4- |
| | | Professor | TOKESHI Manabu | | Faculty of |
| 42 | Microsystem Chemistry | Associate Professor | MAEKI Masatoshi | | Engineering |
| | | Assistant Professor | ISHIDA Akihiko | Ü | |
| 3iof | unctional Chemistry Unit | | | | |
| | M 1 0 | Professor | NAGAKI Aiichiro | | |
| 43 | Mechanistic Organic Chemistry | Associate Professor | OKAMOTO Kazuhiro | | Faculty of Science |
| | | Assistant Professor | MIYAGISHI Hiromichi | | |
| | | Professor | TANINO Keiji | Total synthesis of natural products having a complex structure and novel bioactivities. | |
| 44 | Organic Chemistry II | Associate Professor | SUZUKI Takahiro | Development of efficient methodologies and new reactions to construct polycyclic skeleton with various functional groups on the basis of carbocation chemistry, heteroatom chemistry, and | Faculty of Science |
| | | Assistant Professor | TAKINO Junya | organometallic chemistry. | |
| 45 | Chemistry of Molecular | Associate Professor | SATO Shinichiro | Synthesis and computational chemistry of functional molecular assemblies based on soft matter | Faculty of |
| | Assemblies | Associate Professor | YAMAMOTO Takuya | such as synthetic polymers and carbohydrate chains. | Engineering |
| | Polymer Chemistry | Professor | SATOH Toshifumi | | E le c |
| 46 | | Associate Professor | ISONO Takuya | | Faculty of Engineering |
| | | Assistant Professor | LI Feng | creation of environmentally benign polymers. | |
| | | Professor | MATSUMOTO Ken' ichiro | Biosynthesis of useful and unnatural chemicals using engineered biosynthetic systems, and in | E |
| 47 | Biosynthetic Chemistry | Associate Professor | KIKUKAWA Hiroshi | | Faculty of Engineering |
| | | Assistant Professor | HACHISUKA Shin-ichi | antibacterial lipid. | |
| 48 | Chemical Biotechnology | Guest Professor | HIRAISHI Tomohiro | Elucidation of reaction mechanism of bio based polymer-degrading enzymes, and development of highly functional and efficient enzymes for biotechnological applications. Materials science for | RIKEN |
| | | Guest Professor | FUJITA Masahiro | designing advanced functional bio-based polymers. | |
| Jell | Engineering Unit | | | | • |
| | | Professor | DAIRI Tohru | Search for and characterization of novel primary/secondary metabolic pathways in microorganisms | |
| 49 | Applied Biochemistry | Associate Professor | OGASAWARA Yasushi | and their application for production of useful compounds by biosynthetic and metabolic | Faculty of Engineering |
| | | Assistant Professor | SATOH Yasuharu | engineering. | manieering |
| | | Associate Professor | TAJIMA Kenji | Biopolymer Chemistry(Elucidation of cellulose synthetic mechanism in bacteria, Creation of eco- recycling polymer materials with high mechanical strength, and Mass production of nanocellulose by bacteria and its application), Cell processing engineering (process development with stem cells), | Faculty of |
| 50 | Biomolecular Chemistry | Associate Professor | TANI Hirofumi | Animal cell cultivation engineering for pharmaceuticals production, Bioanalytical chemistry (development of novel biochemical analysis systems using microdevices and molecular assemblies | Engineering |
| Wa. | cular Medical Biochemistr | TT | | as reaction media). | <u> </u> |
| *101 | cular Medical Diocnemistr | Professor | TAKAOKA Akinori | | Ī |
| F-1 | Signaling in Cancer and | | | Research on molecular mechanisms underlying cellular response to infection and cancer. | Institute for |
| 51 | Immunology | Associate Professor | SATO Seiichi | ((i) Pathogen recognition receptors (innate sensors) and their signaling pathways, (ii) Innate immune response against cancer) | Genetic Medicine |
| | | Assistant Professor | SUZUKI Hiraku | * | |
| | | Professor | MOTEGI Fumio | Cell and developmental mechanisms underlying cell polarity, soma germ fate dichotomy, | Institute for |
| 52 | Developmental Physiology | Lecturer | KIMURA Kenji | asymmetric cell division, and morphogenesis. Development of new optical techniques for in vivo | Genetic Medicine |
| |] | Lecturer | NISHIMURA Yukako | molecular imaging. | |