

Description of the Doctoral Program
Veterinary Science
Graduate School of Animal and Veterinary Sciences and Agriculture
Obihiro University of Agriculture and Veterinary Medicine

1. Education Policy of the Doctoral Program of Veterinary Science

Admission Policy

The Doctoral Program of Veterinary Science at the Graduate School of Animal and Veterinary Science and Agriculture, utilizing its educational systems which involve “fusion of veterinary medicine, animal science and agriculture” and “cooperation with overseas universities” aims to train researchers and educators who, while keeping globalization of food and agriculture in mind, have technical knowledge, creativity, and excellent research and development skills, and excellent educational abilities as well as great personality. For that purpose, we want students:

1. Who aim to be researchers and educators who can conduct international-standard, advanced research with global views on veterinary medicine, animal science and agriculture, and have good communication skills,
2. Who are eager to contribute to society domestically and globally by giving back to society their research results in the field where veterinary medicine, animal science and agriculture are fused, and by playing a central role in maintaining animal and human health, conserving the global environment and ecosystem, and developing industries and life science,
3. Who want to pursue comprehensive knowledge and advanced research on a specific area of the veterinary science program, and
4. Who have acquired basic knowledge and skills, and application skills, up to the bachelor’s level in veterinary science and related fields, and basic knowledge and skills, and application skills, up to the master’s level in other fields.

Diploma Policy

In the Doctoral Program of Veterinary Science, the degree shall be conferred on persons who have taken the courses set up in the curriculum and obtained the required credits to complete the program, and have acquired the following skills that enable them to shoulder advanced research using their up-to-date knowledge and skills in the fields of veterinary medicine such as basic veterinary medicine, clinical veterinary medicine and public health, and interdisciplinary fields of the above:

1. Ethics
 - Ethics based on up-to-date knowledge and skills in the fields of veterinary medicine such as basic veterinary medicine, pathological veterinary medicine, applied veterinary medicine and clinical veterinary medicine, and based on deep understanding of highly advanced medical techniques and of social activities for companion, industrial and wild animals,
2. International competence and leadership
 - Abilities to conduct international-standard, advanced research in a wide range of fields of life-scientific research including the intravital micro-level, the macro-level dealing with individuals and populations, and animal production.
 - Abilities to conduct international-standard, advanced research in the field of ecological research dealing with the inside of organisms, individuals and populations.
 - A wide range of technical knowledge on veterinary life science, and abilities to conduct international-standard, advanced research.
 - Abilities to contribute to the improvement of food safety and human and animal health utilizing highly advanced knowledge on food safety management systems and domestic and overseas safety monitoring of agricultural and livestock products, and excellent analysis and livestock management techniques in veterinary medicine and veterinary life science.
3. Communication skills:
 - Internationally competent presentation skills and communication skills necessary to explain their process of thinking and making judgments with regard to their specialty in the fields of basic veterinary medicine, pathological veterinary medicine, applied veterinary medicine and clinical veterinary medicine.
4. Technical knowledge and skills:
 - Abilities to utilize highly advanced knowledge on food safety management systems and domestic and overseas safety monitoring of agricultural and livestock products, and to utilize excellent analysis and livestock

management techniques in veterinary medicine and veterinary life science; abilities to contribute to the improvement of food safety and human and animal health; global views with regard to the fields of veterinary medicine, animal science, agriculture, and their interdisciplinary fields; practical skills and leadership to meet various social needs according to the globalization of veterinary medicine, and; international-standard, advanced research skills.

Curriculum Policy

In order to have the students acquire the knowledge and skills specified in the diploma policy, we conduct education paying attention to the following points:

1. Developing high-level of ethics as a researcher:
 - We offer courses to develop high-level of ethics using e-learning and active learning.
2. Developing leadership:
 - We offer courses for students to acquire advanced knowledge and skills, and an ability to manage the whole in order to develop researchers and educators with practical skills and leadership, which enable them to satisfy social needs.
3. Developing international competence:
 - We offer courses that enhance skills for presentation, debate and academic writing for students to play an active role globally in the future.
 - We offer courses to develop international competence such as research internships and fieldwork in cooperation with overseas universities for students to acquire advanced research skills.
4. Developing comprehensive research abilities as a doctor:
 - We offer common courses as well as selective courses from other degree programs for students to acquire a wide range of highly technical knowledge interdisciplinarily from the viewpoint of fusing veterinary medicine, animal science and agricultural studies.
 - We offer courses for students to acquire international-standard, advanced research skills that aim to resolve global issues.
5. We offer “special core course” as required courses, which aim to have students acquire highly advanced technical knowledge and skills on veterinary medicine and related fields in order to develop researchers who can play an active role and make contributions globally.
6. We offer courses for students to acquire the globally most advanced knowledge and skills on food safety, and animal and human health, involving highly advanced knowledge on food safety management systems and domestic and overseas safety monitoring of agricultural and livestock products, and excellent analysis and livestock management techniques in veterinary medicine and veterinary life science.

2. Completion of programs and awarding degrees

Students are awarded the Doctoral Degree in Veterinary Science after they completed the program, i.e., those who have been enrolled in the Doctoral Program of Veterinary Science at the Graduate School of Animal and Veterinary Sciences and Agriculture of our university for four years or longer, and have earned the required 30 credits, who have received the necessary research instruction, and passed the examination of their doctoral thesis in addition to the final examinations of the courses relevant to the thesis.

However, for those who achieved excellent results, the period enrolled in the graduate school could be shortened to three years.

List of potential supervisors for Doctoral Program of Animal Veterinary Science

Name	Position	Specialized Subject	Field of Research	Contents
Makoto Igarashi	Professor	Veterinary Parasitology	Diseases control	Parasitism of protozoan parasites
Toshiaki Ishii	Professor	Veterinary Pharmacology	Neuropharmacology	Molecular basis of physiological and pathological manifestations in the central nervous system
Toru Ishikawa	Professor	Veterinary Physiology	Cell physiology	Cellular regulatory mechanisms and structure-function relationships of ion channels and transporters involved in epithelial transport
Haruko Ogawa	Professor	Veterinary Epizootiology	Veterinary Epizootiology	Study on animal viral diseases
Shinichiro Kawazu	Professor	Veterinary Parasitology	Preventive Medicine for Protozoan Diseases	Development of novel vaccines and therapeutic approaches based on functional analysis of the protozoan genome and proteins
Keiko Kawamoto	Professor	Microbiology	Immunology of Infectious Disease	1) Molecular and epidemiological research on infectious diseases of terrestrial and aquatic animals 2) Allergy and Immunology
XUAN Xuenan	Professor	Veterinary Parasitology	Host Defense	Studies on analysis of host defense immunity and development of recombinant vaccines against protozoan parasite infections
Yoshiyasu Kobayashi	Professor	Veterinary Pathology	Diagnostic Pathology	Pathogenesis and diagnosis of animal diseases
Motoki Sasaki	Professor	Veterinary Anatomy	Veterinary Anatomy	Functional morphology in vertebrates
Hiroshi Suzuki	Professor	Laboratory Animal Science	Functional Genomics	Analysis of gene function <i>in vivo</i> by transgenic technology and development of reproductive bio-technology
Yasuo Nambo	Professor	Equine Reproduction	Equine Reproduction	1) Research area for theriogenology 2) Reproductive biology 3) Reproductive endocrinology in horses
Yoshifumi Nishikawa	Professor	Veterinary Parasitology	Infection immunity	Study on onset mechanism of pathogenic protozoan diseases
△Hidefumi Furuoka	Professor	Veterinary Pathology	Pathobiological Science	The pathology of neuromuscular disorders and the pathology of infectious diseases (e.g., animal prion diseases, <i>Lawsonia</i> infection)

The professor marked with * will retire on March 31, 2022. If you would like to be supervised by him/her, please consult in advance about research instruction.

The professor marked with △ will retire on March 31, 2023. If you would like to be supervised by him/her, please consult in advance about research instruction.

Name	Position	Specialized Subject	Field of Research	Contents
Motozumi Matsui	Professor	Theriogenology	Diagnosis and Therapeutics for Reproductive Diseases	Pathophysiology of ovarian and uterine disorder in cow reproduction
Norio Yamagishi	Professor	Veterinary Clinical Pathology	Bovine Medicine	Pathophysiology, Diagnosis, and Treatment of Bovine Diseases
Naoaki Yokoyama	Professor	Veterinary Parasitology	Diagnosis for protozoan Diseases	Epidemiological survey of protozoan disease in domestic animals and development of its control strategy
Kayo Okumura	Associate professor	Veterinary Microbiology	Bacteriology	Molecular mechanisms of bacterial pathogenesis and developments of diagnostic tools for bacterial pathogens
Akira Kubota	Associate professor	Toxicology	Environmental Toxicology	Study on biological effects and mode of action of anthropogenic chemicals
Nao Tsuzuki	Associate professor	Image diagnosis	Image diagnosis	Research on image diagnosis for farm animals
Toyoko Hiroi	Associate professor	Veterinary Public Health	Pathogenic Bacteriology	Molecular mechanisms of bacterial infections and its pathogenicity. Development of diagnosis and detection methods of bacterial infections.
Shinya Fukumoto	Associate professor	Veterinary Parasitology	Vector Biology	Infection mechanism of pathogens to the vector invertebrate
Kotaro Matsumoto	Associate professor	Veterinary Internal Medicine	Large Animal Internal Medicine	Diagnosis and treatment of infectious diseases of large animals
Yoshikage Muroi	Associate professor	Pharmacology	Neuropharmacology	Study on the central nervous system for controlling instinctive behaviors

Obihiro University of Agriculture and Veterinary Medicine Website

Visit our website for further information on supervisors above.

<https://www.obihiro.ac.jp/en/navi-grad-sch-anim-vet-sci-agric>