Challenging problems such as "Food" "Environment","Health" and "Natural Resources and Energy" through New Practical Science

Guide for Tokyo NODAI
TOKYO UNIVERSITY OF AGRICULTURE

http://www.nodai.ac.jp/english/

Atsugi Campus
1737 Funako, Atsugi, Kanagawa 243-0034 tel: 81-46-247-4433 [Admissions Section]
Graduate School of Agriculture
Faculty of Agriculture

Setagaya Campus
1-1-1 Sakuragaoka, Setagaya, Tokyo 156-8502 tel: 81-3-5477-2226 [Admissions Center]
Graduate School of Agriculture
Faculty of Applied Bioscience
Faculty of Life Sciences
Faculty of Regional Environment Science
Faculty of International Agriculture and Food Studies

Hokkaido-Okhotsk Campus
196 Yasaka, Abashiri, Hokkaido 099-2493 tel: 81-152-48-3814 [Admissions Section]
Graduate School of Bioindustry
Faculty of Bioindustry

3 campuses, 2 graduate schools with 20 departments, 6 faculties with 23 departments and 150 laboratories
Tokyo University of Agriculture was founded in 1891 by Viscount Enomoto Takeaki, an international figure and scientist in modern Japan during the Meiji period (1868–1912), who held successive posts as Minister of Post and Telecommunications, Education, Foreign Affairs, and Agriculture. The university was originally established as the Department of Agriculture at the Ikueiko School, a subsidiary of the Tokugawa Ikuei-kai Foundation, and this year celebrates its 127th anniversary.

Our university is working to solve various problems related to the survival of mankind across a wide range of agricultural fields, such as bioscience, food science, environmental science, health science, energy, and regional regeneration, both within Japan and overseas. The problems faced by modern society are increasingly expanding into research areas with agricultural foundations. In order to respond to the needs of this generation, as of April 2018, the university has seen to the formation of both the Department of Bioresource Development, and the Department of Agricultural Innovation for Sustainable Society, and has changed the Japanese name of the Department of Animal Science from “Chikusangakka” to “Doubutusuka gakka”. We have changed the Department of Applied Biology and Chemistry, Faculty of Applied Bioscience to the Department of Agricultural Chemistry, and the names of the four departments within the Faculty of Biotechnology to the Department of Northern Biosphere Agriculture, Department of Ocean and Fisheries Sciences, Department of Food, Aroma and Cosmetic Chemistry and the Department of Business, Natural Resource and Economic Development.

Going forward, we will strive to fulfill our mission to “contribute to the world ethically for the happiness of humanity,” and based on “Return Man to the Farm,” the educational principle of our University, and “Practical Science”, our approach to teaching and research. To do this, our university, which has developed into a comprehensive agricultural and life sciences university with two graduate schools, six faculties and twenty-three departments, will continue to foster human resources with an “agricultural spirit” that values life.

Tokyo NODAI continues to challenge the new “Practical Science” for sustainable development of mankind and the earth!!

● The two graduate schools, six faculties, 23 departments aim at multi-disciplinary science to realize sustainable development of mankind and the earth.
● Their challenging domain consists of four fields: Food, Environment, Health, and Natural Resources and Energy.
● Taking over the fundamental principle, we challenge the cutting edge in scientific fields, such as high technology, microbes and mystery of animate life by the new “Practical Science”. The spirit of Tokyo NODAI can be paraphrased as “Return man to the farm”.
● Creation of well-balanced sustainable society based on the symbiosis of nature, environment and region.
● Fostering all-round individuals is aimed through integration of inductive approach (emphasis on experiment) and deductive approach (emphasis on creativity — using one's own brain).
127 years: Evolution since 1891

1891 • Foundation of the Department of Agriculture, Ikueiko School, based on Tokugawa Ikuei Kai Foundation emphasizing “Practical Science”

The founder was ENOMOTO Takeaki, who served as Minister of Foreign Affairs, Post and Telecommunications, Agriculture, Education, and the Chairman of the Tokugawa Ikuei Kai Foundation.

1893 • Renamed “Tokyo Agricultural School”

1894 • Establishment of foundation principle

The foremost authority on agriculture in Meiji era, YOKOI Tokiyoshi, joined the management as a councilman. He acceded as the first president of Tokyo University of Agriculture in 1911 and established the educational principle “Return man to the farm”, which places value on “Practical Science”.

1897 • Transfer of the management to Japan Agricultural Association

1925 • Establishment of Tokyo University of Agriculture

The Foundation of Tokyo University of Agriculture was established.

1946 • Move to Setagaya Campus

1947 • Start of Democratic Education

In 1949 the Tokyo NODAI Educational Corporation was founded to manage the university under the School Education Law and the Private School Law. The Faculty of Agriculture consisted of the following eight departments: Agriculture, Forestry, Animal Science, Agricultural Chemistry, Agricultural Engineering, Agricultural Economics, Landscape Gardening, and Cooperatives.

1950 • Foundation of the Junior College of Tokyo University of Agriculture

1953 • Set up of the Graduate Course with Master courses in Agriculture and Agricultural Economics

1960 • Realization of the Educational Principle which attaches importance to practical training

Atsugi Farm (present Atsugi Campus), Niiyama Citrus Farm, Fuji Farm, Abashiri Farm, Miyako Farm and many other farms and university forests were set up, thereby enhancing educational systems focused on practical exercises.

1966 • The first step towards international academic exchange

Tokyo NODAI made an academic exchange agreement with Michigan State University, USA.

1989 • Set up of Faculty of Bioindustry at Okhotsk campus

1991 • Celebration of Centennial

1993 • Set up of Master course in the Faculty of Bioindustry at Okhotsk Campus, Hokkaido

1998 • Start of Atsugi Campus under a new 6-faculty, 19-department organization

To address food, the environment, resources and energy sources, and health issues, the Faculty of Agriculture was reorganized into a more enhanced system comprising the Faculties of Agriculture, Applied Bioscience, Regional Environment Science, International Agriculture and Food Studies, and Bioindustry and Junior College, making a total of 19 departments in 6 faculties.

2002 • Start of the 2-department, 14-major system of graduate school

2004 • Set up of Museum of “Food” and “Agriculture”

2006 • Set up of Department of Human and Animal-Plant Relationships in Faculty of Agriculture and Department of Aquatic Bioscience and Industry in Faculty of Bioindustry

2006 • Tokyo University of Agriculture was accredited by the Japan University Accreditation Association (JUAA) for meeting the JUAA University Standard.

2014 • Set up of Department of Nutritional Science and Food Safety in Faculty of Applied Bioscience

2016 • The 125th anniversary of the founding

2017 • Set up of Faculty of Life Sciences with 3 departments (Department of Bioscience, Department of Chemistry for Life Sciences and Agriculture, Department of Molecular Microbiology), Department of Regional Regeneration Science in Faculty of Regional Environment Science, and Department of International Food and Agricultural Science in Faculty of International Agriculture and Food Studies.

2018 • Set up of Department of Bioresource Development and Department of Agricultural Innovation for Sustainability in Faculty of Agriculture, and set up of Department of Northern Biosphere Agriculture, Department of Ocean and Fisheries Science, Department of Food, Aroma and Cosmetic Chemistry, and Department of Business, Natural Resource and Economic Development in Faculty of Bioindustry.
Fostering all-round individuals on campuses situated throughout Japan

Tokyo University of Agriculture, Hokkaido-Okhotsk Campus
- NODAI Bioresources Institute
- Information Center for Education and Research
- Food Processing Center
- Okhotsk Marine Research Center

Tokyo University of Agriculture, Setagaya Campus
- Library
- Museum of "Food" and "Agriculture"
- Center for International Programs
- Extension Center
- Institute of Applied Bioscience
- Institute of Regional Environment
- International Agriculture and Food Research Institute
- NODAI Research Institute
- NODAI Genome Research Center
- NODAI Hi-tech Research Center
- NODAI Research Institute
- Institute of Regional Environment
- Institute of Applied Bioscience
- Extension Center
- Information Center for Education and Research
- Applied Biophysics Center

Tokyo University of Agriculture, Atsugi Campus
- Agricultural Research Institute
- Atsugi Farm
- Botanical Garden
- Information Center for Education and Research
- Special Microscope Laboratory
- Food Processing Center
- Applied Biophysics Center

Tokyo University of Agriculture, Gunma Forestry
- Okutama Practice Forest

Tokyo University of Agriculture, Okutama Practice Forest
- Miyako sub-Tropical Farm

Tokyo University of Agriculture, Okutama Practice Forest
- Fuji Farm

Tokyo University of Agriculture, Isehara Farm
- Ninomiya Citrus Farm

Tokyo University of Agriculture, Abashiri Farm
- Abashiri Farm

Tokyo University of Agriculture, Third High School
- Tokyo University of Agriculture, Second High School
- Tokyo University of Agriculture, First High School

Tokyo University of Agriculture, Third Junior High School
- Tokyo University of Agriculture, First Junior High School

Tokyo University of Agriculture, Second Junior High School
- Tokyo University of Agriculture, First Junior High School

Tokyo University of Agriculture, Second Junior High School
- Tokyo University of Agriculture, Third High School

Tokyo University of Agriculture, Isehara Farm
- Isehara Farm

Tokyo University of Agriculture, Atsugi Campus
- Atsugi Farm

Tokyo University of Agriculture, Tokyo University of Information Sciences
- Tokyo University of Agriculture, Tokyo University of Information Sciences

Tokyo University of Agriculture, Tokyo University of Information Sciences
- Tokyo University of Agriculture, Tokyo University of Information Sciences
This program was newly established in April 2014 and offers a total of 26 specialized courses conducted in English. This provides an opportunity for Japanese and international students at Tokyo University of Agriculture (Tokyo NODAI), as well as visiting students from the global partner universities to learn about food, agriculture and environment in Japan and Asia. Integrated learning of agriculture, food and environmental issues is expected to guide students into making a greater contribution in solving major problems facing mankind in the 21st century.

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**Intensive Course**
- Field Study of Food and Environment
- Group Approach to Food and Environment
- Sustainable Agriculture in Asia

**Tokyo University of Agriculture Educational Corporation**
- Tokyo University of Agriculture
- Tokyo University of Information Sciences
- Tokyo University of Agriculture First High School
- Tokyo University of Agriculture Second High School
- Tokyo University of Agriculture Third High School
- Tokyo University of Agriculture First Junior High School
- Tokyo University of Agriculture Third Junior High School

Tokyo University of Agriculture plans to establish an elementary school in April 2019. The approval of the establishment is being applied now.
Faculty of Agriculture

Department of Agriculture

This department tries and works to solve a variety of problems agriculture faces. The subjects of our research include edible plants such as rice, barley, fruit, flowers, and herbs, plants that enrich our daily lives, and even the microorganisms that deeply affect plant production. As the demands for the safety and security of our food are increasing, we contribute to next generation agriculture that supplies high quality products in an environmentally friendly way.

Department of Animal Science

This department conducts multifaceted studies about animal abilities. We consider agriculture as a foundation of our study, and study the life of animals from the micro level to the macro, then think about how we can contribute to diets, health, and daily existence. Students will learn about the mechanisms of life from many varieties of living creatures. Research topics are varied, such as the breeding and raising of animals, industrial animals, animal companions and zoo animals.

Department of Human and Animal-Plant Relationships

This department aims at interdisciplinary studies of coexistence and harmonious partnership with animals and plants. Education, researches and activities extend to wide ranges from natural environments, daily life and animal/plant assisted therapies based on human-to-human relations. Healing power of animals and plants to mental and physical health of human is pursued in those three fields. This department develops experts who can contribute for achievement of comfortable living environments and improving quality of life (QOL) by using potential power of animals and plants.

*Enrollment terminated in 2018

Department of Bioresource Development

This department elucidates the “wonder of living creatures” that we hold in our childhood. You may discover that the weeds you have ignored hold amazing medicinal properties, or that they might be useful materials in the development of exceptional cultivars that are drought- and disease-resistant. We perform extensive research into the preservation and use of plants, wild animals, and insects. In addition, we use advanced technologies, such as genome analysis, to discover new potential in organisms, and to lead the development of new breeds or cultivars. (Newly established in 2018)

Department of Agricultural Innovation for Sustainable Society

Agriculture was developed as an academic field after the war to address food shortages and improve food quality. However, agriculture now is not limited to food issues. It rather tackles urgent problems such as about the environment, resource, energy, and the declining birth rate and aging population. This department studies to apply the knowledge and technology of agriculture to solve the problems listed above and to create a sustainable society. (Newly established in 2018)
Faculty of Applied Bioscience

Department of Agricultural chemistry
Capacity 150

This department seeks to solve various problems in fields closely connected to our daily lives such as agriculture, food, medicine, and environment by biological and chemical approaches. Following in the father of agricultural chemistry and the discoverer of Vitamin B1, Dr. Umetaro Suzuki, we have a long history spanning over hundred years. We still continue to evolve by constantly implementing new techniques. Today, we carry out education and researches aimed at applying a fundamental understanding of vital phenomena to the welfare of humanity and the advancement of society.

Faculty of Applied Bioscience

Department of Fermentation Science
Capacity 150

This department studies brewing technologies and advanced life sciences to develop new technologies of microorganisms. We study traditional fermentation and brewing techniques that have been handed down over many years scientifically with advanced life sciences, such as genome science and molecular biology, to find out the vital phenomena of microorganisms that cause fermentation. Our goal is to develop and set up even better brewing and fermentation technologies in the future.

Faculty of Applied Bioscience

Department of Nutritional Science and Food Safety
Capacity 150

This department provides unique educational programs regarding food-related sciences to produce novel food specialists with adequate knowledge who can contribute to human health and welfare. We focus on food-related chemicals in their safety/toxicity and/or biofunction. Students will learn the diverse issues in food industry and will be able to offer correct information of food safety and biofunction.

Faculty of Applied Bioscience

Department of Nutritional Science
Capacity 120

This department develops human resources who are engaged in nutrition instruction and nutrition management at medical institutions, health and welfare facilities, educational institutions and administrative agencies as well as in health promotion for the general public as a registered dietitian. Furthermore, the department prepares future food scientists and food engineers to be active within the food industry, academia and other related fields in society.
Faculty of Life Sciences

Department of Bioscience

This department uses advanced technology to understand life at a genetic level. We focus on animal and plant cells, and explore deeply the role of the genes from a molecular point of view. After learning a basic understanding of the field, students will aim to apply it to the fields of production, food, health, and medical care. They will also engage in researches that could help to change the near future of living, such as the development of crops using gene recombination, or therapeutic strategies for treating new diseases.

Faculty of Life Sciences

Department of Chemistry for Life Sciences and Agriculture

Chemistry is a science that has common ties with a variety of fields, such as new drug research, materials, cosmetics, chemical industry, environment, agriculture, life, and the ecosystem. It is a discipline that has potentials for everything, from life to global environment. The scope of research is only limited by the power of your imagination. This department researches on substances useful for people, such as new drugs, materials, cosmetics, agricultural chemicals, and macromolecules. Also we try to understand life systems by discovering natural substances that have new functions.

Faculty of Life Sciences

Department of Molecular Microbiology

The field of microbiology has produced great scientists who have contributed to peace, medical care, and the food practices of humans. In recent years, advanced technologies for exploring the micro world have been developed one after another. It is now possible to see a world that was previously invisible to us. It is said that the microorganisms that we have discovered make only a few percentage of the total. This department searches for and discover microorganisms with superior abilities. In addition to biology, we also use approaches by chemistry, physics, and sometimes even mathematics to discover these superior abilities. By understanding their mechanisms, we aim to contribute to medical treatment, discovery of new drugs, health of plants and animals, and global environment.
In studying on cutting-edge technologies of agricultural machinery as well as modern agricultural civil engineering for the purpose of improvement of agricultural production, we have been focusing on the technologies to be able to solve various environmental problems in the virtues of bioproduction & environment engineering, such as global warming, climate change, desertification, water shortage, greenhouse gases emission, and water pollution and so on. We now challenge to promote sustainable agriculture and create a harmony with nature through the application of the bioproduction & environment engineering.

Our target issues are sustainable utilization and conservation of natural resources; especially soil, water and biological resources in rural area, development of environmental monitoring technologies, exercising of environmental information, application of environmentally friendly construction methods for a recycling society and supporting sustainable food chain system through environmental engineering.
Many of the developing countries that still require international aid are located in tropical regions. They face a variety of issues such as overpopulation, food problems, environmental deterioration, resource depletion, poverty, and social unrest. This department aims to resolve those issues by developing agriculture and to support their projects from an international perspective. Students will explore ways to contribute to developing countries through international development cooperation. They learn deeply about local characteristics and cultures through social sciences, and improving agricultural production technology through natural sciences. As they study international agriculture from both sides of humanities and sciences, they will find more ways to solve a variety of problems.

This department conducts a wide variety of researches in social science field, under the themes of food, agriculture and environment. From an economic point of view, we will uncover the close relationship between food that are necessary for life, farms and farming communities that are the production bases of food, and the environment of them. In addition to economics, we study various fields, such as business administration, sociology, geography, and history. With this wide range of approaches, we perform researches and education that are useful for food industries, government, education, environmental conservation, and farming businesses.

This department studies business around food. We aim to foster future experts and entrepreneurs of agriculture and food businesses with global perspective. Students will learn the knowledge, skills and hands-on experiences on business administration, marketing and information system related to food production, processing and distribution.

The modern academic field has been segmented and specialized. It makes a cross-sectoral understanding of production, processing and distribution of food difficult. In addition, while Japanese food has attracted global attention, it is also being faded due to the diversification of lifestyles. This department comprehensively studies the possibilities of traditional farming and new developments from a multidisciplinary approach, such as production science, food science, food and agriculture culture, food farming policies, and food and agriculture education system.
Faculty of Bioindustry
Department of Northern Biosphere Agriculture

In the rich environment of Okhotsk, this department studies agriculture, animal husbandry, ecology, life science and other fields comprehensively. Our research fields are the vastness of nature and actual production sites. Not only the area of the university, the forests, ranches, and fields around will be our campus. Through practical training in forests and marshlands, students will explore the mechanisms of ecosystems, as well as conservation and rehabilitation measures. Due to these factors, we have achieved many research results available only here, such as ecology data on the Ezo deer and the development of a breeding program for more than a thousand emu.

Faculty of Bioindustry
Department of Ocean and Fisheries Sciences

This department studies how humans can acquire a deep understanding of nature, and how they should engage with it. The texts and materials for learning are all found in the surrounding rich nature, such as the Sea of Okhotsk, rivers, and lakes. While coming into contact with diverse organisms and ecosystems, including cold water fish, marine mammals, shrimps, crabs, bivalve shells, snails, and both animal and plant plankton, and while experiencing the active fishing industry, students will learn the connections between rich ecosystems and ocean environments.

Faculty of Bioindustry
Department of Food, Aroma and Cosmetic Chemistry

This department was established as the first institution in Japan to study development and processing of food, fragrances, and cosmetics from the basics to practical applications. Biological resources have a variety of functionalities, and by making use of them, products such as food, fragrances, cosmetics, and toiletries can be produced. Only here students can learn about food, fragrances, and cosmetics by focusing on hands-on experiences like cultivating and harvesting biological resources such as herbs. Also they will have experiments to analyze the functionality of biological resources, and practical training for manufacturing foods and cosmetics.

Faculty of Bioindustry
Department of Business, Natural Resource and Economic Development

This department aims to foster human resources who can revitalize regional industries. From the basics to practical applications, students will learn business administration. Then they will develop the ability to find effective ways to use regional resources, to create and coordinate business plan. We have workshop style discussions with a small number of group, students will improve their communication ability through it.
CHALLENGE ➔ REVOLUTION
From "Return Man to the Farm" to "Return Man to the World"
Tokyo University of Agriculture – Advancing
We introduce the various numerical value related to Tokyo University of Agriculture.

Numerical Facts on Entrance Exam in 2017
Among 777 Universities in Japan

26th
Number of Applicants
(34,113)

10th
Increase of Applicants
(5,997)

Job Offers per Student
Triple of Average

Nationwide
1.73
719,300
416,700

Tokyo NODAI
5.3
12,223
2,307

Many Alumni Are Working in Food Business!
Ranking of Employment at Listed Companies
(26 Food Companies)

3rd
All Universities

1st
Private Universities

Tokyo University of Agriculture and Technology
Tokyo University of Marine Science and Technology
Hiroshima University
Kyoto University