AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Agricultural Microbiology						
Course Code	TBY307		Couse Level	First Cycle (Bachelor's Degree)			
ECTS Credit	3	Workload	70 *(Hours)*	Theory	2	Practice	0	Laboratory	0
Objectives of the Course	To introduce microbiology and microorganisms to the student To establish the basis of microbiology, to raise awareness about the interaction with microorganisms in daily life, to relate microbiology with agriculture.						
Course Content	Preparation of starter culture in dairy products, isolation of nitrogen fixating bacteria from soil, relationship of bioinsecticides with agriculture, THP production						
Work Placement	N/A						
Planned Learning Activities and Teaching Methods			Explanation (Presentation), Experiment, Demonstration				
Name of Lecturer(s)	Lec. Evrim ELÇİN						

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading

1	Agricultural Microbiology, A.Kadir HALKMAN, Ankara

Week	Weekly Detailed Course Contents	
1	Theoretical	Use of starters in milk and dairy products
2	Theoretical	Properties of lactic acid bacteria
3	Theoretical	Starters used in dairy products
4	Theoretical	Bacteriophage detection
5	Theoretical	Symbiotic nitrogen detection
6	Theoretical	PlantGrowthPromotingRhizobacteria (PGPR)
7	Theoretical	Isolation of Rhizobium strains
8	Intermediate Exam	Midterm Exam
9	Theoretical	Application of biological fertilizer
10	Theoretical	Selection of biological fertilizers and strains
11	Theoretical	Nitrogen fixation and plant factors
12	Theoretical	Bioinsecticide production
13	Theoretical	Waste water treatment systems and application
14	Theoretical	Single cell protein production
15	Theoretical	Single cell protein production
16	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	1	42
Lecture - Practice	10	1	1	20
Midterm Examination	1	3	1	4
Final Examination	1	3	1	4
			Total Workload (Hours)	70
			[Total Workload (Hours) / 25*] = **ECTS**	3

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Relationship between milk and milk products

2	The relationship between nitrogen fixation and agriculture
3	Bioinsecticide and agriculture are learned
4	The damages of waste water to agriculture are learned
5	THP production is learned

Programme Outcomes *(Agricultural Biotechnology)*

1	To be able to develop skills in identifying, modeling and solving problems in agricultural biotechnology
2	To be able to synthesize life and engineering sciences for the effective resource planning of agricultural biotechnology applications
3	To be able to interpret about living organisms structure, metabolic and physiological processes in order to propose biotechnological solutions to the agricultural problems
4	To be able to analyze genomic, metabolomic and proteomic information via bioinformatic tools.
5	To have the ability to analyze collected data and interpret the results.
6	To have the ability of individual working ability and to make independent decisions, to work in inter-disciplinary and interdisciplinary teamwork, to communicate by expressing their ideas orally and in writing, clearly and concisely
7	To have the awareness of professional liabilities and ethics
8	To be able to follow current national and international problems

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P1	4	3	3	3	4
P2	3	3	2	5	5
P3	3	3	5	5	5
P4	2	2	2	2	4
P5	3	3	3	3	4
P6	3	3	3	4	3
P7	3	3	4	4	3
P8	3	3	3	3	3