**Master’s Program (Graduate School of Agriculture)**

Graduate School of Agriculture

Students of the Graduate School of Agriculture, University of the Ryukyus have the opportunity to study agricultural sciences in Okinawa, a tropical and subtropical islands chain that has garnered interest across Asia. The Graduate School of Agriculture (master’s program) offers four courses in the Subtropical Agriculture major. Students who aspire to become leaders in addressing global issues relating to agriculture from an international perspective can take additional credits in the International Agricultural Program while enrolled in any of the courses. Those who wish to pursue further research after completing the master’s program can proceed to the doctoral program at the United Graduate School of Agricultural Sciences, Kagoshima University, under the guidance of a faculty advisor affiliated with the Graduate School of Agriculture, University of the Ryukyus.

**Master’s Program (Graduate School of Agriculture)**

**Educational Philosophy**

The basic philosophy of the Graduate School of Agriculture is “a novel agricultural science that aims to develop an affluent society through stable production and sustainable use of biological resources in harmony with the environment, as required in the era of globalization in the 21st century”. The educational and research objectives are to enhance knowledge in areas such as sustainable food production, environmental conservation, resource and energy utilization, longevity, and health based on the geographical and natural environment of the subtropical islands, as well as their historical and cultural features. The goal is to contribute to both local and global society through the development of highly specialized human resources.

**Greetings from the Dean**

Dean, Graduate School of Agriculture

Shigeyuki Naitoh

The Graduate School of Agriculture fosters human resources capable of responding to the evolving global society and contributing to society broadly. The Graduate School of Agriculture is committed to innovative approaches for the stable production and sustainable use of biological resources in harmony with the environment. It has established a systematic educational program that covers a wide range of fields in subtropical agriculture to develop comprehensive knowledge in agricultural science and human resources capable of addressing issues related to agriculture in subtropical regions, including Okinawa Prefecture.

The curriculum consists of basic education, specialized, and applied subjects. The program offers both a comprehensive and in-depth educational program as well as a practical program of education and research on food, agriculture, the environment, and bioscience. Furthermore, the program facilitates the acquisition of advanced specialized knowledge and techniques that contribute to the advancement of agriculture in the tropical and subtropical regiones.

**Education in Subtropical Agriculture**

The Graduate School of Agriculture fosters professionals capable of responding to the evolving global society of the 21st century and contributing to society making broad contributions to it. The Subtropical Agriculture major, which consists of four specialized education courses, offers a systematic educational program that spans a wide range of fields in subtropical agriculture, building on the broad academic foundation provided by undergraduate education.

Specifically, the program provides students with experience in innovative approaches to the stable production and sustainable use of biological resources in harmony with the environment and cultivates comprehensive knowledge of agricultural science and skills to address issues related to agriculture in subtropical regions, including Okinawa Prefecture.

We provide a curriculum built on systematic coursework that equips students with a wide range of knowledge and abilities, applied development skills, and specialized expertise in agricultural science, fostering flexible thinking and a profound understanding of the field. The curriculum includes basic education subjects to acquire broad and cutting-edge knowledge of agriculture, along with four specialized education subjects that offer novel agricultural education aimed at addressing issues in subtropical regions.

The program is designed to offer students comprehensive and in-depth learning experience, including opportunities to acquire advanced specialized knowledge and skills to contribute to the development of tropical and subtropical agriculture and forestry in Asia-Pacific region. In addition to specialized education subjects, the program includes a practical fucus on education and research in food, agriculture, environment, and bioscience. The objective of the program is to cultivate excellence for highly skilled professional careers.

Syllabus

**Ideal student candidate**

The candidate should be eager to learn and create, and should aspire to work as professional engineers and researchers in the field of agriculture, both domestically and internationally.

➀ Individuals who are interested in subtropical agriculture and actively pursue in-depth research in the fields of sustainable agriculture and agroforestry, environmental conservation and restoration, and the development and utilization of life sciences and biological resources.

➁ Individuals who are motivated to acquire broad, systematic knowledge, along with practical application, and research and development skills.

➂ Individuals who aspire to become highly professional, innovative, and ethical contributors to the local and global community.

➃ Special Selection for Working Professionals: Employed individuals from educational/research institutions, government agencies, or companies, who wish to pursue lifelong learning, are committed to engaging in advanced research in the major field of study they are applying for.

Graduate School of Agriculture’s Requirements for Students

Students are required to have the fundamental academic skills necessary for study, have developed an attitude of self-directed learning, and be motivated to make a broad contribution to the advancement of society.

Three Policies

**Features of the four courses in the Subtropical Agriculture major**

Subtropical Agro-Production Science Course

This course focuses on education and research related to sustainable agriculture, emphasizing the balance between nature and agriculture in subtropical communities. It also explores innovative, field-oriented integrated agricultural sciences.

Subtropical Agro-Environmental Sciences Course

Education and research in this course centers on agroforestry for the conservation of new agroforestry environments. Key areas of focus include the elucidation and management of various aspects of organisms in subtropical agroforestry, as well as the development of technology for propagation, regulation, and the environmental conservation, management, and control of watershed ecosystems.

Regional Agricultural Engineering Course

This course offers education and research on agriculture aimed at new regional conservation, focusing on development of natural environment-based agriculture and rural spaces that harmonize with subtropical island environments. It also converses the advancement of IT agriculture technology and the construction of a biomass regional circulation system.

Bioscience and Biotechnology Course

Education and research in this course focus on agricultural sciences related to health and longevity through the development of new local resources. Topics include the examination of biological resources such as seaweed, plants, animals, microorganisms, traditional foods, fermented foods, and other food resources in subtropical regions.

Curriculum

The First Year

Acquiring a wide range of basic and applied skills in agricultural sciences

Basic Education Subjects

* Methodology in Agricultural Research
* Advanced Lecture in Subtropical Agriculture
* Frontiers of Agricultural Research
* Presentation Exercise

Specialized Subjects

Acquiring knowledge, theories, and skills in specialized subjects in each course

Applied Development Subjects

Cultivating applied and creative skills through independent research

International Agricultural Program (Additional)

Fostering the ability to spearhead the advancement of agricultural research from a global perspective

The Second Year

Acquiring advanced specialized knowledge and skills related to each course

Specialized Subjects

Acquiring knowledge, theories, and skills in specialized subjects in each course

Applied Development Subjects

Cultivating applied and creative skills through independent research

**International Agricultural Program**

The Graduate School of Agriculture has been running the “International Agricultural Program” since 2011 with the goal of constructing a 21st century educational and research consortium with nations across Asia and the Pacific Rim. The program aims to cultivate global human resources who endeavor to build a prosperous society through involvement and interaction in various regions worldwide. The program also seeks to establish a framework for students to engage in international study (mid-term goal).

International Agricultural Program (⇒Link to “**International Exchange Activities**” on the next page)

**International Exchange Activities**

Keywords for International Exchange Activities

# Global learning

# Training future leaders in agricultural science

# Overcoming global challenges

# Cultural diversity experiences

# Language proficiency improvement

# Training with an international perspective

# Research collaboration

# International outreach

**International Agricultural Program**

The Graduate School of Agriculture has been running the “International Agricultural Program” since 2011 with the aim of constructing a 21st century education and research consortium with nations in Asia and the Pacific Rim. This initiative contributes to the mid-term goal of “nurturing global human resources who strive to build a prosperous society via involvement and interaction in various regions of the world, creating a framework for students to engage in international study”.

This program is based on a partnership agreement with five universities, IPB University (Indonesia), Khon Kaen University (Thailand), Ruhuna University (Sri Lanka), Sher-e-Bangla Agriculture University (Bangladesh), and University of Veterinary Science, Yezin (Myanmar). It features a mutual acceptance program including a summer course (where faculty and students from University of the Ryukyus are dispatched) and a winter course (where faculty and students from the partner universities are invited). Since 2015, international workshops have been held to strengthen cooperation among the participating universities.

In 2020 and 2021, due to the outbreak of the COVID-19 pandemic, the Remote International Seminar and the Virtual Exchange Program were conducted. Students from IPB University, Khon Kaen University, and Ruhuna University participated in both programs, and students from Ibaraki University also joined in the remote international seminar.

**International Summer Course 2022 (Khon Kaen University, Thailand)**

In 2022, seven graduate students from the Graduate School of Agriculture, University of the Ryukyus participated in a summer course at Khon Kaen University from September 8 to 25. Through various research activities including fieldwork supervised by faculty members and interactions with local students, they gained valuable knowledge and hands-on experience.
Additionally, University of the Ryukyus hosted the winter course from March 13 to 24, welcoming two students from IPB University and four students from Khon Kaen University. The overseas participants engaged in educational and research activities unique to Okinawa at their assigned laboratories.

As part of the program, they explored Okinawa agriculture and food culture. On March 18–19, they visited a local market to learn about Okinawan food ingredients and crops. On March 20, an excursion to the northern region was organized, providing insights into Okinawan agriculture, rural landscapes, and food culture.

2019 International Workshop

2022 International Winter Course (University of the Ryukyus)

**Activity Report**