



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Biotechnology and Commercial Products							
Course Code		MBTK642		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	10	Workload	252 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The aim of this course is to give information about commercial biotechnology							
Course Content		Contents of this lecture includes biotechnologically produced vaccines, antibiotics, genetically modified animals, bacteria, plants, hormones, artificial organs and vitamin production							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Experiment, Discussion, Individual Study					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Commercial Biotechnology: An International Analysis
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Week	Weekly Detailed Course Contents	
1	Theoretical	History of Biotechnology
2	Theoretical	Biotechnology Companies
3	Theoretical	Biotechnology and commercial issues
4	Theoretical	Biotechnology, Patents, and Bioethics
5	Theoretical	Biotechnological Commercial enzymes
6	Theoretical	Biotechnological Commercial antibodies
7	Theoretical	Medicine and biotechnology
8	Intermediate Exam	Midterm exam
9	Theoretical	Biotechnological Commercial vaccines
10	Theoretical	Biotechnological Commercial hormones
11	Theoretical	Biotechnological Commercial antibiotics
12	Theoretical	Biotechnology and agriculture
13	Theoretical	Biodiesel and biofuel
14	Theoretical	Recombinant biotechnology
15	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	0	3	39
Assignment	6	0	15	90
Laboratory	5	0	5	25
Individual Work	13	0	5	65
Quiz	6	0	4	24
Midterm Examination	2	0	3	6
Final Examination	1	0	3	3
Total Workload (Hours)				252
[Total Workload (Hours) / 25*] = ECTS				10

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To have current information commercial biotechnology
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2	Will know commercial vaccins and their production
3	Will have current knowledge about antibiotic production
4	Will know genetically modified organisms in agriculture
5	Will know about biotechnologic production of hormones, animals, plants, and microorganisms

Programme Outcomes (Molecular Biotechnology(English) Interdisciplinary Doctorate)

1	Ability to identify, analyze and understand problems related to molecular biotechnology and finding valid conclusions with basic knowledge in biotechnology
2	Ability to appropriately use laboratories and their associated equipment as part of research and observation activities through various branches of sciences
3	Ability to understand and interpret biological processes at cell, tissue, organ, system and organism levels
4	Ability to decide and apply appropriate tools and techniques in biotechnological manipulation
5	Ability to comprehend fundamentals of genetics and molecular biology and carry out basic methods in relevant applications
6	Ability to apply the fundamentals of protein and DNA chemistry, and immunology to techniques in biotechnology
7	. Ability to understand and practice basics of applied biotechnology, with acquired knowledge on problem solving approaches
8	Ability to understand and interpret basics of molecular applications within medical, agriculture, veterinary and forensic sciences
9	Ability to perceive biological existence at the global and regional scales, together with comprehension of associated problems
10	Acquiring appropriate knowledge in the field of basic sciences to support perception, analysis and interpretation of biological facts, and ability to use and practice relevant methods for this goal
11	Ability to develop proficiency in laboratory management, including maintenance of an orderly work environment, inventory and ordering, and set up or maintenance of equipment
12	Ability to learn essential methods in microbiology and basic skills in a microbiology labortaory
13	Ability to demonstrate proficiency with standard techniques in liquid measurement, recombinant DNA technology, protein purification and identification, and cell culture

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	5	5	5	5	5
P2	5	5	5	5	5
P3	3	3	3	3	3
P4	5	5	4	4	4
P5	5	5	4	4	4
P6	3	3	3	3	3
P7	4	4	5	5	5
P8	4	4	5	5	5
P9	4	4	5	5	5
P10	4	4	5	5	5
P11	3	3	3	3	3
P12	3	3	3	3	3
P13	5	5	5	5	5

