

Module Code	19349035	Course Term
Course Subject Name	Bio-Engineering 2	Spring
Course Tutor	Jiro Nakayama	The 6th Semester
Credit	1	Taught Day
Schools	School of Agriculture	FRI-1
Taught Year	The 3rd year	
Campus	Ito campus	
Subject Area	Lecture	
Course Subject Classification	Specialized Subjects	
Course Requirements		Friday, 1st period (8:40-10:10)
Course Requirement (Pre-requisite)	Students are requested to take the following subject; Microbiology, Food Science, and Molecular Biology.	
Course Outline		
Bio-Engineering is a developing and growing subject based on the results of bioscience. This course focuses on enzymes and food processing, biotechnology in food safety, inactivation of microorganisms, microbial secondary metabolites, microbial genetics, enzyme engineering, environment engineering, plant biotechnology, and fermentation engineering. Students learn the important aspects of Bio-engineering.		
key words		
Biotechnology, Food processing, Applied micorobiology, Enzyme engineering, Plant biotechnology		
Study Objectives (General)		
This course is designed to let students be aware of the fundamentals and the current developments of Bio-Engineering.		
Study Objectives (Specific) The course aims to achieve the following:		
Course Plan		
June 26: Nakayama · Zendo: Microbial engineering and control (2)		
July 31: Igura: Enzymes and enzyme production		
July 10: Miyamoto: Rapid methods for detection, identification and enumeration of microorganisms		
July 17: Doi: Phage biology and application		
July 24: Fujino: The Biology of extremophiles (2)		
July 31: Honjoh: (2) Plant biotechnology for utilization as food		
Aug 7: Masuda: Antibiotic resistance and Persister cells (2)		
Course Approaches		
Textbooks		
Reference Books		
Study consultation (office hour)	Office: 648 Office Hours: 16.30-17.30 (Jiro Nakayama) Email: nakayama@agr.kyushu-u.ac.jp Phone: 092-802-4736	
Exams/Results Evaluation Method	1. Attendance, in-class activities and others (50 %) 2. Exam or Report (50%)	
Others		