

Specifications for Major Program
 Name of School (Program) [School of Applied Biological Science comprises]

	Animal Science Program
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Program name (Japanese)	
(English)	Animal Science Program
1	Degree to be obtained: Bachelor of Agriculture
2	<p>2 Overview</p> <p>In the five major programs of the School of Applied Biological Science (Integrated Ecoscience Program, Fisheries Biology Program, Animal Science Program, Food Science Program, and Applied Molecular and Cellular Biology Program), the aim is to enable students to acquire a wide range of knowledge and wisdom in the realms of natural and social sciences related to applied biology. Specifically, we provide education that allows students to acquire basic knowledge regarding biotic resources and food production, biotechnology, and protection of the biological environment; gain experience in field science; understand bioethics and engineering ethics; and obtain capabilities in foreign languages such as English and in data processing.</p> <p>In the Animal Science Program, education is provided by faculty members belonging to six educational subjects (animal breeding and genetics, animal reproduction, animal nutrition and feeding, animal behavior and physiology, animal histophysiology, and Saijo Station (terrestrial field science)) enabling students to acquire basic knowledge and skills regarding animal production and use, and to be capable of widely considering issues in related areas, and of solving problems. To achieve the goal described above, in this program students study to develop their understanding of matters such as animal physiology; the development of useful new functions; the theory and technology for healthy, modern production; the relationship between nature, human beings, and animals; and the use of products for food. Students gain knowledge and skills related to these areas by attending lectures, and they also acquire intellectual and practical abilities by conducting practical fieldwork and animal experiments. In addition to this, they broaden their international perspective by participating in the foreign text reading course. Furthermore, students improve their abilities comprehensively by undertaking graduation research.</p> <p>This program aims to enable students to develop basic capabilities that can be used in areas of animal production related to such issues as the increased production and stable supply of animal food resources that are superior in quality and safety, the application of animal resources for improving the natural environment and human life, and the enhancement of an international outlook and engineering ethics.</p> <p>The students educated in the program are expected to go on to graduate school, or to become researchers and specialists with an international outlook working in institutions such as the public office for agriculture and fisheries, or in business fields related to foods and chemical/pharmaceutical products.</p> <p>3 Diploma policy (policy for awarding degrees and goal of the program)</p> <p>The Animal Science Program aims to develop professionals who are capable of working as specialists in fields related to issues such as the increased production and stable supply of animal food resources that are superior in quality and safety, and the application of animal resources for improving the natural environment and human life. Therefore, in this program, the degree of Bachelor of Agriculture will be awarded to students who have earned the required credits and certification to satisfy the specified level of achievement, passed the examination that is administered by the School of Applied Biological Science, and acquired the following abilities.</p> <p>Through liberal arts education, the student is required to acquire:</p>

practically use and apply these skills; and
9. The capacity to comprehensively apply the knowledge, skills, and attitudes oby apde siehug6(aph)-8(e s

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S=4 A=3 B=2 C=1

(Excellent)

(Very

Good)

(Good)

(Excellent)	3.00 4.00
(Very Good)	2.00 2.99
(Good)	1.00 1.99

90	
80 89	
70 79	
60 69	

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- 1. 3
- 2.

plan (do) (plan) (do) (check) (action)

(check)

(action)

(plan) (do) (check) (action)

(a)

(b)

o Curator License
o Appointment qualification for food sanitation supervisor and food sanitation inspector
* For details of acquisition of these qualifications, refer to the "Student Handbook."

7 Class subjects and their contents
* For the class subjects, refer to the subject table in Attachment 1. (The subject table is to be attached.)
* For the details of the class subjects, refer to the syllabus that is published for each academic year.

8. Academic achievement
The evaluation criteria are specified for each evaluation item for academic achievement, and the level of achievement against the criteria is given at the end of the semester.
The evaluation score for each evaluation item is converted to a numerical value (S = 4, A = 3, B = 2, and C = 1) and the evaluation standard for academic achievement, from the time the student entered the university to the end of the current semester, is determined using these values while applying weightings. The evaluation standard values correspond to three levels, i.e. Excellent, Very Good, and Good.

Study achievement	Evaluation standard	Achievement evaluation	Numerical conversion
Excellent	3.00 - 4.00	S (Excellent: 90 or more points)	4
Very Good	2.00 - 2.99	A (Very good: 80 - 89 points)	3
Good	1.00 - 1.99	B (Good: 70 - 79 points)	2
		C (Passed: 60 - 69 points)	1

* Refer to the relationship between evaluation items and evaluation criteria described in Attachment 2.
* Refer to the relationship between evaluation items and class subjects described in Attachment 3.
* Refer to the curriculum map in Attachment 4.

9. Graduation thesis (graduation research) (meaning, student allocation, timing, etc.)
o Purpose
The graduation research in this program aims to allow the student to dedicate himself/herself to cutting-edge research in order to systematically reach an understanding of contemporary problems and their background in the field of animal production science, and to acquire comprehensive capabilities while analyzing and considering his/her obtained results.
o Overview
Students are allocated to the laboratory of animal breeding and genetics, the laboratory of animal reproduction, the laboratory of animal nutrition and feeding, the laboratory of animal behavior and physiology, the laboratory of animal histophysiology, or Saijo Experimental Farm and Field Science Center, in order to plan for, execute, analyze, and examine the results of their research under the instruction of a supervisor. Finally they organize their results into a graduation thesis. Oral presentations are held for the research plan and results.
o Student allocation timing and method
1. Students are allocated to a laboratory in the second semester of the third year.
2. Students are allocated to a laboratory under the guidance of the tutor in charge, according to the allocation method stipulated for this major program. The tutor holds a guidance seminar for students in their second year to explain the specialties each supervisor. The tutor also instructs students to attend the presentation assembly for graduation theses and master theses in order to gain a better understanding of the details of the research undertaken by each supervisor. Students visit laboratories when they are in the first semester of the third year to learn about the details of the graduation thesis and the situation in the laboratory.
The number of students who are allocated to each laboratory is adjusted under the guidance of the tutor so that they are uniformly distributed among laboratories. If it is difficult to adjust the number of students, the tutor determines the student to be allocated based on the grades that the student has earned.

10. Responsibility
(1) Responsibility for PDCA (plan, do, check, and act) cycle
1. The education affairs committee of school and the faculty members who provide the lectures are engaged in the "plan" and "do" processes.
2. Each course has responsibility for planning and executing its major program. A chief faculty member is designated as the supervisor of the course.
3. The education affairs committee of the school exercises control over the major programs provided by the school.
4. The education affairs committee of the school consists of five members who are elected from each course, and a chairman who is chosen by the school.
5. The education reform promotion committee is engaged in the process of "check."
6. The education reform promotion committee consists of five members who are elected from each course, a chairman who is chosen by the school, the chairman of the education affairs committee of the school, and an assistant chief of the graduate course.
7. The education reform promotion committee reviews and evaluates the major programs provided in each course, reports the results to the education affairs committee of the school and the courses, and provides

(c)

advice and recommendations.

8. The course committee that takes the responsibility for execution of the major program is engaged in the process of "act."

9. The Course committee and the education affairs committee of the school prepare and execute a plan for improvement taking into consideration the report, advice, and recommendations that are provided by the education reform promotion committee after the "check" process.

The course committee, the education affairs committee of the school, and the education reform promotion committee cooperate with one another to execute their roles with responsibility in the "plan", "do", "check", and "act" cycle in order to improve the education provided by the school.

(2) Evaluation of the program

(a) Perspectives for evaluation of the program

This program is evaluated from the perspectives of "educational effectiveness" and "social effectiveness."

The "educational effectiveness" is evaluated by the effects of the implementation of the program on the educational achievement of the students.

The "social effectiveness" is evaluated by the effects of educational achievement in the program on society.

(b) Evaluation method

In this program, achievement in the program is evaluated from the perspectives described above for students in the second semester of the fourth year.

For "educational effectiveness", the results and achievements of the students who took the program are evaluated comprehensively by the group of faculty members who are engaged in the execution of the program. Also, the level of achievement of all the students is evaluated and reviewed.

"Social effectiveness" is evaluated based on such things as the rate of employment in corporations that have a close connection with the contents of this program, and the pass rate in public servant examinations. We regularly request a member of human resources staff from a company that mainly employs students from this program to evaluate the program. In addition to this, we request graduates of this program to evaluate their own achievement and that of program. The staff working in companies and other graduates are requested to provide evaluation and advice regarding whether the class subjects and their contents in this program had a positive effect on their social activities, whether the contents of the classes appropriately corresponded to changes in science, technology, and society, and any additional class subject that may be required in the future.

(c) Policy and method for feedback to students

The education reform promotion committee regularly conducts surveys and interviews for students to review and evaluate the program, improve the contents of the program, and provide advice and recommendations for improvement.

			<p>Animal Breeding and Genetics</p> <p>Practice for Animal Breeding and Genetics</p> <p>Animal Reproduction</p> <p>Laboratory Work in Animal Reproduction</p> <p>Animal Nutrition</p> <p>Animal Functional Anatomy</p> <p>Laboratory Work in Animal Functional Anatomy</p> <p>Food Production Management</p> <p>Practice in Animal Nutrition</p> <p>Environmental Animal Physiology</p> <p>Practice of Environmental Physiology</p> <p>Farm Practice</p> <p>Animal Welfare</p>					

		<p>Food Hygiene</p> <p>Genetic diversity in animals</p> <p>Developmental Engineering</p> <p>Feed Science</p> <p>Animal Physiology and Production</p> <p>Seminar in Dairy Field Science</p> <p>Grassland Farming</p> <p>Animal Pharmacology I</p> <p>Animal Production System</p> <p>Food Biochemistry</p> <p>Farm Animal Management</p> <p>Animal Pharmacology II</p> <p>Animal Pharmacology III</p> <p>Laboratory Animal Science</p> <p>Training for Animal Food Processing</p>						
		<p>Environmental Soil Science</p> <p>Physiology of Crop Production</p> <p>System of Regional Agriculture</p>						

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The liberal arts education in this Program plays the role of creating an academic foundation for specialized education to enable students to develop a voluntary and independent learning attitude; to cultivate scientific thinking based on their ability to gather information, their analytical capacity, and critical powers; to gain deep insight into the nature of and background to things from a broad perspective; to strengthen their language skills to enable them to live as an international person and to develop their interest in peace; to integrate their extensive knowledge into a body of knowledge truly useful for solving problems; and to develop the ability to look at things from a comprehensive perspective.

		(◎)		(◎)		Graduation thesis (◎)	Graduation thesis (◎)	Graduation thesis (◎)
		(◎)	(○)	(○)	Animal Welfare (◎)	Animal Production System (○)		
	(◎)	(○)			Grassland Farming (○)	Laboratory Animal Science (○)		
				(◎)		Graduation thesis (◎)	Graduation thesis (◎)	Graduation thesis (◎)
				(○)				
			(◎)					
					(◎)	Genetic Diversity in Animals (○)	Feed Science (○)	
					Animal Reproduction (◎)	Developmental Engineering (○)	Farm Animal Management (○)	
					Animal Nutrition (◎)	Environmental Animal Physiology (◎)	Animal Production System (○)	
					Animal Functional Anatomy (◎)	Feed Science (○)	Laboratory Animal Science (○)	
					Practice for Animal Breeding and Genetics (◎)	Animal Physiology and Production (○)	Animal Pharmacology I (○)	
					Laboratory Work in Animal Reproduction (◎)	Grassland Farming (○)	Animal Pharmacology I (○)	
					Laboratory Work in Animal Functional Anatomy (◎)	Practice in Animal Nutrition (◎)		
					(○)	Practice of Environmental Physiology (◎)		
						Animal Pharmacology I (○)		
		(◎)		(◎)		Feed Science (○)	(○)	
				(○)	Genetic diversity in animals (○)	Farm Animal Management (○)		
					(◎)	Developmental Engineering (○)	Animal Production System (○)	
			(○)		Animal Reproduction (◎)	Environmental Animal Physiology (◎)	Laboratory Animal Science (○)	
					Animal Nutrition (◎)	Animal Welfare (◎)	Animal Pharmacology I (○)	
					Animal Functional Anatomy (◎)	Feed Science (○)	Animal Pharmacology I (○)	
					(○)	Animal Physiology and Production (○)		
						Grassland Farming (○)		
						Farm Practice (◎)		
						Seminar in Dairy Field Science (○)		
					Animal Pharmacology I (○)			

	(○)				(◎)	Graduation thesis (◎)	Graduation thesis (◎)	Graduation thesis (◎)
				Practice for Animal Breeding and Genetics (◎)		Graduation thesis (◎)	Graduation thesis (◎)	Graduation thesis (◎)
			(◎)	Laboratory Work in Animal Reproduction (◎)			(○)	
				Laboratory Work in Animal Functional Anatomy (◎)				
				Practice for Animal Breeding and Genetics (◎)				
				Laboratory Work in Animal Reproduction (◎)				
				Laboratory Work in Animal Functional Anatomy (◎)				
					Practice in Animal Nutrition (◎)			
					Practice of Environmental Physiology (◎)			
					Farm Practice (◎)			
					Seminar in Dairy Field Science (○)			
					Practice in Animal Nutrition (◎)			
					Practice of Environmental Physiology (◎)			
					Farm Practice (◎)			
					Seminar in Dairy Field Science (○)			
						Graduation thesis (◎)	Graduation thesis (◎)	Graduation thesis (◎)
				(◎)		Graduation thesis (◎)	Graduation thesis (◎)	Graduation thesis (◎)
				Animal Reproduction (◎)	Genetic diversity in animals (○)	Feed Science (○)		
			(◎)	Animal Nutrition (◎)	Developmental Engineering (○)	Farm Animal Management (○)		
	(◎)	(◎)		Animal Functional Anatomy (◎)	Environmental Animal Physiology (◎)	Animal Production System (○)		
	(○)	(◎)		(◎)	Animal Welfare (◎)	Laboratory Animal Science (○)		
		(○)		Practice for Animal Breeding and Genetics (◎)	Feed Science (○)			
				Laboratory Work in Animal Reproduction (◎)	Animal Physiology and Production (○)			
				Laboratory Work in Animal Functional Anatomy (◎)	Grassland Farming			
					Practice in Animal Nutrition (◎)			
					Practice of Environmental Physiology (◎)			
					Farm Practice (◎)			
					Seminar in Dairy Field Science (○)			

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