

DEPARTMENT OF MOLECULAR BIOTECHNOLOGY
MODULE DESCRIPTION

Course Details					
Code				Academic Year	Semester
MBT211				2	3
Title	T	A	L	ECTS	
Biochemistry I	2	1	2	6	
Language	German				
Level	Undergraduate	X	Graduate		Postgraduate
Department / Program	Molecular Biotechnology				
Forms of Teaching and Learning	Face-to-face				
Course Type	Compulsory	X	Elective		
Objectives	The module covers the basics of biochemistry in lectures and in-depth exercises and practicals. The main topics of the module Biochemistry I include the biochemistry of proteins (amino acids, peptide bonds, primary, secondary, tertiary and quaternary structures), catalytic strategies and enzyme kinetics, carbohydrates, lipids, nucleotides and nucleic acids, DNA, RNA.				
Content	Proteins (amino acids, peptide bonds, primary, secondary, tertiary and quaternary structures), catalytic strategies and enzyme kinetics, carbohydrates, lipids, nucleotides and nucleic acids, DNA, RNA.				
Prerequisites	-				
Coordinator	Assoc. Prof. Dr. Orkide Coşkuner Weber				
Lecturer(s)	Assoc. Prof. Dr. Orkide Coşkuner Weber				
Assistant(s)	Res. Asst. Melis Işık Toksoy, Res. Asst. Şeyma İş				
Work Placement	-				
Recommended or Required Reading					
Books / Lecture Notes	Nelson and Cox Lehninger Biochemistry, 4th Edition, Springer				
Other Sources					
Additional Course Material					
Documents					
Assignments					
Exams					
Course Composition					
Mathematics and Basic Sciences					%
Engineering					%
Engineering Design					%

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Social Sciences		%
Educational Sciences		%
Natural Sciences	100	%
Health Sciences		%
Expert Knowledge		%

Assessment

Activity	Count	Percentage (%)
Midterm Exam	1	30
Quiz	-	-
Assignments	1	20
Attendance	-	-
Recitations	-	-
Projects	-	-
Final Exam	1	50
Total		100

ECTS Points and Work Load

Activity	Count	Duration	Work Load (Hours)
Lectures	13	3	39
Self-Study	13	5	65
Assignments	4	10	40
Presentation / Seminar Preparation	-	-	-
Midterm Exam	1	2	2
Recitations	-	-	-
Laboratory	13	2	26
Projects	-	-	-
Final Exam	1	2	2
Total Work Load			174
ECTS Points (Total Work Load / Hour)			6

Learning Outcomes

1	The student has basic knowledge in the treated subject areas of biochemistry.
2	He/She is able to describe the basic biochemical processes.

Weekly Content

1	The basics of biochemistry
2	Structure and catalysis
3	Amino acids, peptides and proteins
4	Amino acids, peptides and proteins

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5	Amino acids, peptides and proteins
6	Enzymes
7	Enzyme kinetics
8	Carbohydrates and Glycobiology
9	Carbohydrates and Glycobiology
10	Nucleotides and nucleic acids
11	Nucleotides and nucleic acids
12	Lipids and membranes
13	Lipids and membranes

Contribution of Learning Outcomes to Program Objectives (1-5)

	P1	P2	P3	P4	P5	P6	P7
1	1	2	3	-	-	-	-
2							

Contribution Level 1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High

<https://obs.tau.edu.tr/oibs/bologna/progLearnOutcomes.aspx?lang=en&curSunit=5707>

Compiled by: Assoc. Prof. Dr. Orkide Coşkuner Weber

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