



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Basic Microbiology							
Course Code		BYL107		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	78 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		The aim of the course is to give basic informations about microorganisms (prokaryotes, protozoa, fungi and viruses) and to teach the structure, biology, physiology, metabolism and classification of microorganisms and their use in biotechnology.							
Course Content		Microorganisms, microbial life, microorganisms cell structure, metabolism, microbial growth, metabolic regulation, evolution and systematic							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)		Prof. Dilek KESKİN							

### Assessment Methods and Criteria

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

### Recommended or Required Reading

1	Madigan, M.T., Martinko, J. M., Parker, J. 2016. Brock's Biology of Microorganisms. 14th Edition, Prentice-Hall, Inc., USA
2	. Lodish, H., Berk, A., Zipursky, S.L., Matsudaria, P., Baltimore, D., Darnell, J., 2000. Molecular cell Biology.
3	. Freeman W.H., Tortora, C. F., Funke, B. R., Case, C.L. 1995. Microbiology: An Introduction, 5th Edition, The Benjamin/Cummings Publishing Company Inc.

Week	Weekly Detailed Course Contents	
1	Theoretical	Microorganisms and microbiology, an overview of microbial life
2	Theoretical	Macromolecules, cell structure / function
3	Theoretical	Nutrition and laboratory culture and metabolism of microorganisms
4	Theoretical	Microbial reproduction
5	Theoretical	Principles of molecular biology
6	Theoretical	Metabolic regulation
7	Theoretical	Fundamentals of virology
8	Intermediate Exam	Mid term exam
9	Theoretical	Bacterial genetics
10	Theoretical	Microbial evolution and systematic
11	Theoretical	Prokaryotic diversity: Bacteria
12	Theoretical	Prokaryotic diversity: Archaea
13	Theoretical	Eukaryotic cell biology and eukaryotic microorganisms
14	Theoretical	Microbial genomics
15	Theoretical	Viral diversity
16	Final Exam	Final exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	15	0	2	30
Assignment	15	0	1	15
Reading	2	0	8	16
Individual Work	15	0	1	15
Midterm Examination	1	0	1	1



Final Examination	1	0	1	1
Total Workload (Hours)				78
[Total Workload (Hours) / 25*] = ECTS				3
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

1	To have information about basic microbiology
2	To learn classification of prokaryotic and eukaryotic microorganisms
3	To have knowledge about metabolism in microorganisms
4	To have information about the nutrition, growth and proliferation of microorganisms
5	To have information about evolution in microorganisms
6	To have knowledge about systematic in microorganisms
7	To understand the differences between prokaryotic and eukaryotic microorganisms
8	To have basic information about microbial genomics
9	To be able to comment on interactions between microorganisms
10	To be able to learn the applications of microorganisms in some applications in biotechnology

### Programme Outcomes (Laboratory Technology)

1	To be able to comprehend social, cultural and social responsibilities, to be able to follow national and international contemporary problems and developments
2	Atatürk is bound to Atatürk nationalism in the direction of principles and reforms; Adopting the national, moral, spiritual and cultural values of the Turkish people, open to universal and contemporary developments, the Turkish language is a rich, rooted and productive language; Have a love of language and a consciousness; To have the ability to use as much of a foreign language as he would need to read, taste and habit and professionally.
3	To be able to recognize the basic hardware units and operating systems of a computer, having information about internet usage and preparing documents, spreadsheets and presentations on computer by using office programs.
4	Acquires theoretical and practical knowledge at the basic level in mathematics, science and vocational field.
5	With the knowledge of laboratory technology in the field, he knows and analyzes problems, brings interpretation of data and suggests solutions.
6	In laboratories, according to the prepared business plan and program, necessary work can be done to obtain the desired quality products.
7	To have professional and ethical responsibility in business life.
8	Development and change are open, follow scientific social and cultural innovations, and develop themselves constantly.

### 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	L10
P4	5	4	5	4	5	5	5	5	5	5

