

Module Code	20349040	Course Term
Course Subject Name	<b>Environmental and Ecological Science for Animal Production</b>	<b>Spring</b>
Course Tutor	<b>Yuji Oshima</b>	<b>The 4th Semester</b>
Credit	2	Taught Day
Schools	School of Agriculture	<b>MON-1</b>
Taught Year	The 2nd year	
Campus	Ito campus	
Subject Area	Lecture	
Course Subject Classification	Specialized Subjects	
Course Requirements		
Course Requirement (Pre-requisite)	none	
<b>Course Outline</b>		
Students learn the environment for animal production.		
<b>key words</b>		
Leader, Scientist		
<b>Study Objectives (General)</b>		
This course is designed to let students be understand the environment and ecosystem for animal production.		
<b>Study Objectives (Specific)</b> The course aims to achieve the following:		
A. Students can learn pollution in marine ecosystem . (Prof.Oshima)		
B. Ecological functions, uses and potential of seagrass and seaweed beds (Assistant Prof. Kurihara)		
C. Students can learn reproductive strategies in fish. (Prof. Mochioka)		
D. studies on many kinds of impact or load to environment which livestock gives through the process of production. (Prof. Takahsahi)		
E.Students can learn stress in animal production (Prof. Furuse)		
F. Students can learn physiological response to environmental lighting condition (Prof. Yasuo)		
G. The Relationship between Mammalian Reproduction and Environment(Prof, Kaneko)		
<b>Course Plan</b>		
1. (4/6) Prof Oshima: Introduction of course.		
4-5: (4/13 4/20) Prof. Yasuo: Day-night cycle or seasonal changes in photoperiod greatly affect the animal reproduction and metabolism on the basis of biological clock. Students wil learn what are the biological clock, and how animals respond to environmental lighting condition to regulate		
2-3. ( 4/27, 5/11 Prof. Oshima Pollution of chemicals (heavy metals, radio istopes, persistant organic pollutants, endocrine disruptor, in marine ecosystem and their effect on aquatic organisms will be lectured.		
6,7,11. (5/18, 5/25, 6/1) Prof Mochioka: The reproductive strategies (behavioral, developmental and physiological adaptations) in fish will be		
8-10. (6/8, 6/15) Prof. Nakano, Takahashi :Animal physiology, reproduction, behavior and growth are affected by various factors in environment. Meanwhile animals, especially livestock give many kinds of impact or load to environment through the process of production. In this lecture, the relationship between animal and environment will be considered from various aspects.		
11. (6/22) Prof. Nakano:The foot-and-mouth disease that occurred in Japan and Korea in 2010 had a major impact on livestock production in both countries. In Japan's Miyazaki Prefecture, more than 280,000 livestock were killed. In this lecture, we will talk about the effects of foot-and-mouth disease in livestock production.		
12, 13. (6/29, 7/6), Assistant prof. Kurihara: Have you ever heard about algae, marine plants, seaweeds or seagrasses? In the first week, I will briefly talk about how and why algae have been important for us. Specifically, I will focus on ecological functions of seaweeds and seagrass. In the second week, I will talk about utilization of marine plants in the past, present and, future.		
14. (7/13) Prof. Furuse: The mechanism by which stress influences animal production and how to reduce the stress response will be lectured.		
15. (7/20) Prof. Kaneko: Students can learn the relationship between mammalian reproduction and environment.		
<b>Course Approaches</b>	Lecture	
<b>Textbooks</b>		
<b>Reference Books</b>		
<b>Study consultation (office hour)</b>	Office: Room 570	
	Office Hours: 12:30-13:30 (Yuji Oshima)	
	Email: yoshima@agr.kyushu-u.ac.jp	
	Phone: 092-802-4607	
<b>Exams/Results Evaluation Method</b>	1. Attendance of the course	
	2. Reports	