

National University Corporation

# Utsunomiya University School of Agriculture



## Department of Agrobiology and Bioresources

Learn about agriculture  
and bio-science based on  
biology and chemistry



## Department of Applied Biological Chemistry

Learn how to resolve  
challenges regarding life  
sciences, food, and the  
environment



## Department of Agricultural Economics

Reconnect "agriculture" and  
"food." The only liberal  
arts-oriented major in the  
Department of Agriculture



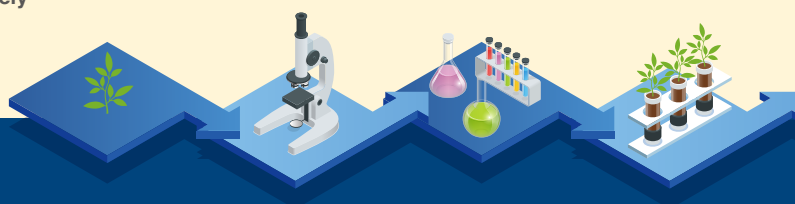
## Department of Environmental Engineering

Learn the agricultural  
environment quantitatively  
toward our sustainable  
food production



## Department of Forest Science

Nurture practical  
professionals of the  
forest, forestry, and  
forest industry



Questions and Inquiries

**National University Corporation  
Utsunomiya University  
School of Agriculture**

(8:30-17:15 weekdays)

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# Welcome to the School of Agriculture, Utsunomiya University (UU-SA)

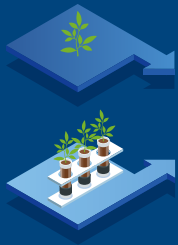
## Responding to Your "Desire to Learn."

In this age of apparent global climate change and a world population approaching 8 billion, food production and environmental conservation are common issues to all humankind. Agricultural science encompasses a wide range of fields, from biology and chemistry to agricultural and forestry production systems, ecosystems and the environment, and even economics. The School of Agriculture provides a variety of learning opportunities ranging from the molecular level to farms, forests, and local communities by utilizing the ASIAGAP and JGAP certified University farm (101ha), the SGEN certified University forest (733ha), Center for Weed and Wildlife Management, and Center for Bioscience Research and Education. Our university offers abundant English education and active student exchange programs with universities in the United States, Asia, and Africa. The campus is located in Utsunomiya City, Tochigi Prefecture, the northern part of the Kanto Plain surrounded by nature, such as the Nikko Mountain Range. It is a convenient and livable city where agriculture, commerce, and industry flourish, and Tokyo is only about an hour away. I hope you enjoy learning, playing, and thinking in such an environment, acquiring the body of knowledge and skills useful in the future.

Kenji Yamane, PhD  
Dean, School of Agriculture







We asked our students

## What makes the school of agriculture at UU-SA special ?

### 1 Substantial classes and facilities



- Student Voice**
- We learn much more than what we pay for
  - Fun practicums and meaningful lectures
  - Excellent research facilities and equipment to learn extensively from DNA to the fieldwork

Above all, our students praise about the well-equipped facilities, the informative lectures, practicums, and experiments. The school is on the Mine campus and is known for its cleanliness. The school is also close to the University farm and the forests, providing ease of access for research. The school provides exceptional education both through field and laboratory activities. Also, our students acknowledged that their learning experiences in our school and the JABEE program contributed to achieving their career goals.

#### More info

The School of Agriculture has:  
**University Farm**—practices how human beings can coexist with nature  
**University Forest**—investigate a variety of relationship between forest and humans  
**Center for Weed and Wildlife Management**—pursues balanced coexistence of weed, wild birds and animals, and our daily lives  
**Center for Bioscience Research and Education**—conducts state-of-the-art bioscience research  
 We support your learning!

Center for Weed and Wildlife Management



University Farm



Center for Bioscience Research and Education



University Forest

### 2 Closeness between students and teachers



Not only are students close to each other, but they are also close to the faculty.



#### Student Voice

- Friendly professors
- High faculty-students ratio
- Dedicated faculty members

### 3 Active International Exchange

Globalize yourself. The school has 35 partner universities from all over the world to conduct research overseas, and to participate in English seminars and international internships.



Exchange with Purdue University, USA



English seminar at University of Malaysia at Sarawak



Exchange with Vietnam National University of Agriculture

### 4 The Large Farm and the Forests

Our Univ. Farm is as large as Tokyo Disney Land and Disney Sea combined. Our Univ. Forest is five times as large as the imperial palace at Tokyo

The lab farm and the forests are spacious. The landscapes are exceptional



### 5 The Amazing History

Founded in 1922 as Utsunomiya Higher Agricultural and Forestry School, the School of Agriculture will celebrate the 100th anniversary in 2022. We are one of the oldest School of Agriculture among the national universities in Japan.

### 6 Multiple TV Appearances

You can explore the locations where movies and TV programs have been filmed in the beautiful French garden, the historic Minegaoka Hall, and more in campus.



The Minegaoka Hall appeared on movies and Music Videos multiple times



# Department of Agrobiography and Bioresources

Learn about agriculture and bio-science based on biology and chemistry

## Acquire in-depth professional knowledge and foster creativity through highly practical education

Specializes in researching sustainable production of bioresources and the management. Suitable for students interested in the functions of bioresources and their inter-relatedness, and the inter-relationship of bioresources and ecosystem

Department of Agrobiography and Bioresources have a variety of labs regarding animals, plants, microorganisms, and soil. Pick up your smartphone and answer questions about some labs.

Q  
1  
Difficulties  
★



### What are the balls in the picture?

- ① The legendary ball that grants wishes if you collect seven of them
- ② Rice cakes containing different pigments
- ③ Mud balls made of soil

Q  
2  
Difficulties  
★



### What are they doing?

- ① Putting a wild boar to sleep
- ② Punishing a misbehaved wild boar
- ③ Retaining a wild boar for tagging



### See below for answers and commentaries

<http://shigen.mine.utsunomiya-u.ac.jp/2016quiz/>



### Message from a graduate

International Institute for Integrative Sleep Medicine, Tsukuba University

**Miyo KAKIZAKI**

Diploma, Matsuyama Girls High School

2003 Bachelor in Bioproductive Science,

Major in Animal Science

2005 Master in Bioproductive Science,

Major in Animal Science



I currently work at the International Institute for Integrative Sleep Medicine at Tsukuba University. We strive to identify the mysteries of sleep. Many researchers are investigating the subject using various methods. While I was at Utsunomiya University, I studied the histology of the pituitary gland of the ostrich. I continue to work in the field of histology in my current career. I also challenge myself in new areas such as genetic engineering and molecular biology. There is a lot to learn, but it has been quite gratifying to make use of and to expand the foundations that I acquired from my lab work at the university.

Acquirable Qualifications/Licenses ● High School Teacher's Primary License (Agriculture)



# Department of Applied Biological Chemistry

Learn how to resolve challenges regarding life, food, and the environment

A Day in the Department of Applied Biological Chemistry

## What you can learn from Applied Biological Chemistry



Comprehensive and in-depth learning of three principal fields: life, food and the environment. It is OK if you are only interested in one or all of them. Come and identify your unexplored interest.

### Lecture



Ranging from basics to the state-of-the-art through lectures you can easily understand

### Lab



Hands-on experience of food processing as you learned in the lecture

Expanding the joy of learning

### Seminar



(Data analysis + literature review) x (Heated discussion + Strict guidance) = Smiles filled with accomplishment

### Experiments and Thesis Research



Absorb new knowledge in the lecture  
→ Discover joy of experiments

### Message from a graduate

Chugai Pharma Manufacturing Co., Ltd. Utsunomiya Plant

**Jun NAGAYAMA**

Diploma, Midorioka High School, Ibaraki

2007 Bachelor in Bioproductive Science,

Major in Applied Biochemistry

2009 Master in Bioproductive Science,

Majoring Applied Biochemistry



I work in the production department of antibody drugs. The field of antibody drugs heavily applies Biotechnology to practical use. We utilize the antibodies obtained in the culture solution during cell culturing. My duties are to "refine" the culture solutions containing impurities before producing drug substances.

The pharmaceutical production requires comprehensive knowledge of science, various equipment, and its management systems. I have learned not just chemical and biological sciences, but also skills and methodologies that applied the academic knowledge to practical use through experiments and thesis research. I also benefit from the knowledge base of the experimental equipment. The school also taught me the patience and analytical skills to identify causes and strive to improve the status quo when issues arise.

Acquirable Qualifications ● High School Teacher's Primary License (Science) ● Food Sanitation Supervisor, Food Sanitation Inspector /Licenses ● Poison Handling Manager ● Eligibility to take an exam for Class A dangerous goods handler





# Department of Environmental Engineering

Learn the agricultural environment quantitatively toward our sustainable food production

Our interest ranges from the mechanism of firmness and stickiness of rice to the soil management conserving tropical wetland forest areas. The learning themes are **soil**, **water**, **food**, and **rural communities**.



River investigation for the conservation of the water environment, Ishigaki Island in Okinawa

Food



Vegetable cultivation experiment at a pilot-scale plant factory



Interviewing residents about food production and living environment in Kenya

Soil



Soil survey for conserving the tropical wetland forest

Rural Communities

We provide students with quality and specialized education that expands their full potential. Our program meets the international standards of engineers, and the certificate of an Associate Professional Engineer accompanies the degree. The program is suitable for students who want to learn about agricultural and environmental engineering, such as environmental management and creation for sustainable food production.

## Message from a graduate

Beverage group, product development department, marketing headquarters, Kagome Co., Ltd.

**Takayuki YAMAGUCHI**

*Diploma, Tochigi high school*

*2006, Bachelor in environmental engineering*

*2008, Master in Environmental Engineering*



I am currently involved in the development of the beverage for a new product. Our common goal is to produce products that please our customers. It is rewarding to work with my team members while overcoming obstacles. I feel delighted and driven when I see customers purchase our products. I made an invaluable friendship with teachers and students through my campus life. We are still in touch and inspire each other. The Department of Environmental Engineering allows you to make these incredible connections.

Acquirable Qualifications /Licenses ● High School Teacher's Primary License (Agriculture) ● Associate Professional Engineer (Engineer-in-Training) ● Assistant Surveyor ● Qualified for a partial exemption of the exam for Biotope Planners and Builders



# Department of Agricultural Economics

Reconnect "agriculture" and "food." The only liberal arts-oriented major in the department of agriculture.

## Creative research deeply rooted in food, agriculture, and rural communities

Our department socializes in comprehensive and creative research deeply rooted in food, agriculture, and rural communities. Come and join us if you have the interest and passion in exploring sustainable food supplies for everyone in the world.



Presentation of agricultural internship to the farmers



Studying economics beyond textbooks! It is also essential to experience agricultural technology



We visit sites where agriculture and food unite.

## Message from a graduate

Department of product promotion, Suntory Corporate Business Limited.

**Yuta KAWAMOTO**

*Hokkaido Date Midorigaoka High School*

*2006, Degree in Agricultural Economics*



I currently work at a department promoting the new installation of Suntory's vending machines. I contemplate daily how I could better communicate the attractiveness of our products, and what makes our customers install our equipment. The subjects of Agricultural Economics cut across the fields of both liberal arts and science. Interdisciplinary knowledge certainly expanded my view. The universities provide academic learning as well as the training to be a member of society. The Department, indeed, offer such opportunities. Please challenge your ability and improve yourself in the Department.

Acquirable Qualifications/Licenses ● High School Teacher's Primary License (Agriculture)



# Department of Forest Science

Nurture practical professionals of the forest, forestry, and forest industry

## Building diverse and sustainable relationships between forests and humans

Come and join the Department of Forest Science if you are interested in becoming a forester/professional engineer of forestry, forest industry, forest environment, and environmental protection



The forest surveying practicum of the cross-sectoral forest soil by Junior students, Forest Environmental Studies



Core training by the freshmen (pruning branches in the University forest)



Forest engineering training for Junior students (observation and operation of forestry machinery in the University forest)

### Message from a graduate

Nikko Botanical Garden,  
Department of Biological Sciences,  
Graduate School of Science, The University of Tokyo

**Junko SHIMIZU**

*Diploma, Meikei High School, Ibaraki  
2003, Bachelor in Forest Science*



I manage and maintain Nikko botanical gardens and conserve endangered plants. The UU-SA provides the hands-on education of forestry. Utsunomiya University is attractive because the southern to northern vegetation and lowland to alpine vegetation are within a day trip distance. My current work benefits significantly from the experiences of on-site learning from the faculty and walking around the mountain with fellow students. I studied the decay of cherry trees while at the university and became a licensed tree doctor. I continue to devote myself to protect certain types of cherry trees. I am looking forward to putting what I learned in college to practical use, growing plants, and passing them on to the next generation.

**Acquirable Qualifications /Licenses**

- Associate Professional Engineer (Engineer-in-Training)
- Assistant Surveyor
- Associate Tree Doctor
- Operations Chief of Forestry Cableway
- High School Teacher's Primary License (Agriculture)
- Landscape Gardening Work Operation and Management Engineer (Shorter number of years required to qualify to take 1st and the 2nd class exams)

## Lab Facilities

### University Farm

**The Practical scientific field of food and biological production for coexistence and symbiosis with the natural environment, and the conservation**

Founded in 1922 as an attached facility of the Faculty of Agriculture, Utsunomiya University, the University Farm has been supporting its research and education in the area of field science. The farm is in Moka city, encompassing 101 hectares of land, including 60 hectares of farmland comprised of paddy fields, fields for wheat, soybeans, and buckwheat, vegetable fields, orchards, greenhouses, and forage fields. There are four departments (crop, horticulture, livestock, and agricultural engineering) that work closely to provide education and research. As one of the leading research achievements, we developed the paddy rice cultivar 'Yudai 21,' which is the first variety of paddy rice released by the national universities and famous for its taste. All the freshmen of the School of Agriculture are required to take the agricultural training at the university farm. Some students continue to use the farm for specialized training in the second year and research for an academic degree, including Ph.D. In recent years, we strive to develop practices for the Good Agricultural Practice (GAP). The University Farm is certified as the educational site for collaborative use by the Ministry of Education, Culture, Sports, Science, and Technology and offers collaborative educational curriculums with other universities around the metropolitan areas. Further, we continue developing unique food products using home-grown resources such as 'Yudai 21,' and dairy products.

### University Forests

**Practical field to scientifically learn about diverse and sustainable interrelationships between forest and humans.**

Afforestation practicum at the University forest in Funyu



Overlooking Mt. Taro from the University forest in Nikko



Paddy rice transplantation using a machinery



Feeding a newborn calf



Managing fruiting of grapes by Gibberellin Treatment



Practice connecting with a cow through physical contacts



Making buckwheat noodles using the buckwheat flour harvested in the farm

The University Forest is one of the educational research resources comprised of two forests (Funyu and Nikko Forests). The Funyu forest (538 ha) is at the altitude of 260-600 m and is the assigned forestry area of Cypress and Cedar trees. The Nikko (208 ha) forest is in the Nikko National Park at the altitude of 1390-1970 m. It includes both natural forests covered by Japanese Oak, White Birch, Northern Japanese Hemlock trees, and artificial forests covered by Japanese Larch trees.

Each forest has unique environmental characteristics and the forest structure and represents a variety of forest ecosystems. Such diversity benefits conducting various basic and applied surveys and researches. It also facilitates students' understanding of forest science through practicums and experiments on sites. Students can also practice operating high-performance forestry machines at the Funyu forest.

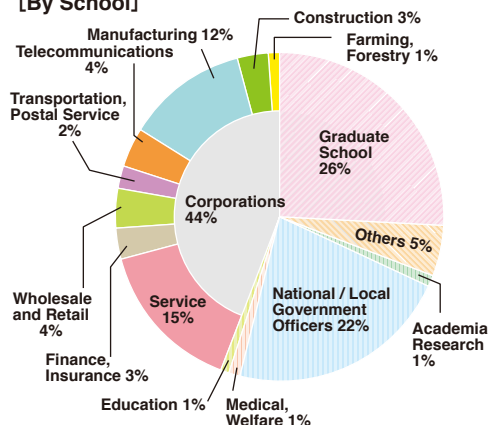
The University Forests has acquired the Sustainable Green Ecosystem Council (SGEC) forest management certification. We strive to contribute to society by training professionals through experiential education based on sustainable conservation management, developing new forest management theories and advanced practical technologies, and transmitting the latest information.



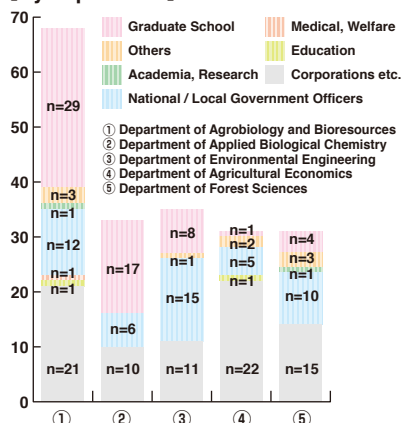
# Post-Graduate Career

## Undergraduate Students (2019 school year)

### [By School]

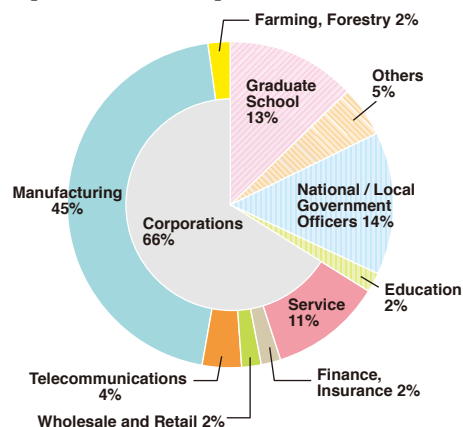


### [By department]



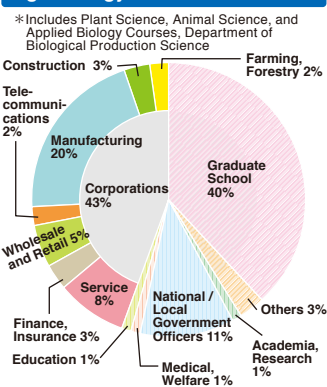
## Graduate Students (2019 school year)

### [Graduate School]

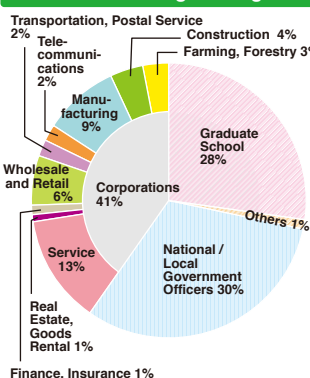


## Post-graduate Career by Department (Based on the last 3-year)

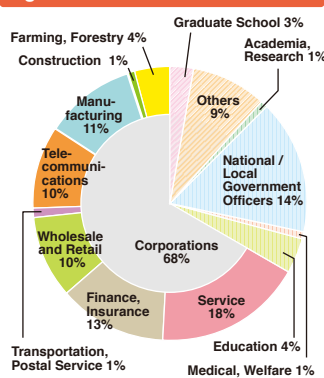
### Post-graduate Career of Undergraduate Students, Department of Agrobiological and Bioresources



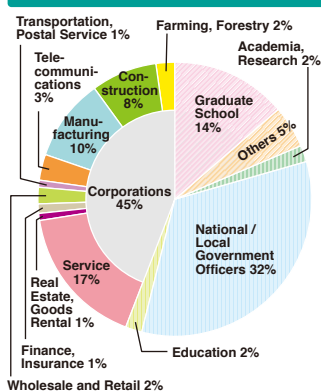
### Post-graduate Career of Undergraduate Students, Department of Environmental Engineering



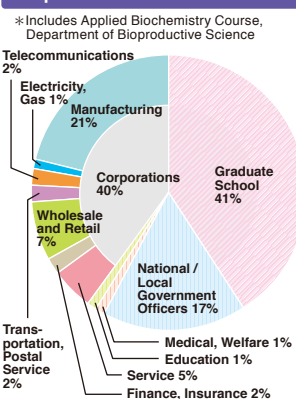
### Post-graduate Career of Undergraduate Students, Department of Agricultural Economics



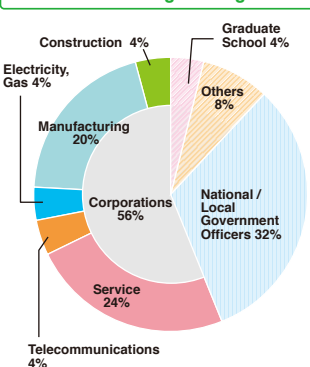
### Post-graduate Career of Undergraduate Students, Department of Forest Science



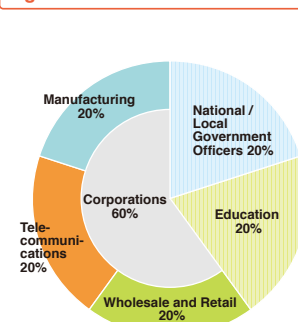
### Post-graduate Career of Undergraduate Students, Department of Bioproduktive Science



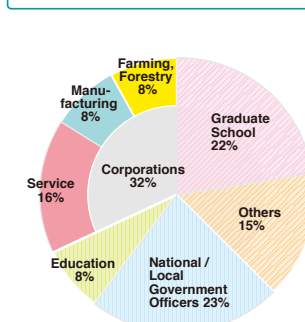
### Post-graduate Career of Graduate Students, Department of Environmental Engineering



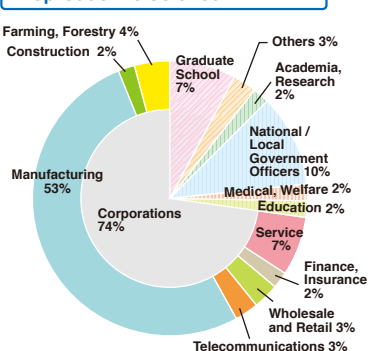
### Post-graduate Career of Graduate Students, Department of Agricultural Economics



### Post-graduate Career of Graduate Students, Department of Forest Science



### Post-graduate Career of Graduate Students, Department of Bioproduktive Science



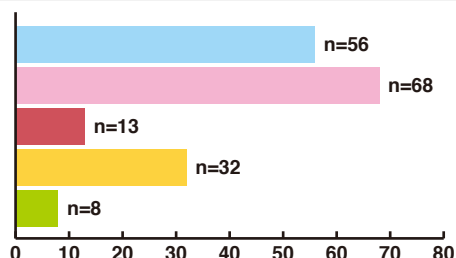
## Acquirable Qualifications (2019 school year)

Assistant Surveyor  
(Limited to those who meets the requirement)  
Graduate of the JABEE Accredited Program  
(Includes Associate Professional Engineer\*)

School Teacher Licenses

Food Sanitation Supervisor,  
Food Sanitation Inspector

Associate Tree Doctor



Students can acquire a variety of qualifications depending on the departments. All are professional qualifications that are useful in the future. Many students obtain a few certificates while at school.

\* This includes students who completed JABEE accredited educational program. The program empowers students with specialized knowledge and skills as expected as a professional engineer. The graduates of the program are exempt from the First-step Examination of Professional Engineer.



# Graduate School

The Graduate School of Regional Development and Creativity at the Utsunomiya University offers programs to students wishing to acquire advanced professional knowledge and technique in the field of agriculture. The students may progress to the doctoral program offered by the United Graduate School of Agricultural Science, Tokyo University of Agriculture and Technology, or by the Graduate School of Regional Development and Creativity, Utsunomiya University.

## Master's Program

### Graduate School of Regional Development and Creativity

#### Division of Social Design

- Agricultural and Rural Economics
- Irrigation, Drainage, and Reclamation Engineering
- 6 more programs available

#### Division of Engineering and Agriculture

- Molecular Agriculture
- Agricultural Biological Chemistry
- Agricultural and Environmental Sciences
- Forest Production and Conservation
- 4 more programs available

Established in April 2019, the mission of the Graduate School of Regional Development and Creativity is “to contribute to the creation of sustainable and prosperous communities and solutions to the challenges in the 21st-century by nurturing outstanding human resources who create social design and innovation and conducting distinctive and strong research.”

There are many diversified and complicated issues in modern society, and there is a limit to solutions that can be provided by a single academic discipline. The Graduate School of Regional Development and Creativity lowers the boundaries among specialized areas, develops interdisciplinary academic fields in border and cross-disciplinary areas. Further, the school intends to train highly specialized professionals who have expertise and skills in social design and innovation and can act spontaneously based on their both broad academic knowledge and practical skills.

## Doctoral Program

### United Graduate School of Agricultural Science

#### Biological Production Science

#### Applied Life Science

#### Symbiotic Science of Environment and National Resources

#### Agricultural and Environmental Engineering

#### Science on Agricultural Economy and Symbiotic Society

Launched in 1985, the United Graduate School of Agricultural Science consists of Utsunomiya University, Ibaraki University, and Tokyo University of Agriculture and Technology. The program produced approximately 1800 graduates, of which 39% were international students.

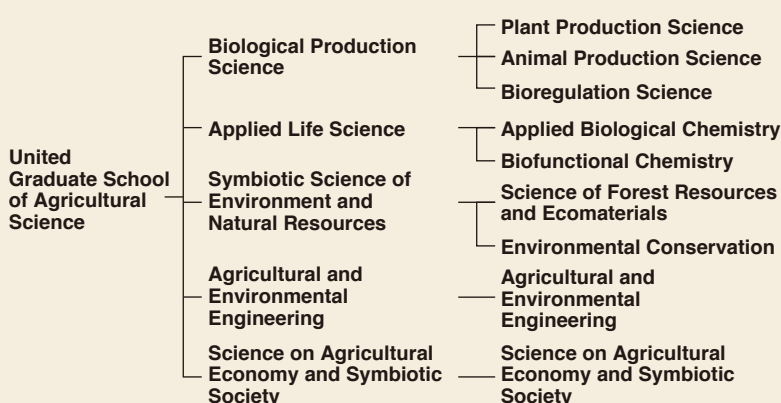
The goal of the program is to produce researchers who contribute to the progress of various sciences regarding bioproduction, utilization of bioresources and bio functions, and preservation of biomaterials as experts in the field of applied bioscience and environmental science. The advancement of the discipline of agriculture, which is highly related to the sciences of bioresource development, is vital for the improvement of human life. Further, the school aims to contribute to the advancement of the sciences and the bio-related industry.

#### [Pre-establishment History]

**April, 1985**

Two united graduate schools of doctoral course in second half of three years (three year doctoral course) were established by the related laws enforcement. One is called “United Graduate School of Agricultural Science, Tokyo University of Agriculture and Technology”, which consists of Tokyo University of Agriculture and Technology (Tokyo U.A&T), Ibaraki University (Ibaraki U.), and Utsunomiya University (UtsunomiyaU.). The other one is called “United Graduate School of Agricultural Science, Ehime University”, which consists of Kagawa University (KagawaU.), Kochi University (Kochi U.) and Ehime University (EhimeU.).

#### [Organization of the United Graduate School]



### Graduate School of Regional Development and Creativity

#### Advanced Integration Science

Optics Biodesign  
(Optical Engineering and Molecular Agriculture)

Focusing on our distinctive advantage, the fields of optical engineering and molecular agriculture, we strive to integrate: innovative biological science that applies the big data derived from genetic analyses to the site of agriculture by utilizing invisible genetic information and visible life phenomenon; various optical engineering skills; and the fields of chemistry that unite the field of biology and optics. It is quite a unique cross-disciplinary program that involves the field of optical engineering and molecular agriculture.