

October 2023 and April 2024

Enrollment

**Graduate School of Chemical Sciences and Engineering,
Hokkaido University**

**Ph.D Program
(Doctoral Course)**

Application Guidelines

— Admission for Special Program —

**Advanced Graduate School of Chemistry and
Materials Science (AGS)**

March 2023

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

It remains vivid in most people's memory that Dr. Akira Suzuki, Professor Emeritus of Hokkaido University, attracted attention by honorably receiving the Nobel Prize in Chemistry in autumn 2010. In the same year, 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. (admission quotas in master's course: 129; admission quotas in doctoral course: 38). This is the first great attempt to combine chemistry both in Science and Engineering in National Universities in Japan, and it is a very unique graduate school in its specialization in chemistry.

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, the Faculty of Engineering, the Research Institute for Electronic Science, the Institute for Genetic Medicine, and the Institute for Catalysis work closely together on research and education activities. Researchers affiliated with the National Institute for Materials Science, the National Institute of Advanced Industrial Science and Technology, the RIKEN, and the National Cerebral and Cardiovascular Center also 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.

What is the AGS

Chemistry is playing a major role in innovations of materials science addressing both academic and social issues that traverse and encompass the main fields of science and technology. To achieve the innovations that are demanded by the 21st century society in future materials, energy, medicine, welfare and so on, education of talented top-class young students in chemistry is highly significant. In the international educational program named the "Advanced Graduate School of Chemistry and Materials Science (AGS)" of the Graduate School of Chemical Sciences and Engineering, Hokkaido University, we are recruiting talented elite students from all over the world and will foster them independent researchers, providing enough financial supports to selected students and fulfilling professional education in chemistry under the atmosphere of friendly competition. Selected students will be fully supported by the scholarship that covers the examination fee, entrance fee, tuition fees, and living costs. The "AGS" program includes all major fields in chemistry and materials science, including recent advances in organic chemistry, physical chemistry, inorganic chemistry, organometallic chemistry, polymer chemistry, catalysis, materials chemistry, biochemistry and chemical engineering.

This integrated program is expected to provide people who will lead the next generation in scientific and technological innovations addressing both academic and social issues in chemistry and materials science. Let's open the door to challenge unknown world of chemistry at the campus of Hokkaido University having the best environment in Japan.

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.

1. Admission Calendar

Application Period	March 27, 2023– May 8, 2023
First Screening <Document Screening>	May 9, 2023 – May 19, 2023
Announcement of the results of First Screening <document screening>	May 22, 2023
Second Screening <Oral Examination (Interview)>	June 1, 2023 – Jun 30, 2023
Announcement of the results of the Oral Examination	July 28, 2023

2. Admission Quotas

Division	Number to be admitted
Chemical Sciences and Engineering	A few

3. Application Period

March 27, 2023– May 8, 2023

4. Application Documents

No.	Required documents	Description
1	Admission application	Prescribed forms
2	Two recommendation letters	Prescribed forms One of the letters should be from your academic advisor at the last school you attended (Not required if you are currently enrolled in Hokkaido University, and wish to study under the guidance of the same academic supervisor in the doctoral course)
3	A summary of your master's thesis or your research achievements	(a) Those who have been awarded a master's degree should provide a summary of their master's thesis or other materials equivalent to a master's thesis (no set format for the summary but approximately two A4-sized pages). (b) Those expecting to be awarded a master's degree should provide an abstract of the research conducted over the course of their master's program (up to 500 words) or other equivalent materials.
4	A list of publications and copies of key research papers (if any)	The titles or subjects of books or papers, with the author's name and date of publication should be written on the list.
5	Academic transcripts from both undergraduate and graduate education program	
6	Official certificates of degrees (both bachelor's and master's degree)	Each certificate must show the date your degree was awarded. If applicants are still doing their master's upon application, they need to submit a certificate of expected graduation. They must be issued by a university/college president or dean.

		<p>(For graduates, be sure that the certificate includes information on your degree).</p> <p>*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 in addition to a Certificate of (Expected) Graduation.</p> <p>If you have already graduated, submit the following two items:</p> <p>a. Online Verification Report of Higher Education Qualification Certificate (教育部学历证书电子注册备案表)</p> <p>b. Graduation Diploma (毕业证书) and Degree Diploma (学位证书)</p> <p>If you are currently enrolled in a graduate program, submit:</p> <p>a. Online Verification Report of Student Record (教育部学籍在线验证报告)</p> <p>Request the document "a" above at "中国高等教育学历证书查询" : http://www.chsi.com.cn/xlcx/bgys.jsp.</p> <p>Also be sure to submit the document more than 15 days before the expiration date of the online verification.</p>
7	A certificate of English language proficiency	<p>Submit a score report from one of the following English proficiency tests as part of your application form:</p> <p>TOEIC/TOEFL/IELTS</p> <p>Alternatively, if English was the primary medium of instruction at the most recently attended institution, you may submit an official letter from the institution verifying that English was the medium of instruction.</p>
8	A copy of your passport	
9	(If applicable) Other supplementary documents requested by your prospective supervisor	

IMPORTANT TO NOTE: All documents should be written in English or Japanese

5. Where to Submit

AGS Office at the Frontier Chemistry Center

Graduate School of Chemical Sciences and Engineering, Hokkaido University

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

Tel/Fax: (+81)-11-706-8110

E-mail: ags@eng.hokudai.ac.jp

Note: You must submit original and electronic copies of all required documents

no later than May 8, 2023. When sending out by mail, **be sure to send by tracked post.**

6. Examination Fee

¥30,000

The following applicants will be exempted from the examination fee.

1. Students supported by the Japanese Government (MEXT)
2. Students supported by the China Scholarship Council (CSC)
3. International Students supported by the Hokkaido University Special Grant Program
4. Recipients of the Hokkaido University President's Fellowship

Those who are required to pay the examination fee will be notified of how to pay for the fee later.

7. Selection Method and Examination Schedule

7-1 First Screening <Document screening>

In the First Screening stage, all application documents will be comprehensively reviewed and considered.

The results of the first screening will be sent by email directly to the applicants on May 22, 2023.

7-2 Second Screening <Oral Examination (Interview)>

: June 1, 2023 – June 30, 2023

In the Oral Examination, applicants are required to give a presentation of their previous research as well and research proposal in English. The examination also includes a discussion with the interviewers.

Interviews will be conducted via a video conferencing system or a video chat system (such as Zoom or Skype).

The schedule and other details on the oral examination will be provided to those who pass the first screening.

8. Notification of the Final Results

: July 28, 2023

The results of the Second Screening (Oral Examination) will be individually notified.

9. Tuition and Fees

Enrollment fee: ¥282,000

Tuition Fee ¥535,800 per year <All fees are subject to change>

The following students will be exempted from all the fees

1. Students supported by the Japanese Government (MEXT)
2. Students supported by the China Scholarship Council (CSC)
3. International Students supported by the Hokkaido University Special Grant Program
4. Recipients of the Hokkaido University President's Fellowship

Note that the maximum amount of time for which a student can receive a tuition benefit is three years.

10. Admission Requirements

Individuals (1) have strong academic records for both undergraduate and graduate studies, (2) have been awarded or expect to be awarded a Master's degree from a university in a foreign country or in Japan by March, 2024 (by September 2023 for October 2023 enrollment), or expect to be evaluated by us as possessing equivalent academic skill *¹.

*¹ : for details, see the section titled "Application Prerequisites"

Note

- 1) Please find an appropriate professor you wish to have as your academic supervisor and get informal agreement before submitting the application form. The list of our academic staff is available at <http://www.cse.hokudai.ac.jp/english/org/>.
- 2) If you have any questions regarding the Application Requirements, contact the AGS Office.

11. Notes

- (1) Incomplete applications may not be accepted. Be sure that there are no errors in your application documents.

- (2) If any falsified information is found in the application documents, the applicant's admission may be revoked.
- (3) The AGS students should actively join the following programs as long as the participation does not bring any negative effects on your research work.

1. CSE summer school

2. Symposium, Workshop or other events sponsored by the CSE

After completion of the course, the AGS alumni are highly expected to contribute to the expansion of the AGS network.

(4) Financial Support Information

Please note that only selected applicants will receive the following supports. Those who would like to know details need to consult the AGS office before contacting our professors.

1. HU Special Grant Program

2. The MEXT scholarship by the University Recommendation

3. The MEXT scholarship by the Embassy Recommendation

4. Hokkaido University President's Fellowship

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

AGS Office at the Frontier Chemistry Center

Graduate School of Chemical Sciences and Engineering, Hokkaido University

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

Tel/Fax: (+81)-11-706-8110

E-mail: ags@eng.hokudai.ac.jp

Application Prerequisites (for April Enrollee)

For October Enrollee: the same as April Enrollee except that March 31, 2024 should read September 30, 2023.

- (1) Individuals who have been awarded a master's degree or professional degree from a Japanese university (the term "professional degree" used hereinafter shall refer to the professional degree prescribed in Article 5-2 of the Degree Regulations [Ordinance of the Ministry of Education, Science and Culture No. 9 of 1953] pursuant to stipulations in Article 104, Clause 1, of the School Education Act); this includes those who expect to be awarded such a degree by March 31, 2024.
- (2) Individuals who have been awarded or expect to be awarded a degree equivalent to a master's degree or professional degree from a foreign university by March 31, 2024 (hereinafter referred to as "individuals from a foreign educational system")
- (3) Individuals who have been awarded or expect to be awarded a degree equivalent to a master's degree or professional degree by March 31, 2024 by taking a correspondence course in Japan offered by a foreign school (hereinafter referred to as "individuals from a foreign educational system via correspondence course")
- (4) Individuals who have completed a graduate school coursework of a foreign university at an educational institution in Japan and have been awarded a degree equivalent to a master's degree or professional degree. The institution needs to be positioned within the school education system of that foreign country as an educational body with a graduate school course and is required to be designated by the Japanese Minister of Education, Culture, Sports, Science, and Technology. This includes those who expect to be awarded such a degree by March 31, 2024 (hereinafter referred to as "individuals who have completed coursework in a school designated as equivalent to a graduate school").
- (5) Individuals who have been awarded or expected to be awarded a degree equivalent to a master's degree by March 31, 2024 from the United Nations University as prescribed in Article 1(2) of the Act on

Special Measures Incidental of Enforcement of the Agreement between the United Nations and Japan regarding the Headquarters of the United Nations University (Act No.72 of 1976), which was established under the December 11, 1972 resolution of the General Assembly of the United Nations (hereinafter referred to as “individuals from the UN University”).

- (6) Individuals who have completed their formal education by taking a correspondence course through a non-Japanese university, an educational institution which received the designation by (4), or the United Nations University, who have passed an examination or a screening equivalent to the regulations by Article 16.2 in Standards for the Establishment of Graduate Schools, and who are recognized to have an academic ability equivalent to Master’s degree holders by the Graduate School, or who will obtain it by March 31, 2024.
- (7) Individuals designated by the Minister of Education, Culture, Sports, Science, and Technology (1989 Notice No. 118, Ministry of Education, Science and Culture).
 - (a) Those who have graduated from a university; have conducted research for two years or longer at a university, research institution, etc.; and are recognized by this graduate school as possessing equivalent or greater academic capabilities as those of a person who has a master’s degree based on its research achievements, etc.
 - (b) Those who have completed 16 years of school education in a foreign country or 16 years of school education of a foreign country by taking a correspondence course in Japan offered by a school of that foreign country; have conducted research for two years or longer at a university, research institution, etc.; and are recognized by this graduate school as possessing equivalent or greater academic capabilities as those of a person who has a master’s degree based on its research achievements, etc.
- (8) Applicants who are recognized by the graduate school as possessing the equivalent or greater academic skill as that of a person who has a master’s degree or professional degree based on an individualized admission qualification investigation and who will be 24 years of age as of March 31, 2024 (hereinafter referred to as “individuals who apply through an individualized admission qualification investigation”)

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.