DEPARTMENT OF MOLECULAR BIOTECHNOLOGY
COURSE SYLLABUS

Course Details				
Code		**Academic Year**		**Semester**
MBT202		2		4
Title	**T**	**A**	**L**	**ECTS**
Biophysical Chemistry	3	1	0	6

Language	German					
Level	**Undergraduate**	**X**	**Graduate**		**Postgraduate**	
Department / Program	Molecular Biotechnology					
Forms of Teaching and Learning	Face-to-face					
Course Type	**Compulsory**		**Elective**	**X**		
Objectives	The module deals with the basics of biophysical chemistry in lectures and in-depth exercises. Main topics of the module biophysical chemistry include the introduction to biophysical chemistry, introduction to quantum mechanics, NMR; UV, IR, MS, FTIR, CD.					
Content	Introduction to Biophysical Chemistry, Introduction to Quantum Mechanics, NMR; UV, IR, MS, FTIR, CD.					
Prerequisites	-					
Coordinator	-					
Lecturer(s)	-					
Assistant(s)	Res. Asst. Ogün Morkoç					
Work Placement	-					

Recommended or Required Reading	
Books / Lecture Notes	Modern Biophysical Chemistry: Detection and Analysis of Biomolecules, Peter Jomo Walla, 2009.
Other Sources	-

Additional Course Material	
Documents	-
Assignments	-
Exams	-

Course Composition		
Mathematics and Basic Sciences		%
Engineering		%
Engineering Design		%
Social Sciences		%
Educational Sciences		%

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Natural Sciences	100	%
Health Sciences		%
Expert Knowledge		%

Assessment		
Activity	**Count**	**Percentage (%)**
Midterm Exam	1	40
Quiz	-	-
Assignments	-	-
Attendance	-	-
Recitations	-	-
Projects	-	-
Final Exam	1	60
	Total	**100**

ECTS Points and Work Load			
Activity	**Count**	**Duration**	**Work Load (Hours)**
Lectures	13	3	39
Self-Study	13	4	52
Assignments	-	-	-
Presentation / Seminar Preparation	-	-	-
Midterm Exam	1	14	14
Recitations	13	1	13
Laboratory	-	-	-
Projects	1	16	16
Final Exam	1	16	16
		Total Work Load	**150**
		ECTS Points (Total Work Load / Hour)	**6**

Learning Outcomes	
1	Acquiring the ability to implement concepts from chemistry, biology, and physics to explain biological processes.
2	Be able to select the appropriate method to analyze biomolecules.
3	Basic methods of biophysical chemistry.

Weekly Content	
1	The basics of biophysical chemistry
2	The basics of biophysical chemistry
3	Introduction to Quantum Mechanics

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4	Introduction to Quantum Mechanics
5	NMR
6	NMR
7	UV
8	UV
9	UV/IR
10	IR/FTIR
11	MS
12	MS
13	CD

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

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

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:	Res. Asst. Aysel Oktay
Date of Compilation:	14.08.2023