



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Basic Microbiology							
Course Code		KMT104		Couese Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	78 ( <i>Hours</i> )	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)									

### 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.

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	midterm
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 (Cosmetic Technology)

1	To know the classification of cosmetic raw materials, for what purpose, in which products and how much they should be used
2	Define and classify cosmetics,
3	To define, classify toxicity, Toxic substances and detoxification ways of these substances to know. To be able to analyze toxic substances.
4	To be aware of the precautions to be taken when working with hazardous chemicals in terms of laboratory safety and human health.
5	To have the ability to use basic mathematical methods to produce solutions.
6	To be able to define the carrier systems used in cosmetics, to be able to choose the carrier system to be used according to the cosmetic product.
7	To know and apply the necessary tests in cosmetic raw materials, intermediate products and finished products.
8	Depending on the Atatürk nationalism in accordance with Atatürk's principles and reforms, adopted the national, moral, spiritual and cultural values of the Turkish Nation, and has adopted that the Turkish language is a rich, rooted and productive language; have love and awareness of language; to have the ability to use the foreign language sufficiently to have the pleasure and habit of reading and need professionally.

### 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
P1	4	3	3	3	5	4	4	4	3	2
P2	4	4	4	3	4	5	3	3	4	4
P4	5	2	3	5	3	3	3	3	4	4
P5	5	2	4	5	3	2	4	3	5	4
P6	5	2	5	5	5	3	3	3	4	4
P7	3	5	4	4	4	4	2	4	3	5

