

October 2022

Dear Dean/President and applicants,

Thank you for your understanding, cooperation and support of educational research at The United Graduate School of Agricultural Sciences, Ehime University (UGAS-EU).

UGAS-EU accepts applicants for admission to "Special Program for International Students in Tropical and Subtropical Agriculture and Related Sciences (three-year doctoral course, October 2023-September 2026)".

I am very glad to inform you that the "Program of Doctoral Education for the Development of Tropical and Subtropical Agriculture and Related Sciences and Achievement of SDGs" with the MEXT scholarship (Special Selection) is applicable to this Special Program also this year.

In the application, please note the following important points,

1. Generally, a MEXT scholarship can be awarded to a candidate of any nationality approved by the Japanese Government. However, please note that ASEAN countries are designated as the main target countries for this special program.
2. If a student's academic record falls below 2.30 (out of a possible 3.00) at a certain point of time each year, the scholarship will be cancelled.
3. The applicant's university or institute must determine the applicant's eligibility to apply for this scholarship.

Sincerely,

OUE Hiroki

Dean, The United Graduate School of Agricultural Sciences  
Ehime University

**【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

**Application Guidelines  
for Japanese Government Scholarship  
(Special Selection)**



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

# The United Graduate School of Agricultural Sciences, Ehime University

## Admission Policy

### <Ideal Applicants>

Agricultural science brings together a broad range of academic disciplines covering biology, chemistry, physics, engineering, economics and biotechnology to improve the efficiency and productivity of biological processes. To achieve these agricultural objectives, it is necessary to adopt an interdisciplinary perspective and build a balanced, sustainable relationship between nature and society. It is equally important to develop and train people to deepen their understanding of biological functions by applying broad knowledge and a flexible mindset unconstrained by conventional academic thinking. They will explore agriculture of the future that goes beyond a simple regional focus and seeks to preserve the global environment. Based on these principles, The United Graduate School of Agricultural Sciences, Ehime University (a consortium of the graduate schools of agriculture at Ehime and Kagawa Universities, and Agricultural Science, Graduate School of Integrated Arts and Sciences, Kochi University) established a three-year doctoral program offering three majors: Bioresource Production Science, Applied Bioresource Science and Life Environment Conservation Science. These majors accept students with master's degrees from universities in Japan. There are also two courses for outstanding international students to pursue research in specific countries and regions.

Agriculture is an academic field rich in future potential and vital for environmental and ecological conservation and improvement for sustaining a healthy life. We welcome applicants who are motivated to lead and explore the many possibilities of agricultural science from diverse perspectives. The Special Program for International Students in Tropical and Subtropical Agriculture and Related Sciences is aimed at research and education in the various sciences related to the production and use of biological resources and the environment that supports such activities in the tropics and subtropics. Centered on such regions, this program accepts outstanding mid-level scientists engaged in research or teaching in all parts of the world and aspires to train scientists and engineers who can positively contribute to their home countries.

The Special Doctoral Course Program in Agricultural Sciences for Students from Asia, Africa and the Pacific Rim (AAP) is a unified master's course and doctoral program. The doctoral program accepts students from countries in Asia, Africa and the Pacific Rim who have completed the master's component of this program at the graduate school in Ehime university, Kagawa university or Kochi University and has the goal of training advanced researchers and engineers.

(Knowledge · Discovery · Understanding)

1. Possessing general expertise in agriculture, the environment, and related sciences, students have the ability to collect and analyze information to identify, understand, and solve problems in their area of expertise, and have the technical ability to conduct research independently or in groups.

(Ethics · Practice)

2. Possessing high ethical standards based on an understanding of research in Bioresource Production Sciences, Applied Bioresource Sciences, Life Environment Conservation Sciences, and related sciences, students are able to conduct science-based research and education in agriculture, the environment, and related sciences.

(Information dissemination)

3. Students are able to proactively work on global issues and to disseminate the results of their research.

(Thought · Judgment · Expression · Communication)

4. Possessing the ability for scientific reasoning and objective judgment, students are able to think broadly and to use advanced presentation and communication skills.

### <Admissions Policy>

Applicants are interviewed (includes a presentation and oral examination) to evaluate the knowledge and skills they have acquired during their bachelor's and master's programs, the ability to use that knowledge and skills, and their attitude toward learning independently and collaboratively. In addition, a system is in place for international students to allow them to complete the admission process before coming to Japan, opening the door to motivated applicants.

Applicants for Working Student Special Admission are interviewed (includes a presentation and oral examination) to evaluate the knowledge and experience they have gained through employment at companies and organizations.

We also offer two special courses for international students. Applicants for the Tropical and Subtropical Agriculture and Related Sciences Course are interviewed by a prospective supervisor and two or more members of faculty to evaluate the following: (1) Master's thesis or equivalent research, (2) research plan after enrollment, (3) professional expertise, (4) aptitude and motivation to learn, and (5) English communication skills. The Asia, Africa, and Pacific Rim Agricultural Sciences Course (AAP) is a five-year Master's and PhD program. Applicants for this course are assessed based on a PhD research plan and a recommendation from a supervisor.

# **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 Awarded and Supervisor**

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

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

#### **(2) Number Awarded**

Six Japanese Government (MEXT) scholarships will be awarded this year. UGAS-EU will recommend six candidates for the scholarship. Those who are awarded the scholarship will be notified in mid-August 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 in three years.

### **2. Qualifications**

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

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

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

Any nationality approved by the Japanese Government. However, please note that ASEAN countries are designated as the main target countries for this program. Accordingly, our objective is for five of six successful candidates to be selected from ASEAN countries.

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

Applicants should be under 35 years old as at April 1, 2023 (those born on or after April 2, 1987).

#### **(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. If the applicant's research work is deemed acceptable, the application will be considered.

#### **(5) Academic Record**

An applicant's academic record in the past two years must meet a minimum standard of 2.30 (out of a possible 3.00) as set by MEXT. Use the "g. GPA check sheets" to calculate and submit of your GPA. (For detailed information, please refer to the prospective supervisor.) If the applicant's academic record cannot be converted to the standard set by MEXT, he or she should contact the UGAS-EU office in advance because another document needs to be submitted.

#### **(6) Health**

The applicant should be in sufficiently good mental and physical health for university study and research.

#### **(7) Language**

English: The Applicants must have passed Level N2 or higher of the Japanese Language Proficiency Test at the time of admission to the regular course, or have completed a master's course in Japan with Japanese as the primary language.

The applicant is required to read and write English and to have attained a level of English proficiency of 600 or higher in TOEIC (paper-based test) or similar level in TOEFL, IELTS, or other internationally recognized English proficiency test. In addition, applicants must satisfy either 1. or 2. below.

1. At the time of enrollment, the applicant is required to have an English qualification or test score that corresponds to the B2 level or higher in the Common European Framework of Reference for Languages (CEFR). (If you do not know your CEFR level, please contact the UGAS-EU office in advance.)
2. The applicant must have completed or be completing the requirements for academic career stated in (4) above by the end of September 2023 with English as the main language.

### Notes

- Military personnel and civilian employees of armed forces are not eligible.
- Recipients of scholarships or fellowships from other sources are not eligible.
- Applications will not be accepted from those who have simultaneously submitted applications to other universities, other MEXT Scholarships, or the Japan Student Services Organization (JASSO) Student Exchange Support Program.
- Those who have received a Japanese government scholarship within the past three years are not eligible.
- Those who have already registered for a university in Japan as a private student are not eligible.
- Those who plan to do extended field work outside of Japan should consult with the dean's office at UGAS-EU through your prospective supervisor.
- Admission will be canceled if a successful applicant does not gain a master's or equivalent degree by the end of September 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 January 13, 2023. (Any application received after this date 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 Japanese Government (2023 APPLICATION FORM FOR JAPANESE GOVERNMENT (MEXT) SCHOLARSHIP (RESEARCH STUDENTS))\***

\*\*Every year this form is renewed by MEXT in December, but the revision is small. The applicant may prepare the document with the uploaded form.

**b. Application form for UGAS-EU (Application for Admission to the United Graduate School, Special Program for International Students in Tropical and Subtropical Agriculture and Related Sciences (three-year doctoral course, October 2023–September 2026) for a Japanese Government Scholarship (Special Selection)\*)**

**c. Field of study and study program for Japanese Government (use uploaded form\*: *Field of Study and Study Program*)\***

**d. 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

**e. Official proof of the applicant's undergraduate degree**

**f. Official transcripts of the applicant's academic records including GPA** for both the graduate and undergraduate grades.

**g. GPA check Sheets** for both the graduate and undergraduate grades.\*

**h. Certificate of citizenship** issued by a government authority or a copy of your passport

**i. Five 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. Two photographs 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, but do not change the aspect ratio.

**j. List of publications (master's thesis, books and academic papers) (*List of publications*)\***

**k. 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.

**l. Reprints of books and academic papers**

All reprints (copies are acceptable) of books and academic papers listed in *List of Publications* for part **a** (and **i**), 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.

**m. One copy of the official results of a TOEFL, TOEIC, IELTS, or other internationally recognized English language proficiency tests that the applicant has achieved in the past two years**

The document must indicate that the applicant has attained a level of English proficiency of 600 or higher in TOEIC (paper-based test) or similar level. If the applicant fulfills the qualifications stated in 2. Qualifications (7) Language a. 1. above, the document must also show that.

**n. If the applicant fulfills the qualifications stated in 2. Qualifications (7) Language a. 2. above, submit a copy of the relevant document.**

**o. Pledge\***

**p. A detailed proposal** in English or Japanese of the research the applicant hopes to pursue for the doctoral dissertation study in this program (More detailed than that required for part **c** above.) The study plan must be related to the applicant's recent research at his or her affiliated institution or enterprise. The proposal should be in Word format and prepared on A4 paper.

**q. A letter of recommendation written by the head (e.g., President, Dean, etc., but not department head) of the applicant's current affiliated institution or enterprise**, including a statement that the applicant is not applying for another university, addressed to the President of Ehime University (use uploaded form\*: *Letter of Recommendation (1)*)\*

**r. A letter of recommendation written to the Dean of UGAS-EU** by a person senior to the applicant at the applicant's affiliated institution or enterprise who knows the applicant's research and study capabilities and be able to be assigned as a cooperative advisor with UGAS-EU during the applicant's period of study (use uploaded form\*: *Letter of Recommendation (2)*)\*

**s. 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.\*

**t. Check list for Japanese government scholarship applicants** (use uploaded form\*: *Check List For Japanese Government Scholarship Applicants*) The applicant should check all the many requirements for application documents using the check list. We recommend checking off the check box for each completed requirement. Once all the required documents have been prepared, submit them along with the completed check list\*

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

## Notes

• Documents a, b, c, j, o, q, r, s, t, should be prepared in typed or neatly handwritten in English or Japanese using the forms provided. They also should be prepared on A4 paper (ISO size: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.

## 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, **(b)** a summary of their recent researches and a list of publications and **(c)** 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. Selection Method

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

## 6. Scholarship Benefits

### (1) Scholarship payments

The monthly allowance is 145,000 yen (subject to change). The Japanese government scholarship is awarded for the period October 2023 to September 2026.

### (2) Transportation to/from Japan

MEXT shall provide an economy class air ticket between the nearest international airport in the applicant's home country and Tokyo or Osaka airport, provided the recipient travels in accordance with the Ministry's instructions. At the end of the term, MEXT shall provide an economy class air ticket between Tokyo or Osaka airport and the nearest international airport in the applicant's home country, provided the recipient travels in accordance with the Ministry's instructions.

**Notes:** Any expenses incurred for travel from the international airport to the UGAS-EU participating university will not be reimbursed. The student is responsible for all travel-related taxes and fees and for travel expenses from the student's residence to the nearest international airport. Any expenses incurred in the purchase of insurance will not be reimbursed.

### (3) School fees

All school fees, i.e., for the entrance examination, registration and tuition, shall be waived. However, candidates are required to pay for insurances as below.

#### 1 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.

Student Education/Research Accident and Injury Insurance (coverage for three years, subject to change).

### (4) Medical insurance

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

## 7. Admission

### (1)Registration 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.

### (2) Japanese:

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.

## 8. Notes

(1) Do not staple any of the application documents.

(2) A scholarship will be revoked in the following cases:

- When giving false statements on the documents
- When violating the pledge
- When violating school regulations, and/or no evidence of academic achievement
- When leaving Ehime University or transfer to other university
- When changing visa status from student to other status
- When receiving a scholarship or scholarships from other sources
- When the academic record is lower than 2.30 (out of a possible 3.00) at a certain point of time each year

(3) A successful applicant selected for a Japanese Government (Monbukagakusho: MEXT) Scholarship and



recommended to the Japanese Government (MEXT) by Ehime University must not cancel their enrollment. If enrollment is canceled, applications for a MEXT Scholarship for this course from anyone affiliated with the institution of the applicant withdrawing their enrollment will not be accepted for one year.

Also, if a successful applicant selected for a MEXT Scholarship and recommended to MEXT by Ehime University cancels their enrollment and enters another university (Japan or elsewhere), applications for a MEXT Scholarship for this course from anyone affiliated with the institution of the applicant withdrawing their enrollment will not be accepted for three years.

### **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
ICHIE Tomoaki (KC)	Tree Ecophysiology	Resource allocation strategies for growth, reproduction and herbivore defense of forest trees
UENO Hideto (EH)	Soil Science and Plant Nutrition	Dynamics of soil nutrients and agroecological soil management for sustainable agriculture
KAMIYA Koichi (EH)	Forest Genetics	Molecular population genetics and conservation genetics of forest organisms
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
TOYOTA Masanori (KG)	Crop Ecophysiology	Ecophysiology and morphology on yield determination of crops
BEPPU Kenji (KG)	Pomology	Reproductive physiology of fruit trees
MIYAZAKI Akira (KC)	Crop Physiology	Physiology and function related with yield production in field crops

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

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
HATOU Kenji (EH)	Information Systems for Plant Factory	Research of the various models for the speaking plant approach in a plant factory

##### c. Aquaculture and Livestock Production

IKEJIMA Kou (KC)	Coastal and Fisheries Ecology	Ecology and Conservation of coastal ecosystems and fisheries resources
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IMAJOH Masayuki (KC)	Fish Pathology	Studies of epidemiology and prevention of fish diseases caused by viruses, bacteria and parasites
EDASHIGE Keisuke (KC)	Applied Cryobiology	Cryobiological property of gametes and embryos Development of cryopreservation methods for gametes and embryos
GOTO Rie (EH)	Fish Reproductive Physiology and Aquaculture	Studies of developmental biotechnology and reproductive physiology in aquaculture species
SAITO Taiju (EH)	Aquaculture, developmental engineering	Development of an efficient aquaculture technology by using developmental engineering methods
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
FUKADA Haruhisa (KC)	Fish Nutrient Physiology	Studies on hormonal regulation of growth and digestion in fish
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

#### d. Bioresource Economics

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

OGAWA Masahiro (KG)	Food Protein Chemistry	Structure-function analysis of food proteins and their functional development
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
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
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
MORIOKA Katsuji (KC)	Fisheries Chemistry	Studies on post-harvest science and technology of fish and fisheries products / Studies on more efficient utilization of fish
MORIMOTO Kenji (KG)	Applied Enzymology	Production of various rare sugars 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
KAWADA Miyuki (EH)	Molecular Microbiology	Biochemistry and molecular biology of membrane transporters.
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
SUGIMOTO Hiroyuki	Wood Science and Technology	Wood science and technology for utilization of forest resources
SUGIMORI Masatoshi (EH)	Wood Science and Technology	Wood Quality
SUZUKI Toshisada(KG)	Biomass Chemistry	Organic chemistry, biosynthesis, and bioactivity of wood components, and woody biomass utilization
SEKITO Takayuki (EH)	Genetic engineering of microorganisms	Molecular mechanism and regulation of intracellular transport

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
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
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

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
KOBAYASHI Noriyuki (EH)	Geotechnical and Geoenvironmental Engineering	Application of rehabilitation engineering for Hydraulic Structures
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
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
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
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
ICHIMI Kazuhiko (KG)	Coastal Marine Science	Biological and Chemical Processes in Coastal Ecosystems
ITO Fuminori (KG)	Insect Ecology	Behavior and ecology of social insects
OBAYASHI Yumiko (EH)	Marine molecular ecology / Biogeochemistry	Biogeochemical cycles and related microbial ecology in marine environment
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
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
HIKICHI Yasufumi (KC)	Plant Pathology	Analysis on pathogenicity mechanisms of plant pathogens and responses of host plants
MORITSUKA Naoki(KC)	Soil science and plant nutrition	Dynamics of fertilizer elements in agroecosystems for sustainable agriculture
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 Agricultural 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.

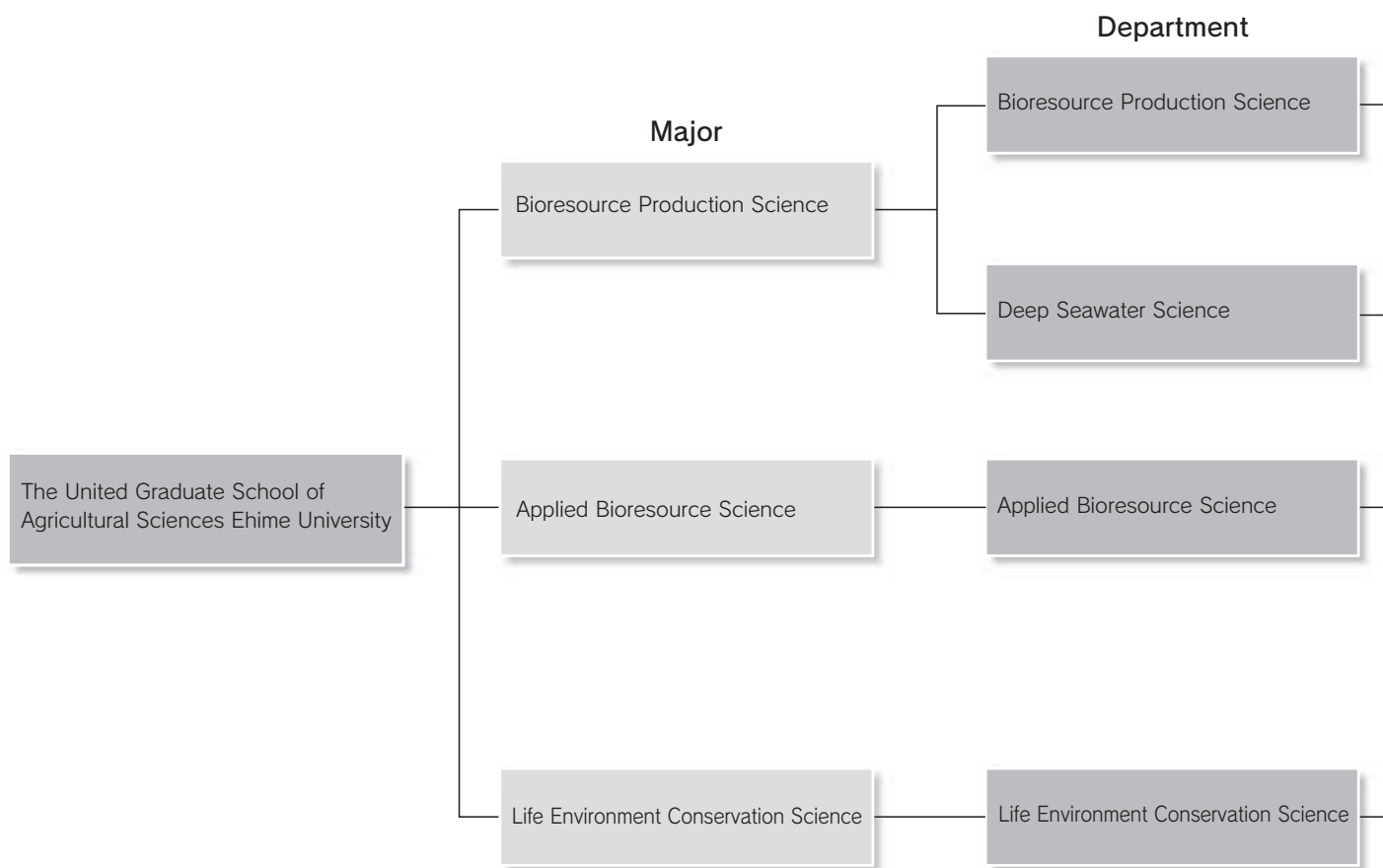
## **Completion of the Doctoral Course**

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.

