



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Up to Date in Biotechnology							
Course Code		MBTK628		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	10	Workload	251 ( <i>Hours</i> )	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The aim of this course is to follow the current developent in biotechnology by reading and discussing the articles in scientific journals about biotechnology							
Course Content		Scientific original articles in the latest issues of the selected biotechnology journal for the week among the thirteen will be discussed during these lectures							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)		Prof. Bülent BOZDOĞAN							

### Assessment Methods and Criteria

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

### Recommended or Required Reading

1	Journal selected for lecture
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Week	Weekly Detailed Course Contents	
1	Theoretical	Microbial Biotechnology , Reading original articles in the latest issue
2	Theoretical	Biotechnology for Biofuels, Reading original articles in the latest issue
3	Theoretical	Biotechnology and Bioengineering, Reading original articles in the latest issue
4	Theoretical	Metabolic Engineering, Reading original articles in the latest issue
5	Theoretical	Journal of Industrial Microbiology and Biotechnology, Reading original articles in the latest issue
6	Theoretical	Enzyme and Microbial Technology, Reading original articles in the latest issue
7	Theoretical	Biocatalysis and Agricultural Biotechnology, Reading original articles in the latest issue
8	Intermediate Exam	Midterm exam
9	Theoretical	Recent Patents on Biotechnology, Reading original articles in the latest issue
10	Theoretical	Food Science and Biotechnology Reading original articles in the latest issue
11	Theoretical	Bioengineered Bugs, Reading original articles in the latest issue
12	Theoretical	Food Biotechnology Reading original articles in the latest issue
13	Theoretical	Avicenna Journal of Medical Biotechnology , Reading original articles in the latest issue
14	Theoretical	Genetic Engineering and Biotechnology Journal, Reading original articles in the latest issue
15	Final Exam	Final exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	0	3	39
Assignment	4	0	15	60
Term Project	4	0	6	24
Reading	5	0	4	20
Individual Work	13	0	6	78
Quiz	6	0	4	24
Midterm Examination	1	0	3	3
Final Examination	1	0	3	3
Total Workload (Hours)				251
[Total Workload (Hours) / 25*] = ECTS				10

\*25 hour workload is accepted as 1 ECTS



**Learning Outcomes**

1	Be able to follow current subjects of biotechnology
2	Be able to read scientific articles
3	Be able to follow current subjects in use of biotechnology in health
4	Be able to follow current knowledge on industrial biotechnology
5	. Be able to follow current knowledge about enzymes
6	Be able to follow current knowledge about methabolic pathways
7	Be able to follow current knowledge about inflammatory diseases
8	Be able to follow current biotechnology developement in food sector
9	Be able to follow current knowledge about genetic engineering

**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	L6	L7	L8	L9
P1	5	5	5	5	5	5	5	5	5
P2	5	5	5	5	5	5	5	5	5
P3	3	3	3	3	3	3	3	3	3
P4	5	5	4	4	4	4	4	4	4
P5	5	5	4	4	4	4	4	4	4
P6	3	3	3	3	3	3	3	3	3
P7	4	4	5	5	5	5	5	5	5
P8	4	4	5	5	5	5	5	5	5
P9	4	4	5	5	5	5	5	5	5
P10	4	4	5	5	5	5	5	5	5
P11	3	3	3	3	3	3	3	3	3
P12	3	3	3	3	3	3	3	3	3
P13	5	5	5	5	5	5	5	5	5

