

Course Number	06003
---------------	-------

2006 「The International Priority Graduate Programs (PGP)」

～Advanced Graduate Courses for International Students～

【1. Profile of the University】

①University Department	Hokkaido University, Graduate School of Agriculture		
②President	MUTSUO Nakamura		
③Address (Headquarters)	〒060-0808 Kita8 Nishi5, Kita-ku, Sapporo, Japan		
④Contact	Division	Graduate School of Agriculture, Division of Bio-systems Sustainability	
	Contact person's Name	YOKOTA Atsushi	e-mail yokota@chem.agr.hokudai.ac.jp
	TEL/FAX Number	TEL +81-11-706-2501, FAX +81-11-706-4961	
⑤Web-Address	<a href="http://www.agr.hokudai.ac.jp/">http://www.agr.hokudai.ac.jp/</a>		
⑥Enrollment (only Graduate School)	563 (include MEXT's Scholarship Students:214)		

【2. Outline of the Course】

①Course	The Special Postgraduate Program in Bio-systems Sustainability
②Degree	Master Course (2 years) and Ph.D. Course (3 years)
③Graduate Course, Department	Division of Bio-systems Sustainability, Graduate School of Agriculture
	(Address)Kita9 Nishi9, Kita-ku, Sapporo, Japan
④Collaboration (Universities, Graduate courses, Departments)	Division of Applied Bioscience, Division of Agrobiolgy, Division of Environmental Resources
⑤Quota	15 (Master Course 7, Ph.D. Course 8) (include MEXT's Scholarship Students: Master Course 5, Ph.D. Course 5) (include Japanese :0)
⑥Faculties	43 (Full-time(only for this course):0 Full-time(at the department offering this course):43 Part time:0)
⑦Representative of the Course	Job Title: Head of the Graduate School of Agriculture, Professor
	Name: SUWA Masaaki

### **【3. Contents of the Course】**

#### **1. Preface**

Hokkaido University was founded in 1876 as Sapporo Agricultural College, the first higher educational institution for agricultural sciences in Japan. The university consists of twelve undergraduate faculties, sixteen graduate schools, and the other research institutes and centers, with approximately 4,000 faculty staffs, more than 10,000 undergraduate and 6,000 graduate students including around 800 foreign students from about 80 countries.

The Faculty of Agriculture is the oldest faculty in the university's history for more than 130 years. It was first established to meet the need to open the island of Hokkaido as a new frontier. Since then, it has been the pioneer in agricultural sciences and has produced many eminent persons. Today, this Faculty is one of the most prestigious Agricultural Faculties among those of the National University Corporations in Japan, attracting its students from all over Japan. The same applies to the Graduate School of Agriculture that is staffed with highly qualified professors. In 2000, it has transformed itself into a “Graduate Research University” that places greater emphasis than ever upon graduate education and research activities, aiming to maintain the highest standards as one of the top universities in Japan in the twenty-first century.

The Special Postgraduate Program in Bio-systems Sustainability (hereafter, the Special Program) will be established in April 2007 as an evolved form of the previous Postgraduate Program in Agricultural Chemistry. This is an innovative program that provides a unique combination of such study fields as food, health and environment to meet urgent needs in research and development for preservation and sustainable utilization of our limited resources on earth to ensure our life in the future. Due to the nature of the program, the language to be used in this program will be English. We invite you to take advantage of this opportunity.

#### **2. Aim**

This program aims to train foreign students from South East Asian countries, China, Korea and other countries in the study fields involved in the sustainable aspects of agricultural sciences within the four Divisions of the Graduate School of Agriculture, especially biotechnology and environmental sciences, to become specialists in their own fields for the following purposes: contribution to their own countries, development of sciences world wide, internationalization of Hokkaido University, enhancement of mutual understanding between other countries and Japan in academia.

#### **3. Contents and special features**

The Graduate School of Agriculture has been renewed in 2006 with a common concept to pursue the “establishment of the biomass-based recycling-framework for sustainability”. The Special Program can be described as the system to train foreign students in the field of biosciences based on this concept, and send them back to their home countries. The students in this program belong to the four Divisions of the Graduate School of Agriculture shown in the list of the next section, and study their own topics under the guidance of their supervisors in this program. This program consists of Master Course (2 years) and Ph.D. Course (3 years), and recommends 5 students for each category as candidates for the Scholarship by the Japanese Government (MONBU KAGAKU SHO) – hereinafter “Scholarship”. Additional few students (~5 people) will be selected from those who are on other sort of financial supports – hereinafter “Personal Funds”. The semester starts from October for Scholarship students, while October or April entrance is possible for Personal Funds students. Students are required to present Master or Doctor thesis as well as to take classes offered from each Division. All these lectures are newly organized when the Graduate School of Agriculture was renewed in 2006. Lectures and daily instructions by supervising staffs will be conducted in English. Therefore, you can start your study immediately after your arrival in Sapporo.

#### **4. Education system**

Teaching staffs, their laboratories, and the corresponding study fields for the graduate students are shown as below. As the system, all the staffs belong to the Research Faculty of Agriculture, where they constitute laboratories, while graduate students belong to the Graduate School of Agriculture, in which they work for

their degrees. Three staffs are assigned to each student and organize teaching committee for the work discussion and guidance for his/her thesis. This system together with the curriculum based on the common concept mentioned above makes it possible to train students to become specialists in their own field quite efficiently. Moreover, thanks to the experiences for the past ten years in the former special program, we have already established comfortable environment for foreign students, where staffs and Japanese students can take care of foreign students not only in laboratory work but also in everyday life in Sapporo.

Teaching staffs and laboratories	Study fields for the students
	<b>Division of Bio-systems Sustainability</b>
Plant Nutrition (Prof. OSAKI Mitsuru)	Rhizosphere Environment Technology
Natural Products Chemistry (Prof. NABETA Kensuke)	Chemical Biology
Biochemistry (Prof. MATSUI Hirokazu)	Chemistry of Functional Foods
Nutritional Biochemistry (Prof. HARA Hiroshi)	Functional Foods for Health and Therapeutics
Microbial Physiology (Prof. YOKOTA Atsushi)*	Gastrointestinal Microbiology
	<b>Division of Applied Bioscience</b>
Ecological Chemistry (Prof. TAHARA Satoshi)	Ecological Chemistry
Wood Chemistry (Prof. UBUKATA Makoto)	Wood Chemistry
Food Biochemistry (Prof. KAWABATA Jun)	Food Biochemistry
Applied Microbiology (Prof. ASANO Kozo)	Applied Microbiology
	Molecular Environmental Microbiology**
	<b>Division of Agrobiology</b>
Molecular Biology (Assoc. Prof. ONOUCHI Hitoshi)	Molecular Biology
Molecular Enzymology (Prof. KIMURA Atsuo)	Molecular Enzymology
Applied Molecular Entomology (Prof. BANDO Hisanori)	Applied Molecular Entomology
Pathogen-Plant Interactions (Prof. UYEDA Ichiro)	Pathogen-Plant Interactions
	<b>Division of Environmental Resources</b>
Soil Science (Prof. HATANO Ryusuke)	Soil Science
Forest Chemistry (Prof. TERAZAWA Minoru)	Forest Chemistry

\* Head of the Special Program

\*\* Prof. TAMURA Tomohiro (Applicants with Personal Funds only)

## 5. Contact, application and selection

Applicants must consult with the contact professor of his/her research field listed above about the possibility of their study in this program (scholarship, study topic, timing of entrance) before application. After that the official application form will be sent to the applicant. The applicant then prepares and send the required documents to the contact professor. The deadline of the application for Scholarship students (October entrant) will be the end of January. After the application, any cancellation is NOT permitted. For the applicants of the other categories, please be instructed from the contact professors about the details. Any questions about the program are welcome. Please contact with the head of the program, Prof. YOKOTA Atsushi at [yokota@chem.agr.hokudai.ac.jp](mailto:yokota@chem.agr.hokudai.ac.jp). Applicants will be selected by the committee of the Special Program based on the academic records (GPA etc.) and on the other criteria. Although there is no restriction for the nationalities of the applicants, those from underdeveloped countries will have a priority. Applicants will be notified of the results by early August.

## 6. Qualification and requirements for the applicant

The applicants must have excellent academic records and be fluent in English as well as being certified as healthy both physically and mentally. The applicants are required to have strong will power to perform his/her study within the due date. After finishing this program, they are expected to contribute not only to their own countries as the specialists in their own field, but also as the key persons to establish human network and promote mutual understanding between their own countries and Japan.