

Course Number	09011
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2009 「The International Priority Graduate Programs (PGP)」

～Advanced Graduate Courses for International Students～

【1. Profile of the University】

①University Department	Graduate School of Science, Hokkaido University		
②President	SAEKI Hiroshi		
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⑤Web-Address	http://www.eng.hokudai.ac.jp/ags/		
⑥Enrollment (only GraduateSchool)	759 (include MEXT's Scholarship Students: 249)		

【2. Outline of the Course】

①Course	International Graduate Program for Asian Graduate Schools of Chemistry and Materials Science (AGS)
②Degree	Doctoral Course (3 years)
③Form	Several universities implementing the program
④Graduate Course, Department	Department of Chemistry, Graduate School of Science
	(Address)Nishi 8, Kita 10, Kita-ku, Sapporo, 060-0810, Japan
⑤Collaboration (Universities, Graduate courses, Departments)	Graduate School of Engineering, Hokkaido University (Division of Chemical Process Engineering) (Division of Biotechnology and Macromolecular Chemistry) (Division of Materials Chemistry)
⑥Quota	12 (include MEXT's Scholarship Students: 2) (include Japanese : 0)
⑦Faculties	64 (Full time: 45 Full time (other department): 19 Part time:)
⑧Representative of the Course	Job Title: Dean of the Graduate School of Science
	Name: YAMAGUCHI Keizo

【3. Contents of the Course】

Attractive Features of the Program

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 by a trans-Asian network for education of talented top-class young students in chemistry, the "International Graduate Program for Asian Graduate Schools of Chemistry and Materials Science (AGS)" will be established with strong ties to leading universities in Asian countries. Hokkaido University, Peking University, Seoul National University and National Taiwan University will enroll a limited number of elite students for this program. All qualified students will be fully supported by a scholarship that covers the entrance fee, tuition fees, and living costs. Each university will participate in the educational program of "Graduate Schools of Chemistry and Materials Science (Doctoral Course)", which includes all major fields in chemistry and materials science, including recent advances in organic chemistry, inorganic chemistry, organometallic chemistry, polymer chemistry, catalysis, materials chemistry, biochemistry and chemical engineering. Exchange programs between member universities will also be initiated so that participating students can develop a rich international awareness. This integrated program established by these graduate schools 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.

(1) Special lectures for training the advanced research ability given in English that promotes the activity in the front of international research fields.

For training the research ability using English, education, guidance, discussion and lecture in the program will be given in English. Also, regular meetings and examinations will be done by English presentation. Thus, we train the students as to be accepted in the international stages. Further, in seminar of laboratory or lectures in courses, report, problems, and discussion will be given in English, to train the reading, considering, writing and speaking abilities in English. In common subjects, English textbooks and handouts will be used and examination will be given in English.

(2) Special programs for training the international communication ability by daily communication of international students and Japanese students.

We have a kind of tutor system. We provide a Japanese Teaching Assistant (a student TA) to an international student, to support as a tutor or a counselor. Here, we hope that they become deeply understood each other and acquire a cosmopolitan outlook. Further, the master course students are encouraged to visit other seminars held at different laboratories to work for research exchange among the laboratories through the program. The doctor course students are encouraged to plan and carry out some international symposiums, which will invite foreign researchers. We hope that these experiences effectively develop the ability of using both international communication and advanced research.

(3) Special Program for training the international research leader who will stand at the front of research fields in material sciences.

The international students in the program are encouraged to attend the international meetings and symposiums, to obtain the ability of English presentation in such an international stage. Further, the students will be required to make proposal for competitive research fund and to submit papers for international journals, to have practical experiences in the front of research activities. Thus, we hope the international students to have their careers in international companies and research institutes as the research pioneers in material science.

Applicable Students for the Program

The education system of AGS consists of the doctor course (3 years). This system is mainly operated by the **Department of Chemistry, Graduate School of Science, Hokkaido University** in collaboration with **three divisions (Division of Chemical Process Engineering, Division of Biotechnology and Macromolecular Chemistry, Division of Materials Chemistry), Graduate School of Engineering, Hokkaido University**. This program gives priority for the international students funded by GCOE and Hokkaido University, and by the Japanese Government Scholarship. Thus, this program afford ample opportunity for every international students to study the advanced material sciences.

Language Used in the Program

The language used in this program is English. All the research guidance, the colloquiums, the lectures in this program will be given in English. Japanese language ability is not required to participate in AGS. The students can obtain the degree without using Japanese for education and research. More detailed information about potential application and the contents of AGS can be found at <http://www.eng.hokudai.ac.jp/ags/>.

Education Guidelines of the Program

[Support for Research and Publication Activities] For the international students, all the education and research activities are done in English, such as discussions in laboratory, education for publication, presentation and defense for the degree, and so on. Doctor thesis must be written in English. Publication in international journals is required for the degree. After that, the international students will master how to write and publish in material sciences.

[Common Subjects and Programs for Students] After carrying out the programs such as global COE and Exchange between Universities, Hokkaido University has already had various systems provided in English to take care foreign researchers and international students. These systems will be also used and improved for AGS. For example, common subjects taught in English, where English textbooks and handouts are used, and report and examination are also done in English. On the other hand, our departments will provide the guidance for fresh-persons, hiking, party, etc. The international students will join these programs with Japanese students. Moreover, the international students will also be invited to the reception party and excursion programmed by Hokkaido University.

[Japanese Education] The international students are not required to have the Japanese language ability at application. However, they are encouraged to learn Japanese language after their arrival in Japan, or even before that in their own countries. The ability to communicate in Japanese will help the international students to live in daily life in Japan and to have opportunity to communicate any common people live in Japan. Further, we believe that the Japanese language ability will make their great merits after in future. International Student Center, Hokkaido University (see http://www.isc.hokudai.ac.jp/www_ISC/index-e.cgi) offers Japanese language courses to the international students. We recommend these courses to the international students. These courses are very substantial, so that the students will be able to talk Japanese smoothly in daily communication about in 6-18 months.

Admission Process

The admission to AGS is planed two times a year. **The international students fund by Japanese Government will be only admitted in October.** The other international students (including private students) will be admitted in April and October. To seek excellent students, student recommendations will be widely invited, as well as entries from the public. We will ask many researchers to submit the recommendation of excellent international students from the top-level universities. Our departments have accepted many excellent international students and PDs from top-level universities. So that, we tried to request to these universities. Also, through the agreements between Hokkaido University and the other foreign universities, we will request for recommendation. The country of international student is not limited. For the application, we will ask all the students, who made an entry to public application or was recommended, to submit applications including a transcript for graduation and a recommendation written by the previous teacher, etc. Also, we will consider their English ability by using TOFEL or TOEIC scores. We will screen candidates on the basis of their documents of application and interviews for their previous teachers. For the passed candidates, we will make an interview in the capital of their countries. Since we will use the above-mentioned admission process, **the applied students lived in foreign countries do not need to visit Japan during admission process.**

Supporting System for International Students in Hokkaido University

Orientations of life support for the international students are usually held in April and October, by the international student center, Hokkaido University. The center also provides various information and advices concerning both the university life and daily life of the international students. For example, the traffic safety course, etc. are held with cooperation with police station. Moreover, the center provides a consultation service; the international students can have consultations with the teachers of international students at date set by the center. Thus, the system for continuous care of international student is already established.

Further, the international students are supported in various ways besides International Student Center. The international student can go for advice to the window of Student Exchange Office, Research and International Affaires Department, Hokkaido University, where advisors of international students are anytime ready for direct consultation. For health of the international students, Health Administration Center, Hokkaido University has nurses who are good at English conversation to care the medical consultation of the international students. Hokkaido University has also many other programs to enable the international students to easily adapt to life in Japan and thus to effectively advance in their studies and research at the university.

How to Make Contact

Students interested in AGS are encouraged to contact to the faculty members of our departments shown in homepage (<http://www.eng.hokudai.ac.jp/ags/>) of this program.