

Division	Field	Contents	Member
生産環境工学 Agricultural Engineering	水環境学 Environmental Engineering for Water	The main subjects in this research and educational field are as follows: hydrological cycle of river basin, characteristics of water environment with regard to water quantity and quality, modeling of hydrological and substance cycle and its application to water resources management.	TANAKAMARU, H. Professor TADA, A. Associate Professor
	土地環境学 Geotechnical and Environmental Engineering for Agricultural Land	Research and education are carried out on the following subjects: Disaster prevention engineering for agricultural land and rural area including rich and beautiful nature; Geotechnical and environmental engineering to apply various functions of agricultural land, irrigation reservoirs and pipelines to life and environment preservation.	UCHIDA, K. Professor KAWABATA, T Associate Professor
	施設環境学 Geo-Environmental Engineering for Agricultural Facilities	This laboratory provides a research and education program concerned with agricultural facilities, such as reservoirs, head works, canal systems, etc. In the design of agricultural facilities, dynamics of seepage flow through soil which is a main topic of our laboratory is a problem. We study the basic principles of the flow of water through soil, the groundwater mechanics, the soil and water interaction, hydraulic	TANAKA, T. Professor INOUE, K. Assistant Professor
	地域共生計画学 Rural Planning	In order to build up a sustainable community where man can harmoniously coexist with nature and agricultural production environment, Rural Planning Laboratory conducts research and methodology in which approaches of both agricultural engineering and agricultural economics are amalgamated.	NAGANO, T. Associate Professor
	農産食品プロセス工学 Agri-Food Process Engineering	Agri-Food Process Engineering Laboratory conducts research and education into the following areas: measurement of physical properties and function analysis of agricultural products and food, theory and technology on the physical, chemical and biological processing, and management system of food chain from food production to consumption and	TOYODA, K. Professor IHARA, I. Assistant Professor
	生体計測工学 Biosystem Analysis	Research and education on developing strategies for simultaneous use of nondestructive monitoring and off line biochemical and biophysical information, for application and design of tools for data analysis and diagnosis of physiological states of living systems: from cell culture to animals and	TSENKOVA, R. Professor KUROKI, S. Assistant Professor
	生産システム工学 Agricultural Production Systems Engineering	An integrated systems engineering approach for instrumentation and control for agricultural production in field space and closed system, enhanced by design and development of equipment utilized in these systems.	KAWAMURA, T. Professor ITOH, H. Associate Professor SHOJI, K. Lecturer
食料環境経済学 Food and Environmental Economics	食料経済学 Food Economics	Our program aims to educate students who can analyze food problems and agricultural development issues from global viewpoint. We offer course works such as food economics, international economics, development economics, food policy, international agricultural economic development, as well as seminars.	KAKO, T. Professor KUSAKARI, H. Associate Professor
	食料生産管理学 Management of Food Production	Food is substantial for human beings to live on. Therefore we must establish sustainable development of agriculture. And the rural areas not only produce/supply food but also have multi-function. We teach the students 1) managerial analysis of food production and marketing, 2) theory of sustainable agriculture, and 3) revitalization of rural communities.	TAKADA, O. Professor IBA, H. Associate Professor
	食料情報学 Science of Food Information	Our program aims to educate students who can make clear up the food systems that consist of many issues from production to consumption of agricultural products and food, and can analyze the actual conditions and various statistical	ONO, M. Professor KANEKO, J. Professor

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応用動物学 Animal Science	動物遺伝育種学 Animal Breeding and Genetics	Research and education on animal breeding and genetics with biochemical and molecular, and statistical aspects for improvement of various important traits and maintenance of genetic diversity of animal populations.	MANNEN, H. Associate Professor SASAZAKI, S. Assistant Professor
	動物多様性利用科学 Faunal Diversity Sciences	Research and education for development of new biotechnologies as well as establishment of sustainable ecological system through investigations on animals' abilities to adapt various environments and species preservation of	OSAWA, R. Professor KUSUNOKI, H. Associate Professor
	生殖生物学 Reproductive Biology	Education and research on the development of functional gametes (egg and sperm) in mammals with the focus on intracellular signal transduction	MIYANO, T. Professor HARAYAMA, H. Associate Professor
	発生工学 Developmental Biotechnology	Education and research concerned with the characterization of gametes, fertilized eggs and pre-implantation embryos and evaluation of new methodology for mammalian reproduction.	MIYAKE, M. Professor
	栄養代謝学 Animal Nutrition and Metabolism	Research and education on molecular biological elucidation of regulatory mechanisms of metabolism by nutrients, and on molecular nutritional control and development of functions in animal.	HASEGAWA, S. Professor KAMISOYAMA, H. Associate Professor HONDA, K. Assistant Professor
	分子形態学 Molecular Functional Morphology	Research and education on molecular functional morphology that encompass a spectrum ranging from gene to body according to meld enormous quantity of morphological insights with molecular science.	HOSHI, N. Professor YOKOYAMA, T. Assistant Professor
	組織生理学 Histophysiology	Research and education focus on the mechanisms of physiological functions caused by the integration of various tissues and cells in animals	KITAGAWA, H. Professor
	感染症制御学 Microbiology and Immunology	For the purpose of preventing infectious diseases, this research field deals with the ecology and epidemiology of pathogenic microorganisms, and the pathogenesis and immunology of infectious diseases.	KAWANO, J. Professor SAEKI, K. Associate Professor
	動物遺伝資源開発学 Animal Genetic Resources	Research and education focused on search and evaluation for useful performance of animals and preservation of genetic diversity to develop efficient breeding strategies for sustainable livestock production.	OYAMA, K. Associate Professor HONDA, T. Assistant Professor
応用植物学 Plant Science	資源植物生産学 Crop Science	With the aim of establishing a safe and sustainable plant production system, this field researches in the following areas: improvements of leaf photosynthesis and seed qualities, and a development of new applications using major crops, such as rice and soybean.	MISOO, S. Professor HATANAKA, T. Associate Professor FUKAYAMA, H. Assistant Professor
	植物育種学 Laboratory of Plant Breeding	Laboratory of Plant Breeding focuses on the studies aiming to identify genes controlling agronomically important traits and to clarify their gene expression. Also, we try to improve various plant tissue culture techniques and to develop efficient breeding systems employing such culture methods.	ISHII, T. Professor ISHIKAWA, R. Assistant Professor
	森林資源学 Forest Resources	This field of study aims to accomplish sustainable management of forest resources. For this purpose, education and research are conducted in the analysis and synthesis of patterns and processes of forests as an ecosystem from various viewpoints including socioeconomic and biological	ISHII, H. Assistant Professor
	果樹園芸学 Fruit Science	Our purpose of research and education is a creation of new generation of fruit tree having useful characters for cultivation, breeding and applications. The strategy is clarification of the mechanism of heredity and reproduction, or exploration and analysis of the functional molecules.	NOMURA, K. Professor YASUDA, T. Associate Professor
	花卉野菜園芸学 Vegetable and Ornamental Plant Science	Research and education on evaluation and utilization of physiological and ecological characteristics of vegetables and ornamental plants relating to environmental factors in order to improve, develop and create useful horticultural crops through biotechnology and molecular biology	INAGAKI, N. Professor KANECHI, M. Associate Professor UNO, Y. Assistant Professor
	園芸保蔵利用学 Postharvest Physiology And Technology of Horticultural Products	In our laboratory, we deal with applied science on the beneficial consumption of horticultural products. For these purposes, we try to develop new technology for preservation and utilization of harvested products, and educate and study focusing on the mechanism for maintaining their quality physiologically and biochemically.	TERAI, H. Professor SUZUKI, Y. Assistant Professor
	熱帯有用植物学 Tropical Crop Science	Research and education focus on the elucidation of response and adaptation to the environment by a variety of diversified tropical plants, and the regulation of plant productivity.	ITOH, K. Professor AZUMA, T. Associate Professor
	植物遺伝資源開発学 Plant Germplasm Enhancement	Research and education focused on search, collection, preservation, evaluation, management, and utilization of plant genetic resources to develop efficient breeding strategies and new breeding materials for sustainable food production.	HOSAKA, K. Professor KATAYAMA, H. Associate Professor YAMASAKI, M. Assistant Professor

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応用生命化学 Applied Chemistry In Bioscience	生物化学 Biological Chemistry	For better understanding diverse life phenomena at the molecular level, we are conducting the research and education focusing on the mechanisms of signal transduction regulating gene expression, function of cellular organelles, and structure-function relationships of proteins, in prospect of their application to biotechnology.	YAMAGATA, H. Professor KANAMARU, K. Associate Professor UNO, T. Associate Professor
	食品・栄養化学 Food and Nutritional Chemistry	Beneficial mechanisms for dietary factors through modulating metabolic functions are investigated with animals and human cell lines, elucidating intestinal absorption systems and epithelial signal transductions, especially in anti-carcinogenesis. Using the information, Food and Nutritional Chemistry will be lectured.	KANAZAWA, K. Professor HASHIMOTO, T. Assistant Professor
	天然有機分子化学 Natural Products Chemistry	Our research is focused on the chemistry of natural products having biological activity: synthesis of natural and/or designed molecules, clarification of chemical structure-biological activity relationships, etc.	SASAKI, M. Professor TAKIKAWA, H. Associate Professor
	有機機能分子化学 Organic chemistry of Functional molecule	We study on organic reactions as a tool to produce useful organic compounds effectively. Our important purpose is to establish a new methodology, which is easy for environment, in synthetic organic chemistry.	MIYAKE, H. Professor
	環境分子物理化学 Physical Chemistry for Environmental Molecules	Research and education to understand physicochemical properties and behavior such as molecular structures and reaction mechanism of trace elements which affect living body and physiological substances those exist in our environment by using spectroscopy, especially vibrational	OHNO, T. Professor
	植物機能化学 Functional Phytochemistry	Structure, biosynthesis and action mechanisms of plant secondary metabolites are studied, with emphasis on structural interest, functional importance, and rhizosphere interaction between parasitic angiosperms and their host. The techniques used are those of organic chemistry, biochemistry and molecular biology.	SUGIMOTO, Y. Professor MIZUTANI, M. Associate Professor YAMAUCHI, Y. Assistant Professor
	動物資源利用化学 Chemistry and Utilization of Animal Production Resources	This laboratory aims to research and educate science and technology in the field of animal production food and the other resources. In particular, the research focuses on identification, characterization and advanced use of functional and biologically active substances from animal products for contributing to food production and human	YAMANOUE, M. Associate Professor UEDA, S. Assistant Professor
	微生物機能化学 Applied Microbiology	Research and education focus on the development and application of microbial activities: the finding, isolation, identification, and functional analysis of novel and biologically active compounds produced by microorganisms; the analysis of molecular function of cell components of such organisms; and the use of microorganisms for the degradation of environmental pollutants.	TAKENAKA, S. Associate Professor
	生物機能開発化学 Biochemistry Frontiers	Our activity in combined Biochemistry and Molecular Biology is directed to the analysis of novel function of biomolecules and gene products. This involves the development of experimental systems in a range of model cells and organisms, and in vitro studies.	AHIDA, H. Professor YOSHIDA, K. Associate Professor FUKUDA, I. Assistant Professor
	糖鎖機能化学 Glyco-chain Biochemistry	My lab investigates the exploration of carbohydrates, mainly glycan in food, possessing immunomodulatory activities against immunocompetent cell such as macrophages and the elucidation of signal transduction mechanism of host-defense activation by the carbohydrate-related compounds in	MIZUNO, M. Professor

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農環境生物学 Agroenvironmental Biology	土壌学 Soil Science	Sustainability and recycling is the key technology for coming future society. Though soil has environment preservation function, its limit must be needed to understand. For efficient utilization of mass organic waste from food industry and human activity efficient utilization, biochemical reaction between soil and roots will be discussed.	AE, N. Professor FUJITAKE, N. Associate Professor SUZUKI, T. Assistant Professor
	植物栄養学 Plant Nutrition	Plant nutrition Laboratory focuses on researches of nitrogen metabolism in plants for producing the safe and high quality foods (vegetables and crop seeds). Elucidation on events in nitrogen metabolism in plants is carried out by using biochemical, physiological and gene-engineering methods.	SUGIMOTO, T. Professor MIYAKE, C. Associate Professor SHIRAIISHI, N. Assistant Professor
	植物遺伝学 Plant Genetics	Objectives of education and research are to understand molecular basis for genome differentiation and polyploidy evolution, genetic factors contributed to domestication, and genetic basis underlying diverse response mechanisms to environmental changes in cereals and related grass species.	NAKAMURA, C. Professor MORI, N. Associate Professor TAKUMI, S. Associate Professor
	細胞機能構造学 Stress Cytology	Environment of nature world keeps on giving a variety of stressors to living organisms. Some stressors contribute to the benefit of living to survive while some usually give the cell death caused by defeating as a result of the survival competition. Our aims are to understand both education and research for ultrastructural cell defenses of the stressed	PARK, P. Professor
	環境物質科学 Environmental Material Science	The organism manages the life activity by using the low molecular weight organic compounds as a function control molecule. The field of our research aims to clarify the interaction between the chemicals such as agricultural chemicals and organism at a molecular level.	IMAISHI, H. Professor INUI, H. Assistant Professor
	細胞機能制御学 Regulatory Function in Cell Signaling	Living cells have the ability to transduce external signal to intracellular molecules by the conformational change on protein phosphorylation or molecular interaction. This research field concerns molecular analysis to cell signaling in	NANMORI, T. Professor
	植物病理学 Plant Pathology	Mechanisms of pathogenicity of plant-pathogenic microorganisms, resistance of plants, and dynamics of their interactions are analyzed using physiological, biochemical, genetic, and molecular approaches.	TOSA, Y. Professor NAKAYASHIKI, H. Associate Professor
	昆虫機能学 Insect Science	Structures and functions of insects are studied from different disciplines such as evolutionary biology, taxonomy, ecology, physiology, biochemistry and molecular biology. Intricate relationships between insects and humans should be favorably manipulated for humans and environment. This should be the major subject of this course.	TAKEDA, M. Professor MAETO, K. Professor