

**【Important】 Implementation of the entrance examination**

The current natural disaster caused by torrential rain and the ongoing pandemic may affect implementation of the entrance examination.

Any updates regarding changes to the start time of the examination, cancellation or postponement of the examination, changes to the selection method, etc., will be posted on the UGAS-EU website (<http://rendai.agr.ehime-u.ac.jp/english/>).

Please check the website regularly for the latest information.

# **SPECIAL THREE-YEAR DOCTORAL PROGRAM**

**for INTERNATIONAL STUDENTS  
in TROPICAL and SUBTROPICAL  
AGRICULTURE  
and RELATED SCIENCES**

October 2023/September 2026



**The United Graduate School of Agricultural Sciences  
Ehime University**

# **THE THREE-YEAR SPECIAL PROGRAM FOR INTERNATIONAL STUDENTS IN TROPICAL AND SUBTROPICAL AGRICULTURE AND RELATED SCIENCES**

The United Graduate School of Agricultural Sciences, Ehime University (UGAS-EU) is a consortium of the graduate schools of agriculture at Ehime and Kagawa Universities, and Agriculture and Marine Science, Graduate School of Integrated Arts and Sciences, Kochi University, on the island of Shikoku, Japan. We consider it necessary that students of agricultural sciences widen their scope and deepen their discipline. Accordingly, to fill the growing need for environmental studies as well as resource studies in the tropics, UGAS-EU established in 1990 a special program for international students in the field of tropical and subtropical agriculture and related sciences. Applications are now being accepted for the October 2023-September 2026 program in accordance with the UGAS-EU admission policy.

## **Application Guidelines**

### **1. Field of Study, Number Accepted and Supervisor**

#### **(1) Field of Study**

Applications for any field in tropical and subtropical agriculture and related sciences are accepted.

#### **(2) Number Accepted**

Not fixed. Successful applicants will be notified by the end of May 2023.

#### **(3) Supervisor**

An application will not be considered if your choice of supervisor is not included. Before applying you must consult with your preferred supervisor about your research topic. Please refer to the list provided in this booklet ("**Field of Instruction and Supervising Professors**"). After admission, two co-supervisors (selected from "**Co-Supervising Professors**") are assigned to each candidate. A Doctor of Philosophy degree will be conferred on those who satisfactorily complete all the requirements.

### **2. Qualifications**

#### **(1) Eligibility**

Those living in Japan and abroad who wish to pursue graduate study and are engaged in research in a university, institute or enterprise

#### **(2) Nationality**

Any nationality approved by the Japanese Government

#### **(3) Age**

There is no age restriction as long as the academic requirements are fulfilled.

#### **(4) Academic Career**

Applicants should possess a master's or equivalent degree as at September 30, 2023. If the applicant does not have a master's degree but feels he or she has done the work, it is possible to submit the work to UGAS-EU for review. Those who have not possessed a master's degree must be reviewed preliminary, so he or she should contact the Dean's office of UGAS-EU by January 15, 2023. If the applicant's research work is deemed acceptable, the application will be considered. Admission may be canceled if a successful applicant does not hold a master's or equivalent degree by the end of September 2023.

#### **(5) Language**

a. The applicant is required to read and write English.

b. The applicant is encouraged to learn some Japanese because it will be necessary for everyday life. If it is not possible to study Japanese before coming, classes are offered at all three universities.

#### **(6) Arrival in Japan**

In principle, successful applicants should be able to arrive in Japan between September 19 and October 2, 2023.

### **3. Application**

All the documents listed below should be sent to the Dean of UGAS-EU through the head of the institution with which the applicant is affiliated. All documents should be sent by registered mail and must arrive at the Dean's office by April 14, 2023. (Any application received after April 14, 2023 will not be accepted.) Applications sent directly by an applicant will not be accepted. Incomplete documents or documents arriving at UGAS-EU after the deadline will not be accepted. Applicants must file complete, accurate and authentic documents for application. To do otherwise may result in denial of admission.

- a. Application form for UGAS-EU** (use uploaded form\*: *Application for Special Program for International Students in Tropical and Subtropical Agriculture and Related Sciences (Three-Year Doctoral Course) October 2023-September 2026*)  
\*Download and use the form from the UGAS-EU website.
- b. Field of study and study program** (use uploaded form\*: *Field of Study and Study Program*)  
\*Download and use the form from the UGAS-EU website.
- c. Official proof of the applicant's master's degree** or a certificate issued by the applicant's graduate school indicating that the applicant is expected to receive a master's degree
- d. Official transcripts of the applicant's academic records** for the graduate grades
- e. Certificate of citizenship** issued by a government authority **or a copy of your passport**
- f. Four passport-sized photographs** (4.5 × 3.5 cm) (showing the head and top of shoulders with face and shoulders square on white or light-coloured background.; no hat except for religious or medical reasons) taken within six months of the application date with the applicant's name and nationality written on the reverse side. One photograph should be attached to the application form, and the other three should be enclosed therein. Photographs can be submitted by data, maximum jpg file size: 3MB
- g. List of publications (master's thesis, books and academic papers)** (use uploaded form\*: *List of publications*)  
\*Download and use the form from the UGAS-EU website.
- h. One copy of the master's thesis** or an equivalent paper (An English abstract is required if the original is not in English.) If the master's thesis is very long, a summary (2-3 A4 pages) is acceptable. Those who have not yet received a master's degree should send a report (in English) of their current research project.
- i. Reprints (copies are acceptable) of main academic papers and books listed in *List of Publications*** for part **a** (and **g**), except the master's thesis, must be submitted.  
Note: An English abstract (2-3 A4 pages) is required if the original is not in English.
- j.\*\* One copy of the official results of a TOEFL, TOEIC, IELTS or other internationally recognized English language proficiency test** that the applicant has achieved in the past two years
- k. A letter of recommendation written by the head** of the applicant's current affiliated institution addressed to the President of Ehime University (use uploaded form\*: *Letter of Recommendation*)  
\*Download and use the form from the UGAS-EU website
- l.\*\* Record of contact with the prospective supervisor** (use uploaded form\*: *Record of Contact with the Prospective supervisor*) in which the applicant has written his/her choice of supervisor and what contact has been made and include the results of the interview examination.  
\*Download and use the form from the UGAS-EU website
- m. 30,000 yen for the application fee**  
Applicants should request the application fee payment handling slip to the dean's office of the UGAS-EU. (rendai@stu.ehime-u.ac.jp)  
Note: The following applicants do not need to pay the application fee.  
(1) Those who completed the Master's course at Ehime, Kagawa or Kochi Universities in September 2023.  
(2) International students receiving a Japanese government (MEXT) scholarship.  
\*Excluding international students who are applying for or intend to apply for an extension of a Japanese government scholarship to receive payment after entering UGAS-EU.  
(3) Those who have applied for a Japanese government (MEXT) scholarship but have not yet been notified of the result.  
(4) Those who apply to UGAS-EU through pre-arrival admission.
- n. Check list** (use uploaded form\*: *Check List*) The applicant should check all the many requirements for application documents using the uploaded check list. We recommend checking off the check box for each completed requirement. Once all the requirement documents have been prepared, submit them along with the completed check list.

\* Download and use the form from the UGAS-EU website

\*\*Applicants who completed the Master's course at Ehime, Kagawa or Kochi Universities don't need to submit the documents **j** and **l**.

## Notes

- Do not staple any of the application documents.
- Documents **a**, **b**, **g**, **k**, **l** should be prepared in typed or neatly handwritten in English or Japanese using the forms provided. They also should be prepared on A4 paper (29.5 × 21 cm). Download and use the forms from the UGAS-EU website. <http://rendai.agr.ehime-u.ac.jp/english/annai/>
- If any document for submission is written in a language other than Japanese or English, an English translation

should be submitted. English translations should be provided by the issuing institution or authority. If the issuing institution or authority is not able to provide a translation, applicants should have the document(s) translated and have them certified by the issuing institution or authority. Both the English translation and the original document(s) should be submitted.

- Incomplete documents or documents arriving at UGAS-EU after the deadline will not be accepted.
- None of the submitted documents will be returned to the applicant.
- If paying the 30,000 yen application fee from abroad, please pay in yen via a bank transfer. The bank account information will be sent when needed.
- The application fee will be reimbursed under the following conditions. If you are eligible for reimbursement, please contact the UGAS-EU office. However, please note that all the bank charges (including transfer fees, intermediary bank fees etc.) for the reimbursement through overseas remittance are the responsibility of the applicant.
  - (1) If the applicant does not submit an application to Ehime University after paying the application fee
  - (2) If the applicant pays the application fee twice or pays too much in error
  - (3) If the application is not accepted
  - (4) If the applicant stated in **3. Application m.** (1)- (3)above mistakenly pays the application fee
  - (5) If the applicant has been granted an extension to a Japanese government scholarship

#### 4. Interview Examination

Applicants must take an interview-style examination given by the prospective supervisor and at least two other faculty members (selected by the prospective supervisor). The interview may be conducted in person or via the Internet (on-line meeting system). Applicants must prepare (a) a summary of their master's thesis and (b) a research proposal, and submit them to the prospective supervisor then to other interviewers by the day of the interview. The prospective supervisor organizes this process and will write a recommendation for a successful applicant based on the results of the interview and the applicant's academic record. The applicant will be judged on the following:

- (1) The content of the master's thesis or equivalent work
- (2) Proposal for research if admitted to UGAS-EU including any relationship to present research at applicant's institution
- (3) Knowledge of the applicant's major field of study
- (4) Motivation and suitability for this program
- (5) Proficiency in English

#### 5. Registration From September 12 2023 to September 15 2023

\* The Registration and Tuition fees for 2021 are as stated below. However, the fees for 2023 may be revised. If there is a change in the tuition fee during your course of study, you will be expected to pay the new fee.

**(1) Registration fee:** 282,000 yen

Note: The following applicants do not need to pay the Registration fee

1. Those who are continuing from the Master's course at Ehime, Kagawa or Kochi Universities.
2. International students receiving a Japanese government (MEXT) scholarship.
3. Those who have applied for a Japanese government (MEXT) scholarship but have not yet been notified of the result.

**(2) Tuition fee for 6 months:** 267,900 yen (one year: 535,800 yen)

Note: Those international students receiving a Japanese government (MEXT) scholarship do not need to pay the Tuition fee.

**(3) 1. Candidates are required to pay 3,620 yen for Student Education/Research Accident and Injury Insurance** (Coverage for three years).

**2. Comprehensive Insurance for Students Lives Coupled with Gakkensai for International Students:33,370 yen** (coverage for three years) including tenant liability.

\* Insurance fee is as above. However, the fees for 2023 may be revised.

**(4) Medical insurance**

Candidates are required to take out "National Health Insurance" (Japan), which covers most medical costs up to 70%.

**(5) Documents:**

1. Written pledge
2. Letter of guarantee
3. Curriculum vitae
4. Four copies of a4×3cm photograph.

Photographs can be submitted by data, maximum jpg file size: 3MB

(Not required if you submitted data with your application)

\*The forms will be sent to you two weeks before the registration period.

## 6. Selection Method

Selection is based on the **Interview Examination** outlined in 4 above, the applicant's academic record and other submitted documents.

## 7. Notes

Applicants must file complete, accurate and authentic documents for application. Who have made false statements in their application documents may have their admission rejected even after they have been admitted.

## 8. Scholarship Information

Successful candidates may apply for the scholarship below. Please consult with the prospective supervisor.

### (1) Reservation Program for Monbukagakusho Honors Scholarship for Privately-Financed International Students by Pre-arrival Admission (University Recommenders)

Eligibility: Privately-financed international students who are not receiving the Japanese Government (Monbukagakusho) Scholarship or any Foreign Government Scholarship, using pre-arrival admission

Monthly stipend: 48,000 yen (The amount may change from one academic year to another.)

Scholarship period: 6 months. (From October in the year of selection to the following March.) The scholarship is provided on a monthly basis.

### (2) The Monbukagakusho Honors Scholarship for Privately-Financed International Students

Eligibility: Privately-financed international students who are not receiving the Japanese Government (Monbukagakusho) Scholarship or any Foreign Government Scholarship. One enrollee from April or October in this special program will be preferentially selected.

Monthly stipend: 48,000 yen (The amount may change from one academic year to another.)

Scholarship period: 6 months. (From October in the year of selection to the following March.) The scholarship is provided on a monthly basis.

Please note that there are other scholarships for privately financed students.

## 9. Personal Information

The information provided in the application, such as name, address and other personal matters, will be used only by the UGAS-EU office for the purpose of processing the applications and notifying the accepted applicants.

All correspondence relating to the application should be sent by air mail to the address below (e-mail can be used for inquiry):

## 10. Reasonable Accommodation Request

Applicants with disabilities who require consideration for the entrance exam or their studies are asked to notify the office of the United Graduate School of Agricultural Sciences before applying.

Note. This preliminary consultation is used to familiarize disabled applicants with our current campus resources beforehand in order to determine how best to accommodate their needs for both the entrance examination and as future students. The preliminary consultation is not intended to limit persons with disabilities from taking the entrance examination or studying at this university.

Dean's Office  
The United Graduate School of Agricultural Sciences,  
Ehime University  
3-5-7 Tarumi, Matsuyama, Ehime 790-8566, Japan  
E-mail: [rendai@stu.ehime-u.ac.jp](mailto:rendai@stu.ehime-u.ac.jp)  
<http://rendai.agr.ehime-u.ac.jp/english/>

## Fields of Instruction and Supervising Professors

**EH** : Ehime University

**KG** : Kagawa University

**KC** : Kochi University

Note: The underlined professors will retire before September, 2026.

### 1 Bioresource Production Science Major

#### Bioresource Production Science Department

##### a. Plant Resource Production

Professor (Affiliation)	Research Field	Main Subject
ARAKI Takuya (EH)	Crop Science	Ecophysiological studies on dry matter production and yield of crops
BEPPU Kenji (KG)	Pomology	Reproductive physiology of fruit trees
ICHIE Tomoaki (KC)	Tree Ecophysiology	Resource allocation strategies for growth, reproduction and herbivore defense of forest trees
KAYA Hidetaka (EH)	Plant Molecular Biology	Plant Molecular genetics and physiology
KOBAYASHI Kappei (EH)	Plant Molecular Biology and Virology	Molecular biology of plant viruses, plant-virus interactions and plant pathogenesis
MIYAZAKI Akira (KC)	Crop Physiology	Physiology and function related with yield production in field crops
TOYOTA Masanori (KG)	Crop Ecophysiology	Ecophysiology and morphology on yield determination of crops
UENO Hideto (EH)	Soil Science and Plant Nutrition	Dynamics of soil nutrients and agroecological soil management for sustainable agriculture

##### b. Plant and Animal Production under Structure

HATOU Kenji (EH)	Information Systems for Plant Factory	Research of the various models for the speaking plant approach in a plant factory
KAWANO Toshio (KC)	Post-harvest Process Engineering	Processing, handling and distribution technology for agricultural products
SUZUKI Yasushi (KC)	Forest Engineering	Logging cable system, Forest operation system, Forest road, Effects of forest operation to residual stands, Woody biomass

##### c. Aquaculture and Livestock Production

EDASHIGE Keisuke (KC)	Applied Cryobiology	Cryobiological property of gametes and embryos Development of cryopreservation methods for gametes and embryos
FUKADA Haruhisa (KC)	Fish Nutrient Physiology	Studies on hormonal regulation of growth and digestion in fish

GOTO Rie (EH)	Fish Reproductive Physiology and Aquaculture	Studies of developmental biotechnology and reproductive physiology in aquaculture species
IKEJIMA Kou (KC)	Coastal and Fisheries Ecology	Ecology and Conservation of coastal ecosystems and fisheries resources
IMAJOH Masayuki (KC)	Fish Pathology	Studies of epidemiology and prevention of fish diseases caused by viruses, bacteria and parasites
MIURA Takeshi (EH)	Fish Reproductive Physiology	Studies of the molecular control mechanisms of gametogenesis in animals, and establishment of the applied techniques in aquaculture based on the basic studies
TAKAGI Motohiro (EH)	Fish Breeding and Conservation Genetics	Studies on fish breeding and conservation genetics
TACHIBANA Tetsuya (EH)	Poultry Nutritional Physiology	Studies on the bioactive molecules related to growth and behavior of chickens
SAITO Taiju (EH)	Aquaculture, developmental engineering	Development of an efficient aquaculture technology by using developmental engineering methods

#### d. Bioresource Economics

ICHIKAWA Masahiro (KC)	Rural Resource Management	Studies on resource uses, livelihood, society and culture in rural areas in Japan and Asia
MATSUOKA Atsushi (EH)	Resources and Environmental Management	Economical studies on management and preservation of agricultural land
TAKENOUCHI Naruhito (EH)	Fisheries management and business	Study on economics and management theories of the sustainable development in the fisheries and fishing village
WAKABAYASHI Yoshikazu (EH)	Social Sciences of Fishery	Studies on the social structure and culture of fishing Community top of this page

## 2 Applied Bioresource Science Major

### Applied Bioresource Science Department

#### a. Food Science

KASHIWAGI Takehiro (KC)	Food Functional Chemistry	Chemicalbiology of food material / Isolation and identification of functional substance in food
KAWAMURA Osamu (KG)	Food Hygiene	Development and application of immunological methods for mycotoxins, and toxicology and human exposure of mycotoxins
KISHIDA Taro (EH)	Nutrition	Studies on nutritional and physiological effects of food components, especially non-nutrient

MARUYAMA Koutatsu (EH)	Community Health and Nutrition	The approaches of nutritional epidemiology to do research on the association between dietary habits (i.e. food and nutrient intakes, eating behaviors, and eating foods with function claims) and human health
MORIMOTO Kenji (KG)	Applied Enzymology	Production of various rare sugars using microbial and enzymatic reactions
MORIOKA Katsuji (KC)	Fisheries Chemistry	Studies on post-harvest science and technology of fish and fisheries products / Studies on more efficient utilization of fish
OGAWA Masahiro (KG)	Food Protein Chemistry	Structure-function analysis of food proteins and their functional development
SHIMAMURA Tomoko (KC)	Food Chemistry	Studies on reaction of food components, food functionality, and food analysis
TAKATA Goro (KG)	Applied Enzymology	Production of Rare Sugar from bio-resources using microbial and enzymatic reactions
YONEKURA Lina (KG)	Food Chemistry	Bioavailability, bioaccessibility and assessment of biological activity of functional compounds in foods

#### **b. Bioresource Science for Manufacturing**

AKITA Mitsuru (EH)	Applied Molecular Cell Biology	Protein transport and metabolite transport in plant organelles
AKIYAMA Koichi (EH)	Genetic engineering in fungi	Molecular biology and recombinant protein production in <i>Fusarium oxysporum</i>
ASHIUCHI Makoto (KC)	Bioengineering and Nanotechnology	Development of Multi-functional bionanomaterials and Their Applications
ICHIURA Hideaki (KC)	Material Chemistry of Forest Resources	Material Chemistry for utilization of forest resources
ICHIMURA Kazuya (KG)	Plant Stress Signaling	Biotic and abiotic stress signal transduction in plants
KAMIYA Koichi (EH)	Forest Genetics	Molecular population genetics and conservation genetics of forest organisms
KAWADA Miyuki (EH)	Molecular Microbiology	Biochemistry and molecular biology of membrane transporters.
NISHI Kosuke (EH)	Animal Cell Technology	Functional analysis of biomolecules and elucidation of their mode of action
NISHIWAKI Hisashi (EH)	Bioorganic Chemistry	Structure-activity relationship and mode of action of bioactive substances
NOMURA Mika (KG)	Molecular Plant Nutrition	Physiology and molecular biology in plant-microbe interaction
SATO Masashi (KG)	Bioactive Natural Products Chemistry	Bio-organic chemistry of natural bioactive substances
SUGAHARA Takuya (EH)	Animal Cell Technology	Screening and application of biofunctional substances from foodstuffs
SUGIMORI Masatoshi (EH)	Wood Science and Technology	Wood Quality

SEKITO Takayuki (EH)	Genetic engineering of microorganisms	Molecular mechanism and regulation of intracellular transport
SUGIMOTO Hiroyuki	Wood Science and Technology	Wood science and technology for utilization of forest resources
SUZUKI Toshisada(KG)	Biomass Chemistry	Organic chemistry, biosynthesis, and bioactivity of wood components, and woody biomass utilization
TANAKA Naotaka (KG)	Cell Biology	Functional analysis of the Golgi apparatus and its application to protein production
TABUCHI Mitsuaki (KG)	Applied Molecular Cell Biology	Studies on the regulation of vesicle trafficking and lipid metabolism in yeast and mammalian cells
TEBAYASHI Shinichi (KC)	Bioactive Chemistry	Organic chemical studies on bioactive chemicals from natural occurring: e.g. isolation and identification of medical agents from folklore medical plants screening for pesticidal agents from natural occurring
YAMAUCHI Satoshi (EH)	Chemistry and Utilization of Bioresources	Synthetic Organic Chemistry for research about function and effective utilization of bioresources

### 3 Life Environment Conservation Science Major

#### Life Environment Conservation Science Department

##### a. Land Conservation and Irrigation Engineering

HARA Tadashi (KC)	Geotechnical and earthquake proof engineering	Study on liquefaction characteristics of soft ground
HARUTA Shinsuke (EH)	Rural Resources Management for Environmental Preservation	Improvement and Management of Water Quality and Resources in Rural Area
KOBAYASHI Noriyuki (EH)	Geotechnical and Geoenvironmental Engineering	Application of rehabilitation engineering for Hydraulic Structures
OUE Hiroki (EH)	Hydrometeorology for Environmental Science	Micrometeorology of the plant canopy under changing environment, hydrological processes in forest and farmland watersheds, irrigation and drainage and integrated agricultural water use management
SAKAMOTO Jun (KC)	Urban Planning and Disaster Management	Urban planning in an era of Declining population
SASAHARA Katsuo (KC)	Erosion and Sediment Control, Landslide Engineering	Sediment and Water discharge from mountainous slope, Early warning system against landslide Mechanism of deformation of unsaturated soil
SATO Shushi (KC)	Water Use and Environmental Engineering	The overall engineering research for achieving the management of water environment and infrastructure in river basin

TAKEYAMA Emi (EH)	Rural Landscape Planning	Design and planning of agricultural landscape for sustainable rural development
YAMASHITA Naoyuki (EH)	Water Environmental Engineering	Study on securing of sanitary safety water environment

#### b. Environmental Science

AKIMITSU Kazuya (KG)	Molecular Plant Pathology	Molecular biology of plant microbe interactions
ADACHI Masao (KC)	Aquatic Environmental Science	Biology, physiology and ecology of harmful algal blooms
HIKICHI Yasufumi (KC)	Plant Pathology	Analysis on pathogenicity mechanisms of plant pathogens and responses of host plants
ICHIMI Kazuhiko (KG)	Coastal Marine Science	Biological and Chemical Processes in Coastal Ecosystems
ISHIBASHI Hiroshi (EH)	Ecotoxicology/Molecular toxicology	Studies on ecotoxicological effects of environmental contaminants in animals Studies on disruption mechanism of nuclear receptor signaling pathway by environmental contaminants
ITO Fuminori (KG)	Insect Ecology	Behavior and ecology of social insects
KAWASHIMA Ayato (EH)	Environmental Science for Industry	Development of effective utilization technology for biomass and treatment technology for hazardous pollutants
KANG Yumei (KC)	Soil Environmental Science	Rehabilitation of contaminated soil, water and grassland ecosystem
KIBA Akinori (KC)	Phytopathology	Analysis of plant immunity and disease development
MORITSUKA Naoki(KC)	Soil science and plant nutrition	Dynamics of fertilizer elements in agroecosystems for sustainable agriculture
OBAYASHI Yumiko (EH)	Marine molecular ecology / Biogeochemistry	Biogeochemical cycles and related microbial ecology in marine environment
TAKAHASHI Shin (EH)	Environmental Analytical Chemistry, Environmental Chemistry, Ecotoxicology, Resources Recycling Engineering	Studies on development of analytical methods, elucidation of emission sources and environmental behaviors, and assessment of ecological effects for persistent bioaccumulative and toxic substances
YAENO Takashi (EH)	Plant Pathology	Molecular biology of plant-microbe interactions
YAMAGUCHI Haruo (KC)	Aquatic microbial physiology and ecology	Physiology and ecology of microalgae including harmful species
YOSHITOMI Hiroyuki (EH)	Entomology	Systematics and taxonomy of Insects conservation of biodiversity

**Outline of The United Graduate School  
of Agricultural Sciences, Ehime University**

## **Educational Principles**

The United Graduate School of Agricultural Sciences, Ehime University is a consortium linking the strengths of the graduate schools of agriculture at Ehime and Kagawa Universities, and Agriculture Marine Science, Graduate School of Integrated Arts and Sciences, Kochi University with the aim of producing exceptional people who will be leaders in the 21st century. Our educational goal is to instill a high standard of scholarship, skills and judgement based on a deep understanding of people, society and nature.

Through farsighted, original research, we hope to train talented, world-class researchers who will play a central role in the regional development of their countries, and we are actively recruiting talented students from all over the world. In this way, we hope to develop a sustainable society and contribute to world peace and harmonious balance between people and nature.

## **Description**

### **1. Bioresource Production Science Major**

In the Shikoku region, agricultural and livestock industries have developed by taking advantage of the complicated geographical features on Shikoku Island. The industries cover a wide range such as the horticultural production of vegetables and ornamental plants in open fields as well as under structure; the production of citrus fruits; aquaculture fisheries in the inland sea and coastal areas; forestry; and animal husbandry. This course is intended to enhance the level of fundamental research and develop applied technology for the production and management of plant and animal resources.

#### **Bioresource Production Science Department**

To achieve the educational goals of this course, study and research is developed for each of the four fields of study listed below.

##### **(1) Plant Resource Production**

This chair is intended to train specialists who would have full knowledge about rationalizing qualitative and quantitative improvement of the production of field crops, fruits and vegetables, ornamental plants and forestry and forestry products as well as plant idioplasm.

##### **(2) Plant and Animal Production under Structure**

This chair is concerned with the fields of study for understanding basic problems about the improvement of productivity by creating artificial environments such as greenhouses, and the technological examination of agricultural facilities, along with environmental and behavioral characteristics of plants and animals.

##### **(3) Aquaculture and Livestock Production**

This chair provides instruction and research programs concerning the culture, propagation (reproduction), feeding, pathology and environment of aquatic life and domestic animals from the integrated viewpoint of biology, chemistry and physics.

##### **(4) Bioresource Economics**

The research and instruction field of this chair is the following: farm, forest, and fishing ground management, including business analysis and planning of farm, forest, and fishing ground operation, and marketing of fruits, vegetables, livestock, timber, and fishery products; resource economics, including effective use of biotic resources as production factors, energies and green resources; and social economic field, including policies and strategies closely related to farm, forest, and fishing ground management, and domestic and international marketing of agricultural, forest and fishery products.

#### **Deep Seawater Science (Joint-Department)**

Basic education and research in elucidating the chemical, physical, biological and microbiological characteristics of deep seawater for the efficient use and applied technology in fisheries and marine food production.

### **2. Applied Bioresource Science Major**

The processing and storage of agricultural produce, or more specifically its effective use, is a growing sector important for the national economy and is also a means of meeting diverse social needs for agricultural products. There is an increasing need for basic research and education in the development of new biochemical technology. This course aims to apply that basic research and education.

### **Applied Bioresource Science Department**

To achieve the educational goals of this course, study and research is developed for each of the two fields of study listed below.

#### **(1) Food Science**

This chair is concerned with the field of study for understanding the utilization process of food from its production to ingestion. Chemistry, physics, nutrition, hygienics, manufacturing of agricultural products and aquatic products, and applied microbiology of food as well as applied biochemistry including morphology, structure, and functions of tissue contents and cell organelles are studied.

#### **(2) Bioresource Science for Manufacturing**

This chair gives the student various types of instruction and research programs concerning the fields of chemistry, biochemistry and biotechnology as a base of production of plant and animal resources as well as application of knowledge about the use of economic resources from the viewpoint of chemistry, physics, physiology and biochemistry.

### **3. Life Environment Conservation Science Major**

The increasing world population and consumption of natural resources has reached an unprecedented level, to the extent that the limits of global resources, and human existence and activities are now recognized. Conservation and efficient use of the environment, the base for bioresource production and human existence, are major issues for agriculture. This course provides education and research based on engineering and ecological methods.

### **Life Environment Conservation Science Department**

To order to achieve the educational goals of this course, study and research is developed for each of the two fields of study listed below.

#### **(1) Land Conservation and Irrigation Engineering**

Using physical and technological methods, students study the consolidation, maintenance and improvement of various geographical features such as forests, cultivated land, shores and coastal waters, along with the rationalization of water use, and maintenance and development of facilities related to water use.

#### **(2) Environmental Science**

This chair provides instruction and research programs concerning the basic study and applied technology of the structure and function of various ecosystems ranging from the terrestrial land to the seas, along with environmental changes caused by human activities, and conservation and management of life environments.

## **Education and Research**

### **Advisory System**

UGAS-EU consists of three majors and four departments, with academic staff expertise that extends beyond that of any one of the constituent universities. Three supervisors are assigned to each student: a supervisor and two co-supervisors. Students are located at the same university as their supervisor and one of the co-supervisors, which provides an efficient and effective educational system.

### **Instruction**

Applicants can choose a supervisor by referring to the 'Fields of Instruction and Supervising Professors' pages. Once accepted by a supervisor, applicants take an examination. After acceptance, students are assigned two co-supervisors. UGAS-EU students receive direct professional guidance and instruction for their doctoral thesis from the supervisor. Students also receive further instruction from their co-supervisors. Upon entering UGAS-EU, the supervisor will review the student's research in close cooperation with the two co-supervisors and the student.

## **Education**

The primary goal of UGAS-EU is to train top-level researchers with a broad knowledge of agricultural science who can continue their research activities on their own after graduating.

The Student Education Program was established in April 2006. This program entails research supervision by several faculty members, seminars and a mid-term review of both the dissertation and research progress. A new curriculum and a course credit system were introduced in April 2009 to enhance graduate school education.

We also offer competitive programs that provide funding for presenting at international conferences.

UGAS-EU eagerly welcomes students from foreign countries. We feel Japan and UGAS-EU should play a role in the internationalization of education and in protecting environmental resources. To further this goal, we have a Special Three-year Doctoral Program for International Students in Tropical and Subtropical Agriculture and Related Sciences.

In October 2002, Ehime, Kagawa and Kochi universities started a special master's program in agriculture for international students from Asia, Africa and the Pacific Rim that leads into our special doctoral course for Asian, African and Pacific Rim students.

## **Research**

The three constituent universities each have a history of providing a base for bioresource production through academic research, thus promoting the growth of the Shikoku Island region. Therefore, the combined resources of these universities should have a greater impact in the fields of agriculture, forestry and fisheries. This structure supports a wider range of research from production technology, environment, and facilities; product processing, use, and distribution; and human living environments.

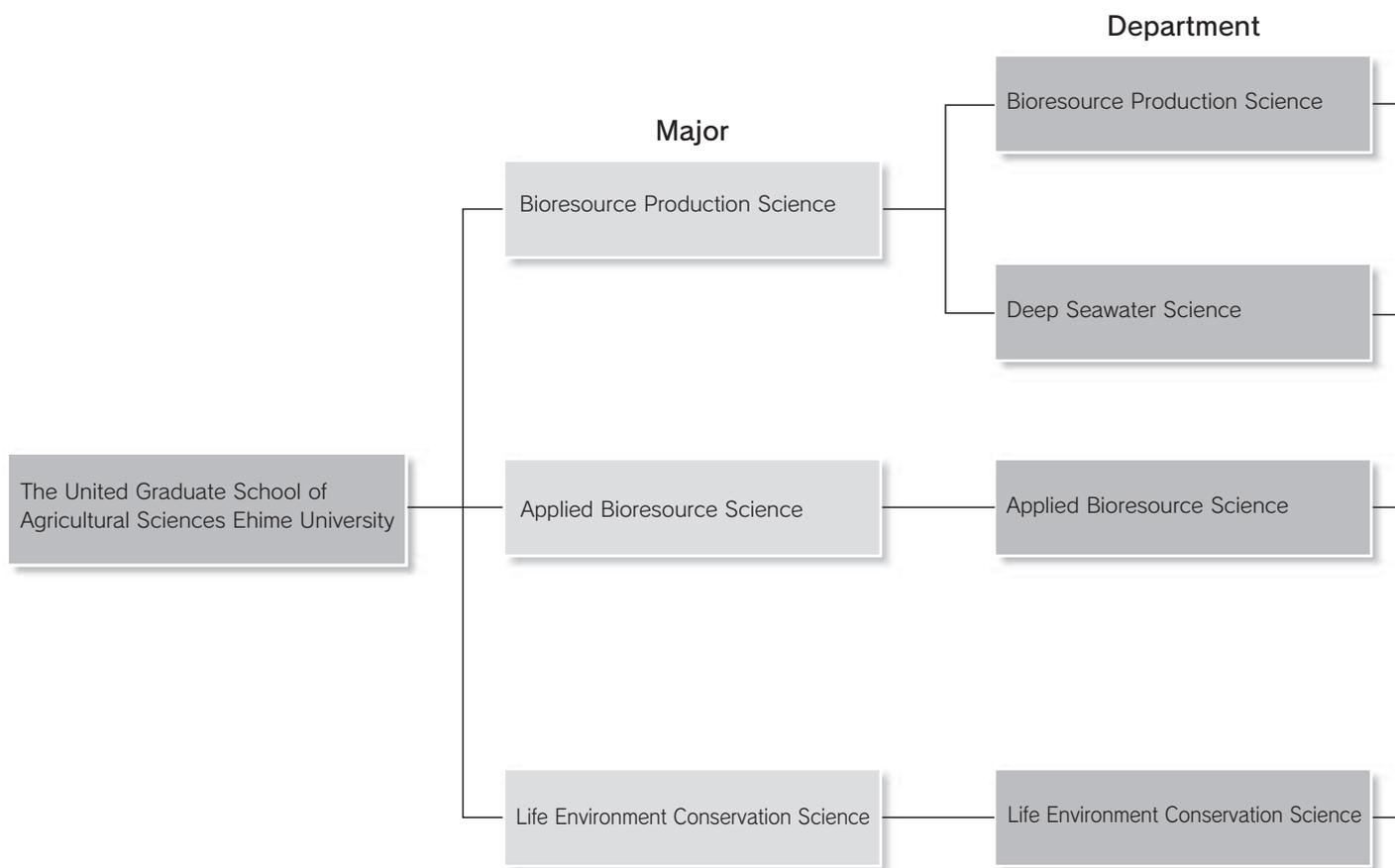
## **Completion of the Doctoral Course**

The doctoral course requires enrollment for three or more years and acquiring at least 12 academic credits. In addition, students must pass the doctoral dissertation review along with the final examination.

Students deemed to have completed outstanding work for their master's degree may go on to complete the doctoral course in one year.

Those who successfully complete the course will receive a Doctor of Philosophy degree.

## Organization



UGAS-EU is based on the equal status of Kagawa, Kochi and Ehime universities and operates with their close cooperation. Although UGAS-EU draws from the facilities and staff of the master's course of each university, it is an independent institution that operates separately under its own management and regulations.

Three majors are offered by UGAS-EU : Bioresource Production Science, Applied Bioresource Science and Life Environment Conservation Science. There are four departments.

