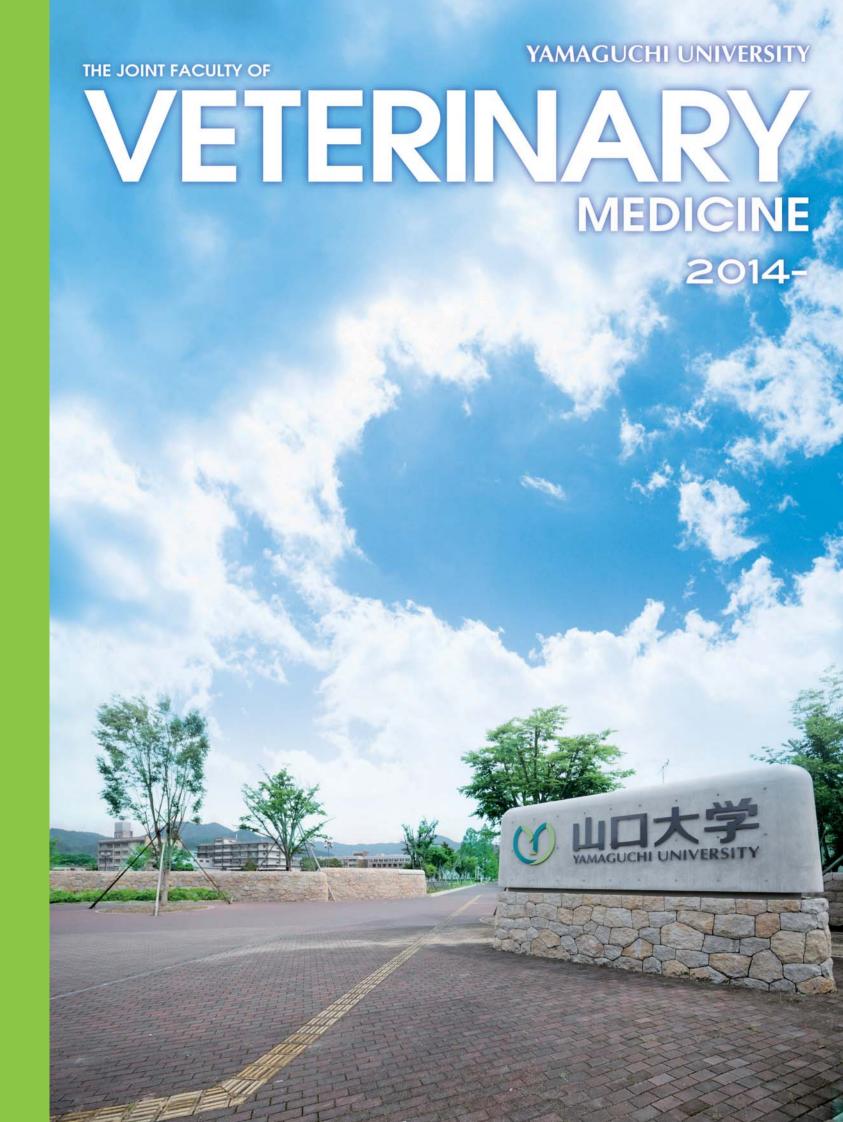




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# Our Philosophy and Mission

The Joint Faculty of Veterinary

Medicine at Yamaguchi

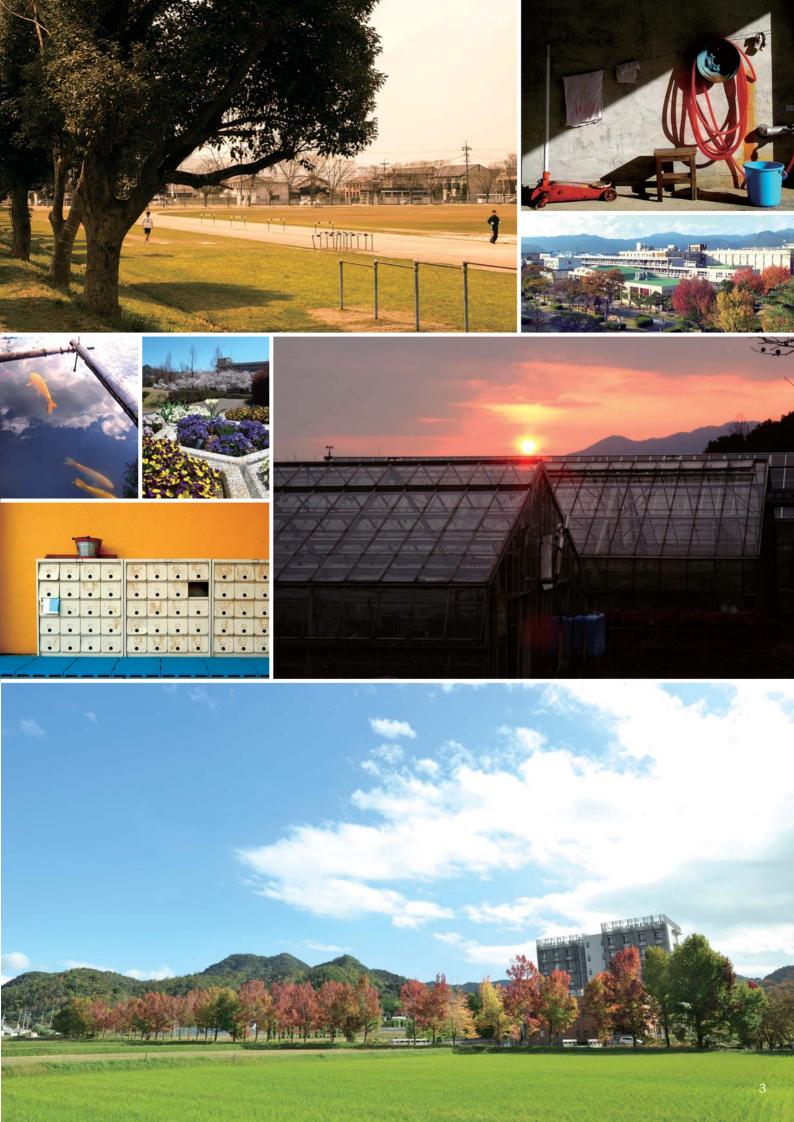
University contributes to create an advanced human society through promoting veterinary biological research, scientific consideration of humankind and animals' co-existence, and to learn the sanctity of life through veterinary bioethics.



# Message from the JFVM

The Joint Faculty of Veterinary Medicine (JFVM) was started in the spring of 2012. Yamaguchi University and Kagoshima University: A Collaboration for Advanced Education.

JFVM is an innovative attempt to create a joint faculty between two universities. It was established to encourage the study of veterinary medicine at national universities and would serve the quality assurance in research, teaching and services in veterinary medicine. Our mission is "to create an advanced human society through promoting veterinary biological research, scientific consideration of humankind and animals' co-existence, and to learn the sanctity of life through veterinary bioethics" as well as to grasp the current needs and issues centering around veterinary science. To produce human resources who play important roles in the international society, JFVM also aims to be accredited by the international (European) standards for veterinary education.



## Historical Overview

## JFVM at Yamaguchi University

#### The Faculty of Agriculture -2012

The Department of Veterinary Medicine in the Faculty of Agriculture at Yamaguchi University started with the foundation of the Yamaguchi Veterinary Medical School in 1944. As Yamaguchi University was founded in 1949, the School of Veterinary and Zootechnics (renamed in March, 1945) joined as the School of Agriculture, with the "Department of Agriculture" and "Department of Veterinary Medicine." Later in 1967, the Agriculture Chemistry Department was placed. However, the Faculty of Agriculture was divided into the "Department of Biological Resources" and the "Department of Veterinary Medicine" after reorganizing the "Department of Agriculture" and the "Department of Agriculture Chemistry." In 2001, the "Department of Biological Resources" was also reorganized and divided into 3 Departments: the "Department of Environment and Biological Resources," the "Department of Biofunction" and the "Department of Veterinary Medicine".

#### The Joint Faculty of Veterinary Medicine since 2012-

The Department of Veterinary Medicine was made to be the first joint faculty with another national university, Kagoshima University, for the first time in Japanese history. The Faculty of Agriculture was reorganized into the Department of Agriculture and the Department of Veterinary Medicine. JFVM promotes education reformation by the cooperation between the two universities. It aims to be an "internationally standardized co-educational system with mutual complement." To realize "veterinary education and research that flexibly accommodate social needs" by creating veterinary curriculum. JFVM effectively share educational resources, faculty, and facilities. As a graduate school, the following schools were established: "the Graduate School of Agricultural Sciences at Yamaguchi University Doctor" in 1969, "the United Graduate School of Veterinary Medicine (master's program)(doctor's program)" in 1990, with 3 other universities in West Japan (Tottori University, Miyazaki University, and Kagoshima University) centering on Yamaguchi University.

# JFVM Aims to Discover, Grow, and Realize Together

The concept of "togetherness" refers to the relationship not only between Yamaguchi University and Kagoshima University, but also between the faculty and the students. To "Discover" means to seek out and find the truth and the philosophy of study. To "Grow" means that the faculty and students develop with more advanced veterinary medicine study. To "Realize" means to develop and actualize a new approach to this field of study based on bioethics. The field of veterinary medicine is advanced animal science based on biology and cooperates with medical, dental, pharmaceutical science as well as other interdisciplinary fields. Our current world is challenged with issues mainly by globalization, border-less communities of food distribution and infection: BSE (known as mad cow disease), highly pathogenic avian influenza, the new H1N1 influenza, and food-shortages caused by population growth. It is clear that Japan is also facing these financial and life threats. Also, in the perspective of animal welfare, we have a great responsibility to cultivate human resources and to provide technology to avoid critical situations. To handle these challenges, the establishment of JFVM from the two universities can cover a broader field of study and research: bioscience research, animal health, public health, and clinical science with the right use of large animals, pet animals, laboratory animals, and wild animals. JFVM aims to turn out skilled veterinarians and veterinary scientists to the community.

The following are the ideal human resources that JFVM aims to produce:

#### **Human resources**

- 1. That have well-rounded characters and good moral values, he or she is able to carry out a veterinary career according to the code of conduct and to contribute to international society.
- 2. That have an inquiring mind and problem-solving skills to practice veterinary animal science based on veterinary medicine.
- 3. That are able to understand veterinary infections and their danger and has the basic knowledge and skills to contain them.
- 4. That are able to acquire enough knowledge and skills to perform advanced veterinary medical care on companion animals.
- 5. That are able to acquire enough knowledge and skills to perform advanced veterinary medical care as well as to contribute to productivity enhancement of large animals and food safety.

## Ability, knowledge and skills to obtain at JFVM

- 1. Bioethics and veterinary ethics.
- 2. Structure and physiology of animal bodies, chemical substances and mechanisms that affect the object.
- 3. The knowledge and skills concerning physical change through disease, structures of pathogens, as well as preventing and containing infections.
- 4. Knowledge and skills to prevent, diagnose, and treat companion animals' diseases.
- 5. Knowledge and skills to prevent, diagnose, and treat farm animals (large animals), as well as to contribute to productivity enhancement and food safety.

## Curriculum

In accordance with the Standards for Establishment of Universities, Yamaguchi University has started its 6 year integrated education system. In JFVM, 1<sup>st</sup> year students take Common Studies and General Studies along with Special Field Studies.

Aiming to produce professional veterinarians with a good education, humanity and morals, JFVM, at Yamaguchi University and Kagoshima University, have employed a common curriculum for both Common Studies and Special Field Studies. Each university has its own regional or environmental strengths and students from both universities are allowed to make full use of them. Yamaguchi University offers programs centering on veterinary science of companion animals and the study of infections; Kagoshima University offers programs focused on veterinary science of large animals and animal health. Both universities mutually offer their programs for better education quality.

The Process of Common Studies consists of general subjects such as physical or health education, prerequisites, foreign language, and basic studies. Basic studies focus on biology as a prerequisite for Special Field Studies. Special Field Studies offer basic, advanced, and clinical veterinary studies. Basic studies consist of veterinary anatomy, veterinary physiology, and biochemistry. Advanced studies consist of veterinary pathology, animal health study, and parasitology. Clinical veterinary study consist of veterinary internal medicine anesthesiology, veterinary surgery, and others. Based on the understanding of their studies, students are also expected to specialize their studies with electives in Special Field Studies (animal bioscience, pathological and preventive veterinary science, and clinical veterinary science for companion animals or for large animals). For more details, please refer to each of the articles of the enrollment process, subjects, and credits.



## Licensure

#### **Prerequisite for National Exam for Veterinarians**

The Degree of Veterinary Medicine is a prerequisite for the exam above.

#### **Artificial Inseminationist for Large animals**

The Degree of Veterinary Medicine and the veterinarian license (\*passing the national exam) provides the license above

#### **Food Sanitation Supervisor**

The Degree of Veterinary Medicine provides the qualification of Food Sanitation Supervisor. A Food Sanitation Supervisor supervises food products and workers in manufacturing facilities of dairy food and/or chemical additives to avoid any violation of food sanitation laws or other related regulations. It is mandatory to staff a food sanitation supervisor in those facilities.

#### **Food Sanitation Inspector**

A Food Sanitation Inspector is a local public personnel who inspects, instructs, and manages food production and its environment. To become a food sanitation inspector, the food sanitation supervisor qualification is a prerequisite as well as passing the exam of Local Governmental Officials.

#### **Environmental Health Officer**

The Degree of Veterinary Medicine provides the license above.



## Course Charts

#### **Course Outline**

#### Implementation of JFVM

Students of JFVM at Yamaguchi University and Kagoshima University both share the same curriculum, especially the Special Field Studies starting in their second year. The remote teaching system installed in both universities provides the students with real-time classes. In their 4th-6th year, especially, each university offers their advanced practices: infection related practice is mainly offered at Yamaguchi University, and diagnostic practice of large animals is offered at Kagoshima University. The students can take these advanced practices at both universities.

#### Curriculum at JFVM

1<sup>st</sup> year students: Common Studies and General Studies are required: biology, chemistry, molecular biology and statistics as the base of veterinary science in addition to bioethics of lab animals, communication theory, language skill, and information use. The Introductory Course also should be taken to understand the general idea of veterinary education and the social responsibility of veterinarians.

2<sup>nd</sup>-5<sup>th</sup> year students: Core curriculum should be taken to acquire knowledge and skills as a veterinarian. Core curriculum involves: Basic Veterinary Courses, (structure and function of animals), Advanced Veterinary Courses (pathological and preventive methods against animal disease), and Clinical Veterinary Courses (diagnostic treatment of animal diseases). Participatory practice in Clinical Veterinary Courses offers treatment practice with cases of animals at on/off-campus facilities.

4<sup>th</sup>-6<sup>th</sup> year students: Special Field Courses are required. Students select one course out of: Basic Veterinary Science Course, Pathogenetic and Preventive Veterinary Science Course, Clinical Veterinary Medicine for Companion Animal Course, or Clinical Veterinary Medicine for Large Animals Course. Advanced practice, graduation thesis, advanced lecture and lab experiment should be taken in the selected course.



## **Common Studies**

								Cla	ss So	chec	lule					
	Subject	Field	Class	Credit(s)	Hour(s)		1st	year			2nd	yeai	•	Location	Notes	
	Subject	Tield	Chas	Credit(s)	Trour(s)	Spr	ing	Fa	all	Spr	-	Fa	all	Eccation	110103	
			Succession and Creation of			1	2	3	4	1	2	3	4			
		Arts and Culture	Culture I Succession and Creation of	1	15	1										
			Culture II	1	15		1									
		Philosophy and History	Philosophy	1	15				1							
		Thistory	History	1	15			1								
	General Studies (Humanity and		Sociology	1	15		1								Minimum of 6 credits	
	Society)		Economics and Law I	1	15	1									required	
		Humanity and	Economics and Law II	1	15		1									
		Society	Economics and Law III	1	15	1										
			Human Development and Cultivation I	1	15			1								
			Human Development and Cultivation II	1	15				1					YU		
			Natural Science I	1	15			1								
	General Studies (Natural Science)		Natural Science II	1	15				1							
Common			Science and Technology in Society	1	15	1										
Studies			Humans and the Environment	1	15	1									Minimum of 6 credits	
			Food and Life	1	15	1									required	
			Introduction to Life Science	2	30	2	2	2	2							
	General Studies	Humanity and	Yamaguchi and the World	1	15			1	1							
	(Liberal Arts)	Future Planning	Knowledge Plaza	1	15			1	1							
	Physical Education	Health and	Society and Medical Service	1	15				1						2 credits required	
	and Health	Sports	Sports Exercise Practice	1	30					]	1	į	1			
		Introductory	Bioethics	1	15	]	1							YU/KU	2 credits	
		Education	Communication Theory	1	15	]	1							(Concentration Seminar)	required	
	Initial Courses  Computer		Information Security and Morals	1	15		1							YU (KU Media)	2 credits	
		Science	Information Literacy	1	15	1									required	
	Family 1	F "'	English I	4	120	2	2	2	2					YU/KU	8 credits	
	Foreign Language	English	English II	4	60					2	2	2	2		required	
			Basic Biology	2	30	2								YU		
			Basic Chemistry	2	30	2								(KU Media)		
В	Basic Studies	Math and Science	Molecular Biology	2	30		2							KU	10 credits required	
			Biological Statistics	2	30		2							(YU Media, Omnibus)		
			Biology Laboratory	2	30		2							YU/KU (Omnibus)		

## **Special Field Studies**

In the Advanced Curriculum, 10 credits from required courses should be taken as well as minimum 6 credits from elective courses. (Total: minimum 16 credits)

Minimum 153 credits of special field studies are required: 137 credits from core curriculum (7 from introductory, 38 from basic, 48 from practical, and 44 from clinical courses) as well as minimum 16 credits from required courses.

					1ot	veer	200	VIA O		ours (			5+1-	year	6th	VAA-	Note
Type		Class	Credit	Hours	S	F	S	F	S	F	S	F	S	F	S	F	Semester
					1	2	3	4	5	6	7	-	9	10	11		(Spring/Fal Terms
	Е_	Introduction of Veterinary Science A	1	15	1	-	1*		-	0	· ·	0	<u> </u>	10	11	12	
-	Core Curriculum (Introductory)	Introduction of Veterinary Science B	1	15	1		1*										Total 7 cred
	irric luct	Carrier Development for Veterinarians	2	30	-		1			2							required *For
7	15 C	Veterinary Ethics	1	15						-			1				transferred
,	P E	Laws and Regulations in Veterinary Medicine	2	30									1	2			students
<u> </u>		Veterinary Anatomy A	1	15			1							H			
		Veterinary Anatomy B	1	15			1										-
		Veterinary Anatomy C	1	15				1									
		Veterinary Anatomy D	1	15				1									-
		Veterinary Histology A	1	15			1										-
		Veterinary Histology B	1	15			1										
		Veterinary Histology C	1	15				1									
		Veterinary Histology D	1	15				1									
		Veterinary Physiology A	2	30			2										
		Veterinary Physiology B	2	30				2									-
		Biochemistry I	2	30			2										
		Biochemistry II	2	30				2									1
	©	Animal Genetic	2	30				2									
	Core Curriculum (Basic)	Animal Behavior	2	30				2									
	D II	Veterinary Embryology	2	30					2								-
	E E	Veterinary Pharmacology A	1	15					1								Total 38 cre
	ırric	Veterinary Pharmacology B	1	15					1								required
	ű	Veterinary Pharmacology C	1	15						1							
	ore	Veterinary Pharmacology D	1	15						1							
	0	Immunology I	1	15				1									
		Immunology II	1	15				1									-
		Laboratory Animal Science A	1	15					1								
		Laboratory Animal Science B	1	15					1								
		Practice of Veterinary Anatomy A	1	45			1										
		Practice of Veterinary Anatomy B	1	45				1									
		Practice of Veterinary Histology A	1	45			1										
		Practice of Veterinary Histology B	1	45				1									
		Practice of Veterinary Physiology	1	45				1									
		Practice of Biochemistry	1	45				1									
		Practice of Veterinary Pharmacology	1	45						1							
		Practice of Laboratory Animal Science	1	45					1								]
		Veterinary Microbiology I	2	30				2									
		Veterinary Microbiology II A	2	30					2								
		Veterinary Microbiology II B	2	30						2							]
		Veterinary Pathology A	2	30					2								1
		Veterinary Pathology B	2	30					2								
		Veterinary Pathology C	2	30						2							
	ical	Veterinary Pathology D	2	30						2							
	ract	Poultry Diseases	2	30										2			]
	1 (P	Fish Diseases	2	30							2						]
	ulu	Toxicology A	1	15							1						Total 48 cre required
	rici	Toxicology B	1	15							1						required
	Cut	Animal Hygiene	2	30							2						
	Core Curriculum (Practical)	Veterinary Infections Diseases A	2	30								2					1
	Ŭ	Veterinary Infections Diseases B	2	30									2				1
		Parasitology I	2	30					2								1
		Parasitology II	2	30						2							1
		Veterinary Public Health	1	15							1						1
		Food Hygiene and Safety Science	2	30								2					1
		Environmental Health Science	2	30							2	_				<del>                                     </del>	1

		Zoonosis I	1	15						1						
		Zoonosis II		-				-								
			1	15				$\dashv$		1	1					
		Veterinary Epidemiology	1	15				_			1					
	cal)	Practice of Veterinary Microbiology A	1	45				1								
	Core Curriculum (Practical)	Practice of Veterinary Microbiology B	1	45					1							
	(Pr	Practice of Veterinary Pathology I	1	45				_	1							Total 48 credits
	un	Practice of Veterinary Pathology II	1	45						1						required
	cnl	Practice of Parasitology	1	45					1							1
	E TE	Practice of Veterinary Public Health I	1	45							1					
	e C	Practice of Veterinary Public Health II	1	45								1				
	Co	Practice of Toxicology	1	45						1						
		Practice of Animal Hygiene	1	45						1						
		Advanced Practice of Infectious Disease Control	1	45								1				
		Veterinary Clinical Nutrition	1	15		1										
		Principles of Veterinary Clinical Medicine	1	15				$\neg$	1							
		Veterinary Radiology	1	15					1							
		Veterinary Clinical Pathology I	1	15				_	-	1						
		Veterinary Clinical Pathology II	1	15				-		1						
			1	15				$\dashv$		1						
		Veterinary Anesthesiology						$\dashv$								
		Veterinary Operative Surgery	1	15			$\vdash$	-		1		-	-	-		
		Veterinary Image Diagnostic I	1	15				_		1						
		Veterinary Image Diagnostic II	1	15			$\Box$	_		1					<u> </u>	
		Veterinary Reproduction	2	30							2					
		Veterinary Dermatology	1	15							1					
		Veterinary Gastroeterogy A	1	15							1					
_		Veterinary Gastroeterogy B	1	15							1					
Required		Veterinary Nephrology and Urology	1	15							1					
nba		Veterinary Endocrinology and Metabolism	1	15							1					
×		Veterinary Clinical Infectious Diseases	1	15							1					
	(sal)	Veterinary Respiratory and Cardiovascular Disorders	2	30						2						
	Core Curriculum (Clinical)	Veterinary Disorders of Neurology and Esthematology	2	30								2				
	0	Clinical Animal Behavior	1	15				$\dashv$				1				
	l m	Veterinary Hematology	1	15				_				1				Total 44 credits
	icn	Veterinary Locomotory Diseases	1	15				$\dashv$				1				required
	<u> </u>		1	15				$\dashv$				1				
	le C	Veterinary Clinical Oncology						_				-				
	ථ	Wild Animal Medicine	1	15				-				1				
		Bovine Clinical Medicine I	1	15				_			1					
		Bovine Clinical Medicine II	1	15				_				1				
		Bovine Clinical Medicine III	1	15				_				1				
		Equine Clinical Medicine	1	15								1				
		Porcine Clinical Medicine	1	15								1				
		Veterinary Preventive Medicine and Animal Health Management	2	30							2					
		Practice of Veterinary Basic Clinical Medicine	1	45						1						
		Practice of Companion Animal Diagnostics and Therapeutics A	1	45							1					
		Practice of Companion Animal Diagnostics and Therapeutics B	1	45								1				
		Practice of Veterinary Anesthesia and Surgery I	1	45							1					
		Practice of Veterinary Anesthesia and Surgery II	1	45								1				
		Practice of Large Animal Diagnostics and Therapeutics I	1	45							1					
		Practice of Large Animal Diagnostics and Therapeutics II	1	45								1				
		Practice of Veterinary Reproduction	1	45				$\dashv$				1				
		Practice of Companion Animal Clinical Medicine	2	90			$\vdash$	$\dashv$				1	2			
		Practice of Companion Animal Clinical Medicine  Practice of Large Animal Clinical Medicine	1	45				$\dashv$					1			
	<u> </u>			-				+					1	-		
	Advanced Curriculum	Special Course Seminar	4	120				$\dashv$						(2)	(2)	Total 10 credits required
	Curriculuill	Gradulius Triesis	6	270	-			_				-	-		(2)	required
		Advanced Practice of Animal Life Science	2	90				_			_			2	<u> </u>	
		Advanced Practice of Pathogenetic and Preventive Science	2	90				_						2		Minimum 6 credits
	_	Advanced Practice of Companion Animal Veterinary Medicine	2	90										2		required.
	- Inn	Advanced Practice of Large Animal Veterinary Medicine	2	90										2		•
· o	ricu	Advanced Lecture of Animal Life Science A	1	15										1		*Minimum 4 credits from
Electives	Jun	Advanced Lecture of Animal Life Science B	1	15			$\Box$	T						1		an advanced
lect	) pa	Advanced Lecture of Pathogenetic and Preventive Science A	1	15										1		practice/
H	anc	Advanced Lecture of Pathogenetic and Preventive Science B	1	15										1		lecture should be taken,
	Advanced Curriculum	Advanced Lecture of Companion Animal Veterinary Medicine A	1	15				一				İ	İ		1	and 2 from
	<b>▼</b> ,	Advanced Lecture of Companion Animal Veterinary Medicine B	1	15				$\neg$							1	the OTHER advanced
		Advanced Lecture of Large Animal Veterinary Medicine A	1	15											1	lecture.
		Advanced Lecture of Large Animal Veterinary Medicine B	1	15				$\dashv$							1	
	L			1 20			$\perp$									

# Course Description

#### Introduction to Veterinary Science A, B

- This course teaches the social responsibilities and roles of veterinarians, and deepens the understanding of various fields that veterinarians actively engage.
- It also helps students become familiarized with the latest basic veterinary research and veterinary clinics and teaches the history of veterinary medicine with high motivation for future learning and career.

#### **Career Development for Veterinarians**

- Along with the changes of social needs for veterinarians, career diversity is becoming vast. This course features guest veterinarian lecturers who actively engage in various fields and are able to teach the veterinarians' role that modern society demands.
- 2. The relevance between the international community and various job categories of veterinarians is deep; therefore, via the lectures, students understand that the acquisition of internationalism for veterinarians is very important, which is also demanded by modern society.

#### **Veterinary Ethics**

- 1. This course teaches students comprehensively the concepts of veterinary ethics and animal welfare.
- It helps students acquire the ability to apply veterinary ethics into actual practices, as a veterinarian with rich morality.
- This course also helps students to acquire flexible thinking to review their own sense of values and culture for veterinary medicine and recognize the global viewpoint.

#### Laws and Regulations in Veterinary Medicine

- 1. This course teaches administrative laws, which should be well-understood by veterinarians.
- In the first half of the course, livestock related laws and regulations are explained, and public health related laws and regulations are discussed in the second half of the course.

#### **Veterinary Anatomy A**

- This course helps students understand the basic anatomical knowledge and terms of body region names of horses, cows, pigs, cats and dogs.
- 2. It teaches an overview of the bone structure, and the lecture of axial, forelimb and hind limb skeletons.
- 3. It also teaches about the structure of ligaments and bones, and gives lectures on joints.
- 4. This course provides an overview of the types, structures, auxiliary equipment of muscles and lectures on the muscles of the head and torso.

#### **Veterinary Anatomy B**

- The aim of this course is to help students understand the basic structure of animal body and to acquire the basic knowledge of mammal and fowl anatomy for veterinary and animal science courses.
- 2. Students will learn myology and splanchnology by the method of systemic and regional anatomy explanations. In particular, they will learn the mutual relevance and diversity among animal species by the method of comparative anatomical explanations. In those explanations, wild animals' cases are used as a comparison.

#### Veterinary Anatomy C

- 1. This course explains the urinary system, in terms of the basic structures of kidneys, the difference in animal species, and the route of the urethra.
- As for genitalia, it refers not only to the basic structures and features, but also to the differences between the uterus and the prostate in animal species.
- 3. This course also describes the basic structures and features of the lymphatic system (lymph nodes, thymus, spleen), the endocrine system (pituitary, thyroid, adrenal glands, pancreas), and the sensory organs, including visual, auditory, taste, and olfactory organs.
- 4. It explains the basic structures of integument, including skin, mammary glands, and hoofs.

#### **Veterinary Anatomy D**

- The aim of this course is to help students understand the basic structure of animal bodies and to acquire basic knowledge of mammal and fowl anatomy for veterinary and animal science courses.
- Students can learn neurology and angiology by the method of systemic and regional anatomical descriptions. This course explains the anatomical features of domestic fowl.

#### **Veterinary Histology A**

- 1. Students will learn the histological terminologies related to the body structure of livestock and poultry.
- Students will also understand the principles and the methods of histological specimens.
- 3. Students will learn the characteristics of cells, epithelial tissues, and connective tissues, in terms of general histological structure of livestock and poultry.

#### **Veterinary Histology B**

- This course provides lectures on the structure of cartilage and bone and the mechanisms of bone development.
- It also provides lectures on the types and basic structure of muscle tissues.
- 3. Students will have the opportunity to hear lectures on the basic structure of neurons, the distribution and function of neuroglia cells, and the structure of neural tissue in the central and peripheral nervous systems.
- This course also provides lectures on the type, morphology and function of blood cells and explains the hematopoiesis mechanisms.
- There will also be lectures on the function and basic structure of vessels and lymphatic tissues.

#### **Veterinary Histology C**

- 1. This course helps students understand the diversities in histological characteristics of livestock and poultry.
- Students will learn the histological structure of livestock and poultry, especially in the digestive system, respiratory system, urinary system, reproductive system, and placenta.

#### Veterinary Histology D

- This course provides lectures on the histological structure of the sensory system, including visual, auditory, taste, and olfactory tissues.
- There will also be lectures on the features and functions of the histological structure of the endocrine organs, including pituitary, adrenal glands, thyroid, parathyroid glands, pineal body, pancreas, and gastrointestinal

- endocrine cells.
- This course explains the histological features of integument tissues, including skin, hoof, cutaneous glands, and mammary glands.
- There will be lecture on the features and functions of the histological structure of poultry's main organs.

#### Veterinary Physiology A

 This course helps students understand the function of animals as individuals and as a group, centering on locomotion.

#### Veterinary Physiology B

- This course organizes the knowledge of each biological function of anesthesia, thermoregulation, endocrine, metabolism, blood, kidney, and reproduction systems.
   Students will acquire the knowledge and thinking methods for integral understanding of these biological phenomena.
- This course will also help students understand the physiological functions unique to various animal species in veterinary medicine.

#### **Biochemistry I**

- 1. Biochemistry is the analysis of the functions and mechanisms of life via chemical flow.
- Students will learn the core structure and function of biological materials, which are essential to understand the role and mechanism of metabolism in vivo.

#### **Biochemistry II**

- In this course, students will understand catabolism and the synthesis mechanism of carbohydrates, lipids, and amino acids, as well as the biogenic biological maintenance mechanism of their integration.
- 2. Students will also understand the relation of metabolism among tissues and its adjustment to maintain life.

#### **Animal Genetics**

- This course explains the genetic traits and teaches the heredity mechanism at population, individual, cell level, and molecular level in domestic animals.
- 2. It also explains the genetic traits in terms of morphology, metabolism, and molecular polymorphism and helps students gain a better understanding of genome analysis in domestic animals. Students will discuss animal breeding as the application of genetics.

#### **Animal Behavior**

- This course provides the basic knowledge to understand common behavior patterns and behavior expressions among various species, (phylogeny and ontogeny of behavior, and the nervous system that controls actions) and there will be lectures on communication behavior, reproduction, social behavior, and maintenance behavior.
- 2. This course will refer to learning theory, research of ethology and clinical application.

#### **Veterinary Embryology**

- This course provides lectures on the developing embryo and the origin, development, differentiation, and maturity of cells, tissues, and organs in a fetal organ.
- There will also be lectures on the final form and relationship of tissues and organs, as well as various factors controlling development.
- 3. Lectures on early development, fetal development, and organ generation will also be provided. The early

developmental session describes the cell division, embryo generation, fertilization, cleavage, and gastrulation. In the fetal generation session, signal transduction, development of basic body structure, the formation of placenta and fetal membranes will be described. In the organ generation session, there will be lectures on the embryological aspects of each organ.

#### Veterinary Pharmacology A

- In order to understand the effects of drugs which are used in veterinary medicine, this course explains the basic principles of pharmacology, such as the action mechanism, adverse effects, pharmacokinetics, etc.
- 2. This course also explains information handling for proper drug use, the drug development method, and the basic mannerisms and ethics of animal experimentation.
- 3. It also includes an explanation of the mechanism of drug action on the peripheral nervous system, the clinical application, and the differences among species.

#### Veterinary Pharmacology B

- 1. This course aims to explain the action the mechanism of drugs on the central nervous system, the clinical application, and the differences among species.
- It will also explain the pathogenetic mechanism of inflammation, the role of autacoids, the action mechanism, side effects, and clinical application of antiinflammatory drugs.

#### Veterinary Pharmacology C

- This course is centered around explaining cardiovascular disease, respiratory disease, digestive disorders and the action mechanism, side effects, and clinical application of the main drugs for these diseases.
- It will also explain salt metabolism and its attendant renal disease, as well as the action mechanism, side effects, and clinical application of the main drugs.
- 3. An explanation of the immune system and cancer development of animals, as well as the action mechanism, side effects, and clinical application of the main drugs are included in this course as well.

#### **Veterinary Pharmacology D**

- This course aims to explain blood diseases, endocrine disorders, digestive disorders, poisonings, and the action mechanism, side effects, and clinical application of the main drugs.
- It also includes an explanation of the action mechanism, side effects, and application of pesticide and anthelminthic.

#### Immunology I

- This course aims to help students understand the whole picture of the immune system, a highly complicated life system.
- Students will also learn about the principle of natural immunity and the relevance with adaptive immunity.
- Students will learn the basics of immunity to infection via the understanding of the antigen recognition mechanism.

#### Immunology II

- This course aims to help students understand the whole picture of the immune system, which is a highlycomplicated life system.
- 2. Based on the foundational knowledge acquired from Immunology I, this course will explain the removal

- mechanism of invading pathogens.
- 3. Students will also come to understand pathology caused by a collapsed immune system.

#### Laboratory Animal Science A

- This course will explain the importance of laboratory animals and animal experiments which play a major role in life science research and veterinary education.
- 2. It will include an outline of the basic knowledge of laboratory animal use and proper animal experimentation from the point of view of comparative biology.

#### **Laboratory Animal Science B**

- 1. This course will explain about the importance of laboratory animals and animal experiments which play a major role in life science research and veterinary education. From the point of view of comparative biology, an outline of the basic knowledge of laboratory animal use and the proper animal experimentation.
- 2. There will be an outline of the influences and measures taken against infectious diseases of laboratory animals (bacterial, viral and parasitic infections), animal experiments, zoonosis, biological hazards, developmental engineering, alternative methods, proper animal experimentation and laboratory animal technology.
- Students will be able to deepen their understanding about animal care and welfare as a veterinarian and cultivate advanced knowledge and ethics.

#### Practices of Veterinary Anatomy A, B

- Students will learn the basic structure of animal bodies and anatomical knowledge through one's own experience in the practice of mammals and birds for veterinary and animal science courses.
- This course provides the regional anatomical practices of osteology, myology splanchnology, angiology, and neurology.

#### **Practices of Veterinary Histology A**

- 1. This course aims to help students understand the general histological structure of livestock and poultry.
- Students will also come to understand the relevance of three-dimensional structures of organs and histological structure.
- 3. It will also include a section on the creation methods of tissue specimens and the observation methods.
- 4. Students will learn the proper use of a microscope.

#### **Practices of Veterinary Histology B**

- 1. This course will aid students in understanding the detailed histological structure of livestock and poultry, especially the digestive system, respiratory system, urinary system, reproductive system, placenta, endocrine system, sensory organs, integuments, organs of poultry, and fetal tissue.
- This course will also help students understand the relevance of three-dimensional structures of organs and histological structures.
- This course also aims to give students an understanding of the relevance of physiological functions and histological structures.
- 4. Students will learn the proper use of a microscope.
- 5. Students will gain an understanding of the histological diversities among animal species.

#### **Practices of Veterinary Physiology**

- 1. This course gives students an advanced understanding of the knowledge learned by veterinary physiology A and B.
- In this course, students will acquire knowledge and skills in the fields of neuromuscular, respiratory, circulatory, digestive, metabolic, and endocrine systems.

#### **Practices of Biochemistry**

- In this course, students will deepen their knowledge of basic biological components such as proteins, enzymes, and DNA.
- Students will acquire basic skills to treat the biochemical components listed above.

#### **Practices of Veterinary Pharmacology**

- Through experiments, students will learn the treatment of animals, drug administration, artificial nutrition solution, and pharmacokinetics in living bodies and related factors.
- 2. Using a whole body or isolated organs, students will learn the drug reaction and its action mechanism.

#### **Practices of Laboratory Animal Science**

- Students will learn husbandry, control of an experimental environment, handing, retention, anesthesia, blood collection methods, euthanasia, and pathological anatomy, which are essential for proper animal experimentation.
- Students will deepen their understanding by visiting animal experimentation facilities.

#### Veterinary Microbiology I

- This course aims to help students understand microorganisms (viruses, bacteria, fungi, and protozoa) in terms of the history of discovery, basic structure; and biological, physicochemical, serological and genetic characteristics.
- 2. Students will learn the principles of handling microorganisms, such as the classification, isolation, identification, cultivation, preservation, and sterilization.
- This course will also aid students in understanding the growth pattern of microorganisms, virulence factors, and mechanisms of mutations and acquisition of resistance.

#### **Veterinary Microbiology II A**

- This course will help students understand the taxonomic position and physicochemical, serological and genetic characteristics of individual microorganisms, such as bacteria, fungi, and protozoa.
- Students will learn the methods of handling individual microorganisms, such as isolation, identification, cultivation, and preservation.
- Students will also learn distribution in the field, and the name and outline of diseases caused to the host by individual microorganisms.

#### **Veterinary Microbiology II B**

- 1. This course aims to have students understand the taxonomic position and physicochemical, serological and genetic characteristics of individual viruses.
- Students will learn the methods of handling individual viruses, such as isolation, identification, cultivation, and preservation.
- Students will also learn distribution in the field, and the name and outline of the diseases caused to the host by individual viruses.

#### Veterinary Pathology A

- 1. This course will help students understand the development of passive and active lesions.
- Students will also come to understand the development of circulatory disorders.
- 3. Students will also gain an understanding of the development of immune pathology and inflammation.

#### **Veterinary Pathology B**

- 1. This course provides an overview of tumor incidence in various animals, and lectures on the cause, metastasis, and types of tumor incidence.
- This course offers lectures on the confrontation of congenital anomaly and malformations, the description of molecular pathology techniques, and the basis of toxicity pathology associated with the drug-triggered carcinogenesis.
- 3. As for the lesions of various animal's organs, lectures on of the circulatory system, such as heart and blood vessel, the hematopoietic system like spleen and lymph nodes, and as for the respiratory system, such as lungs and nasal cavity are offered. Lectures on the degeneration, inflammation, and oncology are also offered.

#### **Veterinary Pathology C**

- 1. This course offers lectures on the digestive system, including the digestive tract, liver and pancreas; the urinary system, such as kidney, ureter, bladder, urethra, malformations, deformation, circulatory disorder, necrosis, inflammation, and oncology in each organ of the male and female reproductive systems, like the uterus, ovary, mammary gland, etc.
- This course aims to help students understand the general idea of diseases, with the explanation of its cause, pathology, and treatment.

#### Veterinary Pathology D

- In this course, students will gain an understanding of the causative agents and pathological conditions of diseases in the musculoskeletal system of bones, muscles, etc.
- This course aims to help students understand the causative agents and pathological conditions of integument disease.
- It also aims to aid students in understanding the causative agents and pathological conditions of diseases of the brain and nervous system, such as peripheral nerves.
- 4. Students will also gain an understanding about the causative agents and pathological conditions of the diseases in the endocrine system, pituitary, thyroid, adrenal gland, etc.

#### **Poultry Diseases**

- This course aims to help students understand the anatomical, physiological and immunological characteristics of poultry, especially chicken, in comparison with mammalians.
- Students will learn the causes, symptoms, diagnosis, and prophylaxis of infectious and non-infectious diseases in poultry.
- As for infectious diseases, students will learn the identification and isolation methods of the pathogens, including methods to distinguish them from other similar diseases.
- 4. Students will learn the types of chicken vaccines, usage, and evaluation of effectiveness, etc.

#### Fish Diseases

- This course will help students understand the anatomical and physiological characteristics of the main aquaculture of fish and crustaceans.
- Students will learn the cause, characteristics, symptoms, pathology, control methods, and problems of environmental and infectious diseases among the Japanese-main aquaculture fish and crustaceans.
- 3. Students will also learn the usage situations of fishery medicine, the types and usage conditions of fishery vaccines, and examples of successful protection.

#### **Toxicology A**

- 1. This course offers lectures on the adverse effects of chemical substances to animals and the environment, and the role of veterinarians in the prevention.
- This course also explains the adverse effects, toxicokinetics, and the toxicity mechanism of chemical substances.
- It also includes an explanation of toxicology in society, implementation and assessment methods of toxicity tests, the adverse effects and risk analysis of chemical substances.
- 4. There will be lectures on genotoxicity and carcinogenicity.

#### **Toxicology B**

- 1. This course offers lectures on the characteristics and basic knowledge of individual organ toxicity (of genital, respiratory, cardiovascular, sensory, musculoskeletal, liver, kidney, blood, endocrine, nervous, and digestive systems) and the relevant toxicity test methods, detrimental effects of each toxicant, toxicokinetics, toxicity mechanism, and environmental impact.
- This course will also explain the impacts of chemical substances on environmental dynamics, living bodies, and ecology.

#### **Animal Hygiene**

- In order to breed livestock animals in a healthy manner, and to ensure the productivity of safe animal products, lectures on the importance and need for political control of animal hygiene, breeding environment, disease prevention and control will be offered.
- This course also explains the basic strategies to control livestock diseases based on relevant laws and regulations.
- 3. It will also give an outline about feeding and sanitation of special-purpose livestock and working animals.

#### Veterinary Pathology A

- 1. This course will help students understand the development of passive and active lesions.
- 2. It will also aid students in understanding the development of circulatory disorders.
- 3. Students will also come to understand the development of immune pathology and inflammation.

#### **Veterinary Pathology B**

- This course provides an overview of tumor incidence in various animals, and lectures on the cause, metastasis, and types of tumor incidence.
- This course offers lectures on the confrontation of congenital anomalies and malformations, the description of molecular pathology techniques, and the basis of toxicity pathology associated with the drug-triggered carcinogenesis.

3. As for the lesions of various animal's organs, lectures on of the circulatory system, such as the heart and blood vessels, the hematopoietic system like the spleen and lymph nodes, and the respiratory system, such as lungs and nasal cavities will be offered. There will also be lectures on degeneration, inflammation, and oncology.

#### **Veterinary Pathology C**

- This course offers lectures on the digestive system, including the digestive tract, liver and pancreas, the urinary system, such as the kidneys, ureter, bladder, urethra, malformations, deformations, circulatory disorders, necrosis, inflammation, and oncology in each organ of the male and female reproductive systems, like uterus, ovary, mammary glands, etc.
- This course will help students understand the general idea of diseases, with an explanation of its cause, pathology, and treatment.

#### **Veterinary Pathology D**

- This course aids students in understanding the causative agents and pathological conditions of diseases in the musculoskeletal system of bones, muscles, etc.
- This course also helps students to understand the causative agents and pathological conditions of integument disease.
- Students will gain an understanding of the causative agents and pathological conditions of diseases of the brain and nervous system, such as peripheral nerves.
- Students will also come to understand the causative agents and pathological conditions of the diseases in the endocrine system, pituitary, thyroid, adrenal glands, etc.

#### **Veterinary Infectious Diseases A**

- Students will learn each theory of bacteria, rickettsia, chlamydia, and protozoan infection of animals (large animals, companion animals and wild animals, with the exception being fish and birds).
- 2. As for the pathogens, students will learn pathogen identification methods; behavior characteristics, infection, proliferation, excretion, and propagation methods of the pathogen; and the characteristics of the diseases caused by the various pathogens. Students will also learn the diagnostic evidence for the various clinical conditions and pathological changes, as well as the methods for proper administration of curative medicine for treatment and prevention.

#### **Veterinary Infectious Diseases B**

- Students will learn each theory on virus and prion infection of animals (large animals, companion animals and wild animals, with the exception being fish and birds).
- 2. As for the pathogens, students will learn pathogen identification methods; behavior characteristics, infection, proliferation, excretion, and propagation methods of the pathogen; and the characteristics of the diseases caused by the various pathogens. Students will also learn the diagnostic evidence for the various clinical conditions and pathological changes, as well as the methods for proper administration of curative medicine for treatment and prevention.

#### Parasitology I

 In order to understand the wide variety of animals related to parasitic phenomena (of a disease-nature) and their infectious diseases, students will learn the general

- idea of the basic concepts, terminology, classification, life cycle, examination methods, diagnosis methods, and treatment of parasites.
- This course will help students understand the current epidemiological status of parasitic diseases, as well as their industrial and public health significance.
- Students will learn the major protozoa-involved parasitic diseases and understand the significance of their diagnosis, treatment, and prevention.

#### Parasitology II

- 1. Students will learn the major parasitic diseases related to helminths (flukes, tapeworms, nematodes, and thornyheaded worms) and understand the significance of the diagnosis, treatment and prevention.
- Students will also learn the major parasitic diseases related to arthropods (mites and insects) and understand the significance of the diagnosis, treatment, prevention, and vector measures.
- 3. Finally, students will learn the parasitic diseases associated with public health, including food hygiene.

#### **Veterinary Public Health**

- This course will review the history of public health activities and teach the challenges, such as the problems of health, population, food, emerging and re-emerging infectious disease, pesticides, environmental pollutants, food quality and safety, in which veterinary public health has been heavily involved.
- This course will also introduce the trend of national public health and help students acquire the scientific thought process based on risk-analysis.
- 3. This course also explains the international framework, such as WHO, FAO, or OIE, their basic-laws and international regulations, such as the Terrestrial Animal Health Code and the International Health Regulations, and harmonization with domestic laws.

#### Food Hygiene and Safety Science

- This course explains the concepts of food hygiene, food poisoning, food-borne infections, and the source and infection route.
- Students will learn microbiological control in food, food additives, physicochemical risk factors, health hazards, and food pollution.
- There will be lectures on food hygiene, good hygienic practices, and HACCP to acquire knowledge and thoughts on food safety.

#### **Environmental Health Science**

- This course explains the general idea of pollution problems caused by air, water and soil pollution, and the national measures based on the Environmental Basic Act and individual laws (Air Pollution Control Law, Water Pollution Control Law, etc.).
- Students will learn the sustainable development and recycling society, as the international framework to solve the trans-boundary movement of hazardous waste, hydrosphere and atmosphere pollution.

#### Zoonosis I

- This course outlines the definition, type, social impact of zoonotic diseases.
- Lectures on the pathogenesis of major viral zoonotic disease, its occurrence in human populations, symptom of humans, diagnosis, and epidemic prevention method will be offered.

#### Zoonosis II

- This course explains the infectious cycle, occurrence situation, symptoms, pathogen, diagnostic and preventive measures of bacteria, fungi, protozoa, and parasitic zoonotic diseases.
- This course aims to help students understand the infectious cycle of various zoonotic diseases, and explain the preventive measures based on the cycle.

#### **Veterinary Epidemiology**

- This course will help students understand health and disease among populations of animals and humans, and the distribution of phenomenon and determinant related to those, and explain the basic idea of epidemiology for disease prevention measure at the population level.
- Students will acquire basic knowledge of epidemiological indicators, the design of epidemiological study, and the analysis of epidemiological data.

#### **Practices of Veterinary Microbiology A**

- Students will learn the methods of isolation, cultivation, identification and handling of pathogenetic bacteria.
- Students will also learn the characteristics of bacteria
  by using low pathogenetic microorganisms in
  experiments, since highly pathogenetic bacteria or some
  microorganisms cannot be handled in practice.
- 3. Students will get the opportunity to experience the preparation of enrichment, selection and susceptibility testing mediums, cloning of isolates, and serological tests and learn their principles and significance.

#### **Practices of Veterinary Microbiology B**

- 1. Students will learn the methods of isolation, cultivation, identification and handling of pathogenetic viruses.
- Students will also learn the methods for treatment of embryonated eggs and the cultivation of primary cells and cell lines and experience the methods for propagation of viruses by using live attenuated vaccines.
- 3. Students will receive a chance to experience serological tests for identification or diagnosis of viruses, and learn their principles and significance.

#### **Practices of Veterinary Pathology I**

- 1. Students will deepen their understanding of various lesions learned in lectures.
- 2. This course provides a pathological diagnosis with the understandings of various search methods of pathology.

#### **Practices of Veterinary Pathology II**

- 1. Students will deepen their understanding of various lesions learned in lectures.
- This course provides a pathological diagnosis, with the understanding of various search methods of pathology.

#### **Practices of Parasitology**

- This course helps students acquire the practical skills and knowledge of parasites and diagnosis of parasitic diseases.
- 2. Students will acquire the treatment methods of parasite specimens to achieve a safe and reliable diagnosis.
- Students will also acquire the skills to diagnose the observation results of parasite examination in proper expressions.

#### **Practices of Veterinary Public Health I**

1. This course helps students acquire food hygiene

- management methods, examination methods, environmental hygiene examination and assessment methods.
- Students will also acquire basic skills related to the handling, separation and identification of food-borne infectious agents.

#### **Practices of Veterinary Public Health II**

- This course will teach the roles of veterinarians in meat hygiene inspection and hygiene instruction of environmental health tasks in the public health administration, and help students to understand the activities of veterinarians in society.
- Students will learn the control measures for public health risk factors and hygiene instructions for food animals in farms; and the handling and prevention of zoonotic pathogens in pathological surveys.

#### **Practices of Toxicology**

- Through experiments, students will acquire methods of clarifying adverse effects of chemical substances on animals and the environment.
- 2. Students will analyze the obtained experimental data and learn the assessment methods of toxicity.

#### **Practices of Animal Hygiene**

- Students will learn basic skills and procedures related to livestock, farm environment, and the safety of livestock products in veterinary hygiene. Via the acquisition of relevant laws and regulations, students will understand clinical veterinary medicine and preventive veterinary medicine comprehensively.
- Based on water quality test methods as a general sanitary inspection skill, students will learn the various sanitary inspection and sterilization methods of natural water, clean water, and sewage.
- Students will visit farms and learn how to construct the HACCP system in farms necessary for health control and the safety of livestock products. Students will practice how to identify CCP from the system and to validate the HACCP
- 4. This course will help students understand the following themes of the disposal methods of livestock barn sewage, the tasks in livestock hygiene service centers, and the disease prevention of livestock farm by using feeding control systems via site visits and practice.

## Advanced Practices of Infectious Disease Control

- This course helps students acquire specialized knowledge on ecology of bacteria, viruses, and parasites, pathogenetic mechanisms, and their detection methods.
- Students will acquire advanced expertise essential to promote research in the prevention of infections caused by various infectious agents.

#### **Veterinary Clinical Nutrition**

- Students will learn the principles of animals' essential nutrients, feed digestion, and nutrient absorption, and deepen their knowledge of the digestive tract of major animals
- Students will also learn the principles of the use and metabolism of absorbed nutrients, the creation and use of energy for survival, and deepen their knowledge of metabolic disease.
- 3. Finally, students will learn the metabolic profile test based on the information of the nutritional components

in circulating blood which is linked to the determination of animals' health condition or the improvement of nutrition management.

#### **Principles of Veterinary Clinical Medicine**

- This course gives students an understanding of the basic knowledge, procedure, technique and ethics of veterinary medicine. This lecture is placed as an introductory clinical course before acquiring each theory of organ-classified diseases.
- 2. This course offers lecture essential factors for the course of medical treatment, from diagnosis to treatment and prognosis, including laboratory tests, analysis of the results, the difference in the opinion between the veterinarian and owner, accountability and evidencebased veterinary medicine.

#### **Veterinary Radiology**

- 1. This course offers lectures on the general action of radiation used in veterinary medicine, adverse effects to the human body and protection.
- Lectures on the basic principle of several image diagnostic technologies, including X-ray examination (X-ray, CT, nuclear magnetic resonance, and nuclear medicine) and the construction of these diagnostic images will also be given.
- Lectures on the statutes of the safety management and regulations regarding radiology use are offered in this course.

#### **Veterinary Clinical Pathology I**

- Veterinary clinical pathology proceeds through several examinations (clinic-pathological tests), using living animal materials and analyzes the acquired information from examinations to help diagnosis, treatment, and prognosis. In this course, students will learn the types of clinic-physical examinations, principles, procedures, and their significance, etc., and acquire the ability to interpret the results and to apply them in clinical settings.
- 2. In veterinary clinical pathology I, specifically the focus is on blood tests, serum biochemistry, bone marrow examinations, rumen juice inspections (ruminants), etc. Students will learn the principles, significance, and test results of animals (companion animals and large animals), to acquire the ability of diagnosis, treatment, and prognosis.

#### Veterinary Clinical Pathology II

- 1. In veterinary clinical pathology, students conduct several examinations (clinic-pathological tests) using living animal materials and analyze the acquired information from examinations to help the diagnosis, treatment, and prognosis. In this course, students learn the types of clinic-physical examinations, principles, procedures, and their significance, etc., and acquire the ability to interpret the results and to apply them in clinical settings.
- 2. Especially in veterinary clinical pathology II, the focus is on urine testing, renal function testing, examinations of the digestive system, the pancreatic exocrine secretion system, bone and muscle disease, endocrine-metabolic disease, bodily fluids. It also focuses on each and general cytotechnology theory, and the principles, significance, and test results of animals (companion animals and large animals), to acquire the ability of diagnosis, treatment, and prognosis.

#### **Veterinary Anesthesiology**

- In this course, students will learn the basic physiology of animals.
- Students will also learn to control the physiological responses of various diseases, surgery operation, and medicine, and understand sedation and anesthesia for safe animal treatment.
- 3. This course helps students to understand emergency, intensive care, and invasive controlling methods.

#### **Veterinary Operative Surgery**

- 1. In this course, students will understand the basics of treatment for surgical diseases in veterinary medicine.
- 2. This course explains basic surgical procedures: the disinfection method, usage of instruments and equipment, hemostasis, suturing and the characteristics of surgical procedure at each organ and region.
- 3. Based on the basic knowledge acquired in this course, students will understand the contents of surgical treatment methods in other courses offered according to the animal type or organ type.

#### Veterinary Image Diagnostics I

- This course offers lectures on the basic principles of diagnostic radiography techniques, such as X-ray, echography, CT, and MRI, used in the clinical veterinary medicine.
- Lectures on the timing to apply diagnostic imaging tests, and the symptoms and characteristic findings in typical diseases are also offered.
- This course conducts trainings to link inductively the symptoms, examination findings and image findings, and improve the diagnostic capability in clinical practices.

#### Veterinary Image Diagnostics II

- This course offers lectures on the basic principles of image diagnostic technology, such as X-ray, ultrasound, CT, and MRI, used in the clinical veterinary medicine.
- Lectures on the typical diseases on which to apply imaging tests and the characteristic findings are also offered.

#### **Veterinary Reproduction**

- This course explains the reproductive physiology and morphology, sex differentiation, endocrinological mechanisms, gamete formations, fertilization, pregnancy establishments, pregnancy sustention, and parturition in livestock animals, companion animals, and wild animals.
- This course offers an outline on technologies concerning the detection of estrus, artificial insemination, and pregnancy diagnosis in animals.
- 3. An explanation on the history, theory and current situation of developmental and reproductive biotechnology in animals, reproductive engineering is offered, as well as a description of artificial breeding and natural breeding.

#### **Veterinary Dermatology**

- 1. This course offers lectures on the structure and function of animal skin, the clinical signs of skin diseases, its testing, diagnosis methods, and treatment methods.
- 2. This course aims to provide the thought process and knowledge of animal dermatology in clinics, handling a wide variety of diseases seen in day-to-day practices: allergic skin disease with high frequency, otitis externa, skin tumors, and immune-mediated diseases.

3. Many photo materials for easy-understanding of the various disease symptoms are used.

#### **Veterinary Gastroenterology A**

- This course outlines the anatomy, physiological function, and pathological physiology of each digestive organ which is essential for the understanding of various digestive disorders occurring among animals.
- Lectures on the details of the various testing methods required in diagnosis of gastrointestinal diseases are offered.
- 3. An outline of the basic theory of medical treatment of digestive disorders, the pharmacological characteristics of medicine and its administration methods, and lectures on clinical examination, diagnostic imagining, and histopathological diagnosis of each organ, concerning the digestive system are offered.
- 4. This course provides lectures focused on medical treatment methods.

#### **Veterinary Gastroenterology B**

- This course offers lectures on the digestive diseases that occur among companion animals, with regard to dental diseases, oral cavity, pharynx, esophagus and liver disease.
- Lectures on the surgical treatment approach to general gastrointestinal diseases among small animals are also offered.
- 3. This course also outlines the perioperative management of patients.

#### **Veterinary Nephrology and Urology**

- 1. This course explains the clinical symptoms and diagnostic methods of renal urological diseases.
- 2. There is also an explanation of the disease definition and pathophysiology of renal urological diseases.
- 3. This course also explains the medical and surgical treatment of renal urological diseases.

#### **Veterinary Endocrinology and Metabolism**

- The endocrine disorders of companion animals are diverse, and especially the diagnosis is very complicated. In order to understand each endocrine disorder, the physiology of each hormone is also very important. In this course, the review of physiology is introduced in each class, lecturing the generation mechanism of endocrine disease, and it outlines the clinical symptoms, diagnosis methods, and treatment methods.
- Since metabolic diseases seem to be understated in the small animal veterinary field, the lectures aim to obtain a comprehensive understanding by handling them systematically, including the electrolyte abnormalities.

#### **Veterinary Clinical Infectious Diseases**

- Based on the microbiological knowledge acquired, students will deepen their knowledge of pathology, symptoms, diagnosis, treatment, and prevention of each pathogen of various infectious diseases, which are problems in companion animals' clinics.
- This course outlines the hygiene management of veterinarians, who are constantly exposed to animals, since some infectious diseases are zoonotic diseases.

#### Veterinary Respiratory and Cardiovascular Disorders

 This course consists of the general and detailed exposition of respiratory and cardiovascular diseases of

- companion animals. In the introduction, it explains the diagnosis and treatment of respiratory and cardiovascular diseases. Briefly discuss the latest findings also.
- Specific diseases are explained based on symptom, pathology, diagnosis and treatment using the actual case data encountered in daily clinical practice.

## Veterinary Disorders of Neurology and Esthematology

- In clinical veterinary medicine, the importance of neurological diseases, occurring in the brain, spinal cord, and peripheral nerves, has been increasing with the advance techniques of the diagnostic imaging. This course lectures on the diagnosis techniques and treatments of typical diseases occurring in the nervous system.
- Lectures on the diseases occurring in the sensory organs, such as eye balls, inner ears, middle ears, ear canals, and other organs associated with vision and hearing, closelyrelated with the neurological systems are offered.

#### **Clinical Animal Behavior**

- This course is focused on understanding "action therapeutics" systematically, with its basic concepts, definitions of problem behaviors, types, features, pathogenesis, pathophysiology, risk factors, symptoms, diagnostic methods, treatment, and follow-up methods, and helps students acquire the ability to apply the study in clinical settings.
- From the perspective of the human-animal bond, students will understand animal-assisted therapy training, breeding working dogs, and the relationship between owner and animal.

#### **Veterinary Hematology**

- This course aims to understand the hemopoietic system, hemostatic mechanism, and mechanisms of the increase and decrease of blood cells, and their various pathological conditions, which are essential to understand the hematological disorders occurring among animals.
- Students will study the immune-mediated hematopoietic diseases, lymphoid tumors, leukemia, myelodysplastic syndrome (MDS), and their classifications and pathology to acquire basic knowledge of the diagnosis, treatment, and prognosis.

#### **Veterinary Locomotory Diseases**

- This course focuses on understanding the structure and function of musculoskeletal system of companion animals.
- This course will explain the pathogenesis, pathology, diagnosis, and treatment of the major musculoskeletal diseases, including the differences of animal species.
- It will also explain the diseases of bones, joints, tendons, and ligaments with the latest information, and help students acquire the knowledge of musculoskeletal diseases.

#### **Veterinary Clinical Oncology**

- 1. This course offers lectures on the diagnostic methods of neoplastic diseases of companion animals.
- 2. Lectures on the treatment methods of neoplastic diseases of companion animals are also offered in this course.
- This course will also offer lectures on the overview of major neoplastic diseases, and on the respective diagnosis, treatment, and prognosis.

#### **Wild Animal Medicine**

- Students will discuss the concept of ecology and conservation science, as a base of wild animal veterinary.
- This course will explain the anatomy, physiology, breeding and diseases of wild animals.
- As an actual practice field, students will acquire the basic knowledge of aid for injured wild life and wildlife protection management, and receive an explanation of the relevant laws and regulations.

#### **Bovine Clinical Medicine I**

- This course will explain the basic knowledge, testing methods, diagnostic methods and treatment methods which are essential to perform medical treatment on cattle.
- 2. This course will also explain diseases widely, such as gastrointestinal disease, respiratory disease, cardiovascular disease, and urological disease.

#### **Bovine Clinical Medicine II**

- This course will explain the basic knowledge, testing methods, diagnostic methods and treatment methods which are essential to perform medical treatment on cattle.
- This course will also explain diseases widely, such as metabolic disease, sense organ disease, musculoskeletal disease, addiction, neonatal disease, and mastitis disease.

#### **Bovine Clinical Medicine III**

- An outline of the diagnosis and classification of reproductive disorders, mainly of female companion animals and large animals, and the prevention, diagnosis, and treatment of organ diseases, infertility, and abnormal pregnancy period (including infection), based on the knowledge obtained in veterinary reproduction course will be offered.
- This course will explain the developmental engineering and reproductive engineering of cattle, and students will understand the current state of its field application.
- This course also describes the reproductive physiology and genital disease of male livestock, and explains the causes, diagnosis, and treatment methods of male livestock-specific diseases.

#### **Equine Clinical Medicine**

- This course will explain the diagnosis and treatment methods of specie-specific diseases, which are the basis for clinical equine veterinary medicine, with the history and modern situation of culture and industry of domestic and foreign horses.
- Students will understand the importance of cause differential diagnosis, which leads to a correct treatment selection in the colic disease field with very high occurrence rate.
- Lectures on the applicable treatment to the stagediagnosis for heart and respiratory diseases which could lead to exercise intolerance of competition horses will be offered.
- 4. Students will deepen their understanding of the musculoskeletal damage and hoof disease related to the structure, claudication, and movement of horse bodies and of the infertility and miscarriage that could cause a significant economic damage to the horse industry.

#### **Porcine Clinical Medicine**

- 1. This course offers lectures on the basic veterinary materials used to ensure safe and stable pork production.
- Students will gain knowledge of pig diseases, productivity barriers, collective preventive health, and farm biosecurity.
- Students will also gain an understanding of the process of pork distribution and consultation, from production to consumption.

#### Veterinary Preventive Medicine and Animal Health Management

- Students will learn feeding management of major livestock and the basics of various accident prevention methods.
- 2. This course aims to help students understand the physiological mechanisms for lactation, damage in maternal bodies, and transitional periods around parturition that require attention. Students will deepen their knowledge of pathogenetic mechanisms of metabolic and peripartum diseases.
- 3. Students will learn the TMR method, the management methods of dry, transitional, and postpartum periods, and deepen their knowledge of causes and countermeasures to prevent juvenile livestock's death.
- Students will also learn about environmental stress, accidents in a LISA type system, such as grazing, and group-level prevention management.

#### **Practices of Veterinary Basic Clinical Medicine**

- 1. This course aims to help students acquire the basic methods and skills of medical treatment on animals.
- This course focuses on the treatment methods of animals, collection of biological materials, and various laboratory tests using these materials.

## Practices of Companion Animal Diagnostics and Therapeutics A

- Students will learn more practical clinical test methods to upgrade the skills and knowledge acquired in basic clinical practice, including the interpretation of test results.
- Students will also learn advanced diagnosis methods that target various organs (blood, respiratory, circulatory, digestive, and nervous system).

## Practices of Companion Animal Diagnostics and Therapeutics B

- This course aims to help students acquire additional practical clinical examination methods to the ones acquired in "Practices of Companion Animal Diagnostics and Therapeutics A" course (related to urology, bone marrow, musculoskeletal, ophthalmology, and tissue collection).
- Students can comprehensively acquire the diagnosis methods of various diseases of dogs and cats by exercising case studies, including: clinical history, physical examination, blood examination, imaging test, cytology, and pathological examination.
- 3. Students have the opportunity to exercise treatment methods for diseases diagnosed from the case studies in group discussions or comprehensive debates; thus, they can learn about the process, from diagnosis to treatment, of companion animal diseases.

#### Practices of Veterinary Anesthesia and Surgery I

- This course provides practical education on sedation, anesthesia, operation and perioperative management.
- 2. Students will acquire basic surgical preparation and operation skills.
- 3. In anesthesiology, students will learn drug effects on living bodies, using a variety of laboratory animals and the basics of monitoring perioperative management.
- 4. As for the basics of operation, students will acquire the basics of surgical operation, with trainings using surgery-practice models and operation videos.

#### Practices of Veterinary Anesthesia and Surgery II

- This course provides the education and training on surgery techniques needed to deepen the understanding of surgery operation with operation videos, simulation software, and slaughtered materials.
- Students will learn approach methods, handling of organs and the operative procedure for typical diseases in each part of the body as practical operative procedure using laboratory animals.

## Practices of Large Animal Diagnostics and Therapeutics I

- Students will acquire the basic knowledge necessary for the diagnosis and treatment on goat and cattle, the techniques of retention method, diagnosis, examination, and treatment methods.
- 2. This course ensures the acquisition of knowledge with actual practice with animals and the knowledge obtained from the "bovine clinical medicine" course and helps students acquire the basic veterinary techniques.

## Practices of Large Animal Diagnostics and Therapeutics II

- This practical course covers the diagnosis and treatment of living bodies and anatomical bodies of horses and pigs. Group trainings are implemented according to the subject provided.
- 2. This course also covers the claudication diagnosis methods, acromelic X-ray inspection method, echography of the heart, tendons, ligaments and joint causes, the endoscopy methods of the respiratory tract, esophagus, and stomach, and the diagnostic imagining methods of horse-specific diseases.
- Students will acquire the knowledge needed to perform sedation and anesthesia on horses, and a general-purpose skill of laryngeal and endoscopic surgery.
- 4. As for pigs, students will perform general-purpose surgery, such as surgical castration or dental manipulation after acquiring the basic diagnosis skills such as blood collection, drug administration, and sedation method.
- 5. This course provides practical experiences of pig reproduction and breeding techniques.

#### **Practices of Veterinary Reproduction**

- In this course, students can experience reproductive physiology systematically in animals, understand the process of the estrous cycle, pregnancy, delivery, and parturition in major animals (cow and dog), and acquire the ability to diagnose reproductive anomalies.
- Students will also experience the basics of developmental biotechnology and techniques to control artificially reproductive functions, and acquire the ability

to explain the contents, the impact on animal health, and the safety of livestock products.

## Practices of Companion Animal Clinical Medicine

- In this course, students will verify the basic medical knowledge and skills needed for companion animals acquired from past lectures and practicals with participation in actual clinical practice at animal hospitals (Animal Medical Center).
- 2. Via medical practice, students will acquire communication skills to communicate with the patients and description methods of medical records, as well as deepen their understanding of: diagnosis procedure, various testing methods, interpretation of results, pathophysiology of the disease, and various treatment methods.
- Students will also learn the principles and procedures needed for practical anesthesia and surgery, perioperative period and postoperative management for surgical diseases.

#### **Practices of Large Animal Clinical Medicine**

- This course will verify the basic medical knowledge and skills needed for large animals acquired from past lectures and practicals with participation in actual clinical practice at the university farm or a local agricultural mutual relief association.
- 2. Via medical practice, students will acquire the skills needed for communication with owners and description of medical records, as well as deepen their understanding of: diagnosis procedure, various testing methods, interpretation of results, pathophysiology of the disease, and various treatment methods.
- Students will learn the principles and procedures of practical anesthesia and surgery, perioperative period and postoperative management for the surgical disease.

#### **Special Course Seminar**

- Through the active learning of each advanced subject, students will cultivate application skills and establishment of the essential skills and knowledge gained from the core curriculum.
- Students will also cultivate a good comprehension of information via reading western scholarly articles, or reporting and debating on experiments, investigations, and case of the specific subjects.
- 3. This course also aims to help students acquire information and knowledge of related fields, train them to understand and explain nature in a proper manner.

#### **Graduation Thesis**

- Through one's voluntary research of each advanced subject, students will cultivate application skills and establishment of essential skills and knowledge gained from the core curriculum.
- According to one's research subject, students will develop and implement, experiment and research, analyze and discuss the results, and acquire methodology, experimental techniques, literature search method, concluding thesis, and presentation methods.
- Students will actively learn about scientific research via one's voluntary learning opportunities for graduation thesis and cultivate the problem-solving skills.

#### **Advanced Practices of Animal Life Science**

1. Students will learn the analysis methods of the

- development process, structures and functions in animals.
- This course offers lectures on the essential techniques and the updated technologies of the specific field for performing research.
- 3. This course also introduces up-to-date experimental procedures, methods and technologies.

## Advanced Practices of Pathogenetic and Preventive Science

- 1. Students will acquire the important experimental techniques for advanced veterinary research.
- This course provides guidance for pathology, hygiene, bacteriology, virology, parasitology, protozoan disease study and immunology.

## Advanced Practices of Companion Animal Veterinary Medicine

- The instructor of clinical veterinary medicine for companion animals provides research guidance with specific experiments and investigation according to one's graduation thesis topic.
- The instructor provides the clinical skills on companion animals via diagnosis of clinical cases.

## Advanced Practices of Large Animal Veterinary Medicine

- The instructor of clinical veterinary for large animals provides research guidance with specific experiments and investigation according to one's graduation thesis topic.
- 2. The instructor provides clinical skills on large animals via medical practice of clinical cases.

#### **Advanced Lectures of Animal Life Science A**

- This course centers on lectures on the enhancement and importance of the most advanced basic veterinary field from the professional or researcher's point of view.
- Lecture topics include embryology, anatomy, physiology, biochemistry and pharmacology with the latest findings and materials.

#### **Advanced Lectures of Animal Life Science B**

- This course centers on lectures on the enhancement and importance of subjects of the most advanced basic veterinary field from the professional or researcher's point of view.
- Lecture topics are centered on the latest findings and materials from the perspective of anatomy, physiology, biochemistry, molecular biology, pharmacology, and ethology.

## Advanced Lectures of Pathogenetic and Preventive Science A

- This course centers on lectures on the enhancement and importance of subjects of the most up-to-date basic veterinary field, which is deeper than the materials in the core curriculum course, from the professional or researcher's point of view.
- Lecture topics include pathology, hygiene, bacteriology, virology, parasitology, protozoan disease study and immunology. Students will learn a wide range of basics, important for advanced veterinary professionals in applied veterinary medicine fields.

## Advanced Lectures of Pathogenetic and Preventive Science B

- Lectures on "the diagnostic techniques on animal disease and its control" are provided by responsible instructors, with major animal diseases and cases.
- Students will acquire highly-specialized knowledge of the occurrence, etiology, pathophysiology, and prevention of the topics using the latest findings and information, which are deeper than the core curriculum materials.

## Advanced Lectures of Companion Animal Veterinary Medicine A

- This course aims to help students understand the latest diagnosis and treatment methods of major diseases of companion animals: infectious diseases, central nervous system diseases, tumors and diseases related to immune system and allergies.
- Students will acquire the ability to explain and challenge oneself with the present and future of veterinary care and animal welfare of companion animals.

#### Advanced Lectures of Companion Animal Veterinary Medicine B

- 1. This course explains genetic diseases of animals.
- Lectures on infectious diseases of companion animals are offered in this course.
- Explanations of diagnostic imaging of companion animals, which require advanced technologies are also offered in this course.
- 4. This course aims to explain the diagnosis, treatment, and the latest information of urological disease, musculoskeletal disease, cardiovascular disease, and neoplastic disease of companion animals.

## Advanced Lectures of Large Animal Veterinary Medicine A

- Students will acquire veterinary preventive medicine and health management skills, the technologies of artificial control of animal's reproductive functions, the diagnosis and treatment methods of claudication or other movement disorders, all of which could lower the productivity of industrial animals.
- Students will also acquire the ability to explain the impact on animal health and safety of livestock products from a scientific point of view.

## Advanced Lectures of Large Animal Veterinary Medicine B

- Lectures on the specialized knowledge and new findings of clinical veterinary for each large animal (cattle, horses, and pigs) are provided in this course.
- Students can deepen their expertise of communication and consultation with the farm and owners who engage in clinical veterinary for large animals.

# Student Support Services

Yamaguchi University has a student support system in which the students can comfortably spend their campus-life: financial support, dormitory rooms, health counseling, part-time job referral, etc. The staff at the Counseling Service will give professional advice and support, teaming with Health Administration Center and Student Counseling Room. All Yamaguchi University students are welcome to consult with them.

#### **Health Administration Center**

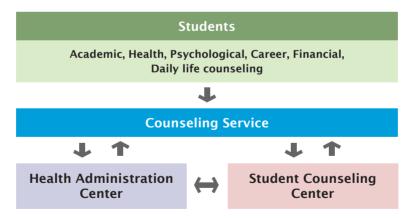
The Health Administration Center helps students to keep and/or improve health conditions. It supports them with preventing or early recognition of sickness and/or diseases with physical and/or psychological counseling and medical examination. In case of emergency, it provides first-aid treatment and/or early treatment. Yamaguchi University recommends all students to join the Student Health Insurance Union, as well as the Disaster and Accident Insurance for Student Education and Research.

## **Student Counseling Center**

Yamaguchi University offers counseling opportunity with clinical psychotherapists. The students can freely visit the room to relax and consult with them. All counseling matters are confidential; please feel free to consult.

## **Counseling Service**

Yamaguchi University's experienced counselors are available for students to give them professional advice, cooperating with the Health Administration Center. Please feel free to visit these counselors.



## Extracurricular Activities

Yamaguchi University offers 54 extracurricular activities. The athletic teams and cultural clubs are for all students to share their interests and enjoy themselves.

#### **Athletic teams**

- Aikido
- American football
- Archery
- Badminton
- Baseball
- Boating
- Cheering
- Cycling
- Female basketball
- Female lacrosse
- Female volleyball
- Golf
- Gymnastics
- Handball
- Horseback riding
- Ice hockeyJapanese archery
- ludo
- Karate
- Kendo

- Male basketball
- Male lacrosse
- Male volleyballMotor cycling
- Mountaineering
- Rubber Baseball
- Rugby
- Sail-boatingShorinii Kenpo
- Skiing

- Soccer
- Soft tennis
- Softball
- Swimming
- Table tennis
- TennisTrack and field
- Wandervogel (hiking)

#### **Cultural clubs**

Orchestra

Theater

Philharmonic chorus

Photography

Tea-ceremony

- Archeology
- Art
- Brass band
- Cave research
- F S S
- Japanese chess Youth hostel
- Japanese traditional music
- Literature
- Mandolin
- Film

## American football team

All members, including newly-joined freshmen, can join the games. Try a new sport and gain new sport and gai

the games. Try a new sport and gain new experience!

## Boating team

Aiming to win the national championship, we boat and practice

friendship is also available here. Feel free to come visit us!



### Judo team

We enjoy practice, but not only that, we often eat out together and have a good time.

Please join us!



## EVENTS!

Yamaguchi University holds several events throughout the year. Not only the students, but people from the local community also join and enjoy the campus festivals. Those festivals, such as Himeyama festival, Med school festival, and Tokiwa festival, provide them with a place of interaction.



## Brass band club

"Let's be nice people and play our instruments!"
We have won the national brass band contest 4 times. We also actively perform and teach in the local public schools.



We perform and learn Japanese traditional music.
We often perform at day-care centers and have regular concer



### Cheer team

Cheer is your youth! Anyone can shine! Do not worry about your body figure; the only thing you need is your smile. Why not join us?

## Female basketball team

We have practice every day for the intercollegiate Chugoku league.
Our friendships are

so precious, and the days we spend together are very fulfilling.

# Tea ceremony club

We practice for the official tea ceremonies (twice a year). Many are beginners here; so don't hesitate to jo

don't hesitate to join us! We welcome male students, too!

## Cave research

We explore and research many different caves, such as Akiyoshido.
We also do

"spelunking," one of the famous western outdoor sports. Please join us!



#### [Yoshida campus]

- 01 Welcome festival for new students
- Tanabata festival (dorm festival)
- O3 Himeyama festival (campus festival)
- 04 University Cup Ekiden

#### [Kogushi campus]

**os** Med school festival (campus festival)

#### [Tokiwa campus]

of Tokiwa festival (campus festival)





## Admission

### JFVM Students

JFVM at Yamaguchi University seeks out students who exhibit strong academic interests and an inquiring mind, as well as students who have logical thinking skills, creativity, communication skills for teamwork and society in harmony with nature.

#### JFVM seeks out students who:

- Understand the wide-range responsibilities and have a clear purpose to work as a veterinarian.
- Have learned the concepts of basic subjects such as natural science, humanity, social science and language with adequate academic ability to comprehend knowledge and skills as a veterinarian.
- Actively seek for a healthy society in harmony with animals and have good communication skills.

#### **Prerequisite Subjects for Admission**

At the Department of Veterinary Medicine (DVM):

Students are expected to possess significant academic ability of mathematics, science and English for DVM courses. Additionally, adequate knowledge of the Japanese language, geography, history, and civics are needed to become a contributory veterinarian to the public and welfare.

The following are prerequisites for DVM admission:

- Mathematics: mathematical thinking and understanding of Math I, Math II, Math A, and Math B
- Science: completion and scientific thinking of 2 subjects from: physics, chemistry, biology, or geology.
- Japanese and English: the skills of communication, reading, and thinking in both languages are important to play roles in the international field.
- Geography, history, and civics: deep consideration of animals and humans, and a wide perspective to analyze social problems are needed to contribute to welfare of animals and humans.

#### **General Entrance Exam**

#### **Application Process for All Applicants**

Individual Academic Achievement Test

- Yamaguchi University employs a separate installment system (1st and 2nd tests).
- All applicants are able to apply to one university for the  $1^{st}$  test, and another national university for the  $2^{nd}$  Test; an applicant is able to apply to at most 2 national universities.
- There is no regulation of sending 2 applications within Yamaguchi University; students are free to apply to different departments for the two tests.
- Yamaguchi University does not consider any result of the National University Entrance Examination (NUEE) of a past year.
- No makeup test is offered, no exceptions.

#### Test Schedule

1<sup>st</sup> Test: Late February 2<sup>nd</sup> Test: Early March

<sup>\*</sup>Application period and the date of acceptance notice will be announced every July.

#### **Eligibility of Applicants**

Applicants should take the required subjects of the national university entrance examination (NUEE), and they should match one of the following:

Applicants should:

- Have (or will receive by March before admission) a high school degree or secondary education degree.
- Have completed (or will complete by March before admission) 12 years of education.
- Possess (or will obtain by March before admission) the same or higher academic capability as high school graduates, in accordance with Article 150 in Ordinance for Enforcement of the School Education Act.

#### **Application Process**

Application Period:

End of January-Early February

Admission hours: 9:00-17:00 (Saturdays, Sundays and Holidays are closed)

#### **Admission Procedure**

Successful applicants are required to complete the admission process during the designated period.

#### Fees at Admission

- Admission Fee (Paid at admission process) 282,000 JPY
- Tuition (Paid after admission)

For Spring Semester: 267,900 JPY For Fall Semester: 267,900 JPY

Details of NUEE and IAAT

						-									
Name of Department	Type of Exam and Number of Recruited of Students		The National University Entrance Examination (NUEE)	The Indiv Achieven	The Individual Academic Achievement Test (IAAT)	Point Alloca	tion of the Ì	Vational U1	Point Allocation of the National University Entrance Examination and Individual Academic Achievement Test	ice Examin	ation and Inc	dividual Aca	idemic Ac	thievement'	Fest
		Field	Subjects	Field, etc.	Subjects	Type of Exam	Japanese	HIST/ GEOG/ PSCI/ ECON	Mathematics	Science	Foreign Language	Skill Test	Short Essay	Interview	Total Points
		Japanese Language	Japanese	Mathematics	Math I, Math II, Math A, Math B	NUEE	200	100	200	200	300				1000
		HIST/	Take 1 from: World History B, Japanese History B,												
		PSCI/ECON				IAA			200	200					400
	1st Test: February 25;														
Department	21 students	Mathematics	Math I and either Math I or Math A Math II and either Math II or Math B	Science	Take 1 from Physics I, II, Chemistry I, II.		200	100	400	400	300				1400
of Veterinary Medicine		Science	Take 2 from Physics I, Chemistry I, Biology I, Geology I		Biology Í, ÍÍ, Geology I, II	Total									
		Foreign Language	Take 1 from English, German, French, or Korean												
		Total	5 Fields; 7 subjects												
		Mathematics	Math I, Math A, Math II, Math B			NUEE			200	400	200				800
	2nd Test: March 25;	Science	Take 2 from Physics I, Chemistry I, Biology I	Other	Interview	4								200	200
	6 students	Foreign Language	Take 1 from English, German, French, or Korean												0
		Total	3 Fields; 5 subjects			Total			200	400	200			200	1000

## **Special Admission Cases**

### **Commendation Test**

Faculty & Department	The Joint Faculty	of Veterinary Medicine						
Division	The Department of	f Veterinary Medicine						
Recruited Students	3 students							
Admission Requirement	before since April Applicants also she the recommendation	aduate from high school in March before admission (or of pievious year). Their general academic evaluation is A. ould have a strong academic potential and good nature; on letter should be made by their school principals, and ald be assured when accepted.						
Selection Factors	documents: Applicants' docum	passed on a cohesive evaluation of the following tents, recommendation letter, statement of reason, grades versity entrance examination (NUEE), short essays and						
	The Fields and Sub	The Fields and Subjects of NUEE						
	Field	Subjects						
	Japanese History/ Geography	Japanese Language World History B, Japanese History B, Geography B						
	Civics	Ethics, Political Science and Economics						
	Mathematics	Math I, and either Math I or Math A Math II, and either Math II or Math B						
	Science	2 from: Physics I, Chemistry I, Biology I, or Geology I						
	Foreign Language	English						
Application Period	Mid-December							
Test Deadline	Late January							

## **Admission of Privately Funded Foreign Students**

Department	The Joint Faculty of Veterinary Medicine
Number of Seats	Few
Qualification for Applicants	Applicants must NOT possess Japanese citizenship (see *1&2), must take the Examination for Japanese University Admission for International Students [EJU] and EITHER the TOEIC or the TOEFL Test and must match one of the following:  - Applicants who have completed (or will complete by March before acmission) 12 years of schooling approved by MEXT.  - Applicants who are 18 years old or older (or will be 18 years old by March 31 before admission), approved by MEXT with an international baccalaureate degree: the abitur qualification, the baccalaureate degree (of France).  - EJU should be taken either in June or November before the admission.  - The TOEIC and TOEFL Test should be taken within 2 years of the application deadline, and students should submit a COPY of the official certificate.
Qualification for Applicants	Yamaguchi University only regards TOEIC Test with an official certificate.  *The TOEIC IP score is NOT regarded.  *1. Anyone who possesses a permanent residency in Japan CANNOT apply for this selection.  *2. Anyone who possesses a Japanese high school degree (or will obtain it by March before admission) CANNOT apply for this selection. He or she is considered as other domestic applicants, i.e. as Japanese high school graduates.
Application Period	End of January - Eary February
Selection Factors	The scores of EJU, IAAT, Transcript and TOEIC and/or TOEFL are cohesively used.

#### **Details of IAAT**

Name of Faculty	IAAT Subjects	Test Date
The Joint Faculty of Veterinary Medicine	Science (Biology I & II) Interview (in Japanese)	End of February

### **Details of EJU**

Name of Faculty	EJU Subjects	Test Language
The Joint Faculty of Veterinary Medicine	Japanese Language Mathematics (II & B)	Japanese
•	Science (take 2 from: Physics, Chemistry, or Biology)	

### **Admission for Transfer Students**

All candidates are expected to match one of the following:

- Graduated (or will graduate by March before admission) from university.
- Completed (or will complete by March before admission) 16 years of education abroad .
- Possess (or will obtain by March before admission) the same or higher academic capability as university graduates, in accordance with the provision of paragraph 4 of Article 104 in the Ordinances for Enforcement of the School Education Act.
- Is designated by the Principal of MEXT.

#### All candidates also need to:

- Have taken the TOEIC\* or TOEFL Test within 2 years of the application. (\*the TOEIC IP score is NOT regarded.)

#### **Application Process:**

Application Period:

End of Augast (1 week) and

End of January - Early February (1 week)

Admission hours: 9:00-17:00 (Saturdays, Sundays and Holidays are closed)

#### **Selection Methods**

Selection of applicants is conducted based on the comprehensive evaluation of the following results or scores:

Essay, certificate of English skill (TOEIC or TOEFL score), applicant's documents, a short thesis and interview.

#### **The First Selection**

The first selection consists of: an essay, applicant's documents, and submission of a certificate of English skill. The result of the selection will be sent to the individual applicants in Mid-September. The ID number of the successful applicants are also listed on Yamaguchi University's URL: http://www.vet-gokaku.agr.yamaguchi-u.ac.jp/

#### The Second Selection

To the successful applicants, the second selection includes: a short thesis and interview. Applicants take 2 interviews: an individual and a group interview.

- Documents for the short thesis may be provided in English.
- Applicant's documents may be used in interview.

#### Fees at Admission

- Admission Fee (Paid at admission process) 282,000 JPY
- Tuition (Paid after admission)

For Spring Semester: 267,900 JPY For Fall Semester: 267,900 JPY

#### **Recognition of Credit and Enrollment**

- Any Common Studies and General Studies taken outside of Yamaguchi University, regardless of the type of class, are recognized in accordance with JFVM's policy. As for Special Field Studies, however, no outside course or class is regarded.
- Students should remain in JFVM for no more than 10 years.
- Other information is given in the orientation after admission.

### **Other Information**

For those who have physical and/or mental concerns and desire specific consideration, please fill out and submit the consultation sheet by the end of June to discuss special treatment for education.

Depending on the situation, treatment may take time; thus please consult with the admission office as soon as possible.

\*Please put the following information in the consultation sheet:

- (1) Applicant's name, date of birth, sex, local address, zip-code, phone number, name of the school that applicants graduated from
- (2) Name of the department to apply
- (3) Type and degree of disability
  - \*Please submit the applicants' medical certificate and physical disability certificate, if he/she possesses it.
- (4) Details of treatment that applicants desire to receive for exams
- (5) Details of treatment that applicants desire to receive in class

#### **Consultation for Challenged Applicants**

Candidates who are physically and/or mentally challenged are suggested to consult with the Yamaguchi University admission office prior to the application process.

#### Consulting:

When applicants desire special treatment for their condition, please contact the admission office via phone, fax, or e-mail and submit a consultation sheet with details. Where appropriate, an interview may be held between applicants and a person related to the applicants' current school.

In the consultation sheet, please put the following:

- Applicants' name, date of birth, sex, local address, and phone number
- Name of school that applicants graduated (or is graduating) from and date of graduation
- Name of faculty and department to apply (if applicants have a second-choice faculty and department, please put them in also)
- \*If applicants are to take the standard IAAT, please put the date of 1st and 2nd test.
- Type and degree of disability (attach applicants' medical certificate and physical disability certificate.)
- Details of treatment that applicants desire to receive
- Condition and/or situation of applicants at current school (high school, etc.), mainly in class.
- Other references

#### Timing of Consultation:

When applying for the standard IAAT: by Mid-December

When applying to special admission: 2 weeks prior to the first application date.

#### Mailing address for Submission

Name of Office	Zip-code	Address	Phone/Fax/E-mail address
Admission Office of the Joint Faculty of Veterinary Medicine at Yamaguchi University	753-8515	1677-1 Yoshida, Yamaguchi City, Yamaguchi, Japan	Tel:+81-83-933-5808 Fax:+81-83-933-5812 E-mail: ve104@yamaguchi-u.ac.jp

# Financial Obligations

#### Fees of Admission and Tuition

The admission and tuition information is listed below:

		Amount	Payment Due Date
Admission		282,000 JPY	When enrollment occurs
Tuition	Spring Semester	267,900 JPY	End of May
	Fall Semester	267,900 JPY	End of November

The exemption of admission or/and tuition is applied to those for who it is deemed that payment is significantly difficult. The admission fee exemption, however, is limited to the case that the payers' death occurs a year or less before enrollment, or when payers suffer from natural disasters, such as windstorm or flood. The postponing of the admission fee is also possible. Please contact the Student Support Center for more details.

### **Scholarship System**

The half tuition scholarship is applied each semester to the selected students who achieve significant academic grades with good morals and common sense. This system gives an exemption of half of the semester's tuition. Freshman students are applied to this system in their second semester (fall semester), and there is possibility to keep receiving this scholarship with constant effort. \*The amount of exemption is subject to change.

## **Student Loan Program**

The student loan program is available for those who achieve significant academic grades with good morals and common sense. The following is a chart of the loan program by the Japan Student Services Organization.

	Month	y Loan	
Туре	Commuting from home	Not Commuting from home	Notes
Type 1	30,000 JPY 45,000 JPY	30,000 JPY 51,000 JPY	No Interest
Type 2	30,000 JPY 80,000 JPY 120,000 JPY	50,000 JPY 100,000 JPY	With Interest *the rate is limited to 3% per year after the student's graduation (Rate can be chosen by payers: fixed or adjustable rate)

### **Other Loan Programs**

Other loan programs are offered by local public organizations and private associations. Most of the loan information will be up in April or May and will be listed then. Please refer to the updated information on the Scholarship and Loan List at the Student Service Office.

- Local Public Organization scholarships and loans(e.g. Ishikawa Prefecture Scholarship Foundation,

Okinawa International Exchange & Human Resources Development Foundation, Okayama Prefecture Scholarship Foundation, Kawasaki City Scholarship Foundation, Yamaguchi Prefecture Human Resources Foundation)

- Private Association scholarships and loans (e.g. Ashinaga Scholarship Society, Masaru Ibuka Memorial Charitable Trust, Ikeda Charitable Trust Foundation, Utsumi Scholarship Foundation)

### Housing

#### **Dormitory**

The Yoshida Dorm (male only) and the Fushino Dorm (female only) are at Yoshida Campus, the Tokiwa Dorm (coed) is at the Ube Campus. Selection of residents is done according to their financial situations, etc.

Name	Yoshida1	Yoshida2	Fushino	Tokiwa A (male)	Tokiwa B (male)	Tokiwa (female)
Restrictions	Student	Students on Yoshida Campus		Students on Tokiwa or Kogushi Campus		
Capacity (students)	176	130	156	96	48	64
Monthly Fee	16,500 JPY	24,300 JPY	700 JPY	4,300 JPY	16,500 JPY	24,300 JPY
Admission Fee	20,000 JPY	20,000 JPY	10,000 JPY	3,000 JPY	20,000 JPY	20,000 JPY
Overhead Fee	500- JPY	500- JPY	10,000 JPY	10,000 JPY	1,000- JPY	1,000- JPY
Meal Fee	No Cafeteria	No Cafeteria	Breakfast: 100 JPY Lunch:250 JPY Dinner:250 JPY	No Cafeteria	No Cafeteria	No Cafeteria
Types of Rooms	14m² (single)	18m² (single)	14m² (twin)	8m² (single)	18m² (single)	18m² (single)

#### **Boarding and Apartment**

Yamaguchi University also provides information of boarding houses and apartments to students. The rent of those rooms varies depending on the room's equipment or age. Below is the expected range of rent in Yamaguchi prefecture:

Type of Room	Range of Rent
10 m² (sharing bathroom and laundry space)	8,000-30,000 JPY
10 m² with kitchen and bathrooms	16,000-40,000 JPY
12 m² with kitchen and bathrooms	20,000-50,000 JPY
$13\text{m}^2$ - $20\text{m}^2$ with kitchen and bathrooms	20,000-65,000 JPY

# Degree Requirements

- There is no requirement for promotion to the 2<sup>nd</sup> year of JFVM.
- For promotion to the 3<sup>rd</sup> year, all 2<sup>nd</sup> year students are required to complete: all the common studies (minimum 28 credits) and the basic studies (10 credits) as well as a minimum of 27 credits from the core curriculum (total 33 credits: 2 from the introductory, 28 from the basic, 2 from the practical, and 1 from the clinical). In total, a minimum of 65 credits are required.
- There is no requirement for promotion to the 4<sup>th</sup> year of JFVM.
- For promotion to the 5<sup>th</sup> year, all 4<sup>th</sup> year students are required to complete: a minimum of 104 credits from the special field studies (total 110 credits: 4 from the introductory, 38 from the basic, 42 from the practical, and 26 from the clinical). Including the credits from the common studies and the basic studies, a minimum of 142 credits are required.
- There is no requirement for promotion to the 6th year of JFVM.
- As for the core curriculum, 10 credits of the required advanced curriculum (the special course seminar and the graduation thesis) should be completed as well as a minimum of 6 credits from the elective advanced curriculum.
  - \*In addition, 4 out of the 6 elective credits should be taken as a "required-elective course", meaning that 2 credits (A & B class) of the same advanced practice. Students choose one from: Animal Life Science, Pathogenetic and Preventive Science, Companion Animal Veterinary Medicine, and Large Animal Veterinary Medicine. Another 2 credits should be taken from another advanced lecture besides the practice already chosen.
- For graduation, a minimum of 191 credits should be completed: 28 credits of the common studies, 10 credits from the basic core curriculum (\*a minimum of 38 credits as the subtotal of the common studies and the basic core curriculum), 137 credits from the core curriculum (7 from the introductory, 38 from the basic, 48 from the practical, and 44 from the clinical), and 16 from the advanced curriculum (elective-required course and other lectures).

# Academic Exchange Agreements

#### **University-Level Academic Exchange Agreements:**

Country	Institution	Date of Agreement
Indonesia	Brawijaya University	April 15, 2008
	Gadjah Mada University	October 14, 2008
	Bogor Agricultural University	March 10, 2010
	Udayana University	March 25, 2010
	Bandung Institute of Technology	May 25, 2012
South Korea	Inha University	June 25, 1998
	Kongju National University	March 15, 1999
	Hankuk University of Foreign Studies	December 2, 2003
	Gyeongsang National University	November 26, 2004
	University of Seoul	December 21, 2009
	Changwon National University	February 10, 2010
	Seoul National University	February 11, 2010
	Ajou University	March 8, 2010
	Ehwa Womans University	March 8, 2010
	Kunsan National University	April 26, 2010
Thailand	Kasetsart University	July 3, 1998
	Prince of Songkla University	October 29, 2001
	Khon Kaen University	October 30, 2001
	Chiang Mai University	October 31, 2001
	Srinakharinwirot University	November 1, 2001
	Agricultural Research Development Agency	August 27, 2008
	Chulalongkorn University	September 14, 2010
China	Shandong University	June 2, 1983
	Beijing Normal University	February 9, 2004
	Wuhan University of Technology	May 20, 2004
	Guizhou University	March 25, 2005
	Chongqing University of Technology	November 19, 2010
	Capital Normal University	October 17, 2011
Taiwan	National Chung Hsing University	March 9, 2006
	Tunghai University	September 30, 2009
	Feng Chia University	September 30, 2009
	Da-Yeh University	September 30, 2009
	Providence University	September 30, 2009
	National Yang Ming University	November 20, 2009
	Kainan University	October 15, 2012

Vietnam	Ministry of Education and Training of Vietnam	March 30, 2009
	University of Danang	September 17, 2009
	Can Tho University	November 16, 2011
	Hanoi University of Agriculture	March 29, 2012
Malaysia	University Malaysia Sarawak	March 29, 2012
	University of Technology, Malaysia	September, 5, 2012
Laos	National University of Laos	April 12, 2012
United Kingdom	University of Sheffield	November 28, 1997
	University College London	November 19, 2007
	University of Central Lancashire	November 5, 2012
Germany	Friedrich-Alexander-Universitat Erlangen-Nurnberg	March 17, 2003
Egypt	Cairo University	February 12, 2012
The United States of America	University of Oklahoma	February 19, 1996
Canada	University of Regina	February 7, 1996
Australia	University of Newcastle	August 8, 2003
	University of Technology, Sydney	May 30, 2012

### **Faculty-Level Academic Exchange Agreements:**

Country	Faculty and Institution	Date of Agreement
South Korea	College of Agriculture and Life Science, Chungnam National University	May 18, 2000
Thailand	School of Bioresources and Technology, King Mongkut's University of Technology Thonburi	May 23, 2006
	Faculty of Technology and Community Development, Thaksin University	January 16, 2012
	Faculty of Agricultural Production, Maejo University	February 23, 2012
China	Xinjiang Academy of Animal Sciences	September 2, 1991
	School of Urban and Environmental Sciences, Northeast Normal University	April 15, 2010
Nepal	Institute of Agriculture and Animal Science, Tribhuvan University	January 27, 2010
Bangladesh	Faculty of Biological Science, Jahangirnagar University	March 6, 2012
Vietnam	National Institute of Animal Science, Ministry of Agriculture and Rural Development	July 24, 2012
Hungary	Faculty of Agricultural and Food Sciences, University of West Hungary	November 9, 2011
Argentina	Faculty of Science, the National University of La Plata	April 27, 2011
New Zealand	New Zealand Institute for Crop & Food Research Limited	September 3, 2008



# Yamaguchi University Yearly Events

#### **Spring Semester 2014**

Events:	Date:	Events:	Date:
Spring Break	April 1- April 8	Open Campus :Tokiwa Campus	August 10
Class Registration	April 2- April 7	Offices Close	August 13- 15
(Upper-class) Entrance Ceremony	April 3	Chugoku Summer Sports Festival	Early August -Early September
Health Check (New Students)	April 2- April 7	Commencement and Entrance	September 24
Orientation	April 1- April 8	Ceremony of Fall Semester	Septemoer 21
Welcome Festival for New	April 5		
Students	Tipin 0	Fall Semester 2014-2015	
Seminar on Loan Reports for New Students	April 7- April 8	Events:	Date:
Class Registration (Freshmen)	April 8-April 15	Class Registration (Freshmen and Upper-class)	September 10-19
Classes Start	April 9	Classes Start	September 25
Seminar on Loan Applications for New Students (Freshmen)	April 9- April 10	Fall Clearing Day: Yoshida Campus	September 23 (TBA)
Health Check (Sophomore Students and Above) at Yoshida Campus	April 9- April 18	Himeyama Festival (University Festival)	Early November, TBA
Health Check (Sophomore	April 22- April 24	Tokiwa Festival	Early November, TBA
Students and Above) at Tokiwa Campus		Med-School Festival	November 8- November 9
Seminar on Loan Applications	Early April, TBA	3rd Quarter Exam	November 10-21
for Graduate Students		Chugoku Winter Sports Festival	Early November - Early December, TBA
Seminar on Loan Applications for Undergraduates (Sophomore	Early April, TBA	University Cup Ekiden	November 23 (TBA)
Students and Above)		Seminar on Traffic Safety	(TBA)
1st Quarter Exam	May 26- June 6	Chugoku & Shikoku Music/ Art Festival in Okayamai	December 19-21
Health Check (Sophomore Students and Above) at Kogushi Campus	May 12- May 13	Winter Break	December 25- January 7
Yamaguchi University's Anniversary	June 1	NUEE Preparation (Offices Close)	January 16
Seminar on Loan Receipts for	Mid-June, TBA	NUEE	January 17- 18
Sophomore Students and Above	Title Julie, 12/1	4th Quarter Exam	January 26- February 6
Summer Clearing Day: Yoshida Campus	June 19 (TBA)	Tuition Waiver Request for Spring Semester for	End of January - Early March (TBA)
The Tanabata Festival (Dorm Festival)	July 12	Undergraduate Students Spring Break	February 7- March 31
Seminar on Security and	Early July, TBA	1st IAAT Test	February 25- 26
Consumption Seminar on Loan Passints for	Late July, TBA	2nd IAAT Test	March 12- 13
Seminar on Loan Receipts for New Students	Late July, 1 DA	Commencement Ceremony (Doctorate Degree)	January 18
2nd Quarter Exam	July 22 - August 4	Commencement Ceremony	March 20
Tuition Waiver Request of Fall Semester	End of July - End of August	(Master's Degree and Bachelor's Degree)	
Summer Break	August 5- September 24		
Open Campus :Kogushi Campus	August 8		
Open Campus : Yoshida Campus	August 9		

# List of Faculty

#### **Basic Veterinary Science**

KISO Yasuo, PhD, DVM

Dean of the Joint Faculty of Veterinary Medicine Professor, Veterinary Anatomy

SATO Koichi, PhD, DVM

Vice-Dean of the Joint Faculty of Veterinary Medicine

Professor, Veterinary Pharmacology

YAMAMOTO Yoshimi, PhD

Professor, Veterinary Bioscience

WADA Naomi, PhD, DVM
Professor, Veterinary Physiology

KANO Kiyoshi, PhD, DVM

Associate Professor, Veterinary Developmental Biology

KUSAKABE Takeshi, PhD, DVM

Associate Professor, Veterinary Anatomy

OHAMA Takashi, PhD, DVM

Associate Professor, Veterinary Pharmacology

USUI Tatsuya, PhD, DVM

Assistant Professor, Veterinary Toxicology

#### Pathogenetic and Preventive Veterinary Science

IWATA Hiroyuki, PhD, DVM

Professor, Veterinary Hygiene

KIMURA Tohru, PhD, DVM, DJCLAM Professor, Experimental Animal

MAEDA Ken, PhD, DVM

Professor, Veterinary Microbiology

MORIMOTO Masahiro, PhD, DVM

Professor, Veterinary Pathology

TOYOFUKU Hajime, PhD, DVM

Professor, Veterinary Public Health and Epidemiology

NISHIGAKI Kazuo, PhD, DVM

Associate Professor, Molecular Immunology and Infectious Disease

SHIMIZU Takashi, PhD

Associate Professor, Veterinary Public Health

TAKANO Ai, PhD, DVM

Associate Professor, Laboratory of Epidemiology

WATANABE Rie, PhD, DVM

Associate Professor, Veterinary Hygiene

KUBO Masahito, PhD, DVM

Assistant Professor, Veterinary Pathology

MIYAKE Ariko, PhD

Assistant Professor, Molecular Immunology and Infectious Disease

SHIMODA Hiroshi, PhD, DVM

Assistant Professor, Veterinary Microbiology

WATANABE Kenta, PhD, DVM

Assistant Professor, Veterinary Public Health

#### Clinical Veterinary Science

MIZUNO Takuya, PhD, DVM

Professor, Veterinary Clinical Pathology

NAKAICHI Munekazu, PhD, DVM

Member of Education and Research Council Professor, Veterinary Radiology

OKUDA Masaru, PhD, DVM

Director of Animal Medical Center Professor, Veterinary Internal Medicine

OTOI Takeshige, PhD, DVM

Professor, Veterinary Theriogenology

SATO Hiroshi, PhD, DVM

Dean of United Graduate School of Veterinary

Professor, Veterinary Parasitology

TAURA Yasuho, PhD, DVM

Professor, Veterinary Surgery

BABA Kenji, PhD, DVM

Associate Professor, Veterinary Internal Medicine

ITOH Yoshiki, PhD, DVM

Associate Professor, Veterinary Radiology

KADOKAWA Hiroya, PhD,

Associate Professor, Veterinary Theriogenology

NOGUCHI Shunsuke, PhD, DVM

Associate Professor, Veterinary Clinical Pathology

TANI Kenji, PhD, DVM

Associate Professor, Veterinary Surgery

YANAGIDA Tetsuya, PhD

Associate Professor, Veterinary Parasitology

ISERI Toshie, PhD, DVM

Assistant Professor, Veterinary Radiology

NAKAZAWA Hiroshi, PhD, DVM

Assistant Professor, Veterinary Surgery

SHIMOKAWA Takako, PhD, DVM

Assistant Professor, Veterinary Internal Medicine

TANIGUCHI Masayasu, PhD, DVM

Assistant Professor, Veterinary Theriogenology

#### Animal Medical Center

ITAMOTO Kazuhito, PhD, DVM

Associate Professor, Small Animal Clinical Science

HARAGUCHI Tomoya, PhD, DVM

Assistant Professor, Small Animal Clinical Science

 $NISHIKAWA\ Shimpei,\ PhD,\ DVM$ 

Assistant Professor, Small Animal Clinical Science

#### United Graduate School of Veterinary Science

WATARAI Masahisa, PhD, DVM

Vice-Dean of United Graduate School of Veterinary

Professor, Veterinary Public Health