DEPARTMENT OF MOLECULAR BIOTECHNOLOGY
MODULE DESCRIPTION

Course Details				
Code	**Academic Year**			**Semester**
MBT101	1			1
Title	**T**	**A**	**L**	**ECTS**
Introduction to Molecular Biotechnology	2	0	0	2

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	Students will have general knowledge about the field of Molecular Biotechnology as well as scientific work, scientific writing and studies in different fields.					
Content	• Introduction • Branches of Biotechnology (White, Red, Green Biotechnology) • Overview: Biomolecules • Scientific Work, Working in Different Laboratories with Different Organisms and Chemicals • Intellectual Properties, Plagiarism, Plagiarism Checking and Scientific Writing • Literature Research (PubMed, Google Scholar) & Effective Use of Microsoft Office Word in Scientific Studies • Effective Use of Microsoft Office Excel in Scientific Studies • Biomimicry and Synthetic Biology (Introduction to Genetic Engineering) • Biosensors • Computational Biology • Electrophysiology: Measurement and Application of Biopotentials, Examples of Electrical Biosignals (EEG, ECG, EDA, EMG & EOG) • Basics of Biosignal Processing: Brain Research and Neuroscience, Analysis of EDA Data & Emotion Recognition					
Prerequisites	-					
Coordinator	Assoc. Prof. Dr. Aysu Yarman					
Lecturer(s)	Assoc. Prof. Dr. Aysu Yarman, Assoc. Prof. Dr. Orkide Coşkuner Weber, Asst. Prof. Dr. Dilek Göksel Duru, Asst. Prof. Dr. Neşe Aral Sözener, Res. Asst. Dr. Betül Uluca					
Assistant(s)	Res. Asst. Şeyma İş					
Work Placement	-					

Recommended or Required Reading	
Books / Lecture Notes	
Other Sources	

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Additional Course Material		
Documents		
Assignments		
Exams		

Course Composition		
Mathematics and Basic Sciences		%
Engineering		%
Engineering Design		%
Social Sciences		%
Educational Sciences		%
Natural Sciences	100	%
Health Sciences		%
Expert Knowledge		%

Assessment

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

ECTS Points and Work Load

Activity	Count	Duration	Work Load (Hours)
Lectures	13	2	26
Self-Study	13	2	26
Assignments	-	-	-
Presentation / Seminar Preparation	-	-	-
Midterm Exam	1	4	4
Recitations	-	-	-
Laboratory	-	-	-
Projects	-	-	-
Final Exam	1	4	4
		Total Work Load	**60**
		ECTS Points (Total Work Load / Hour)	**2**

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Learning Outcomes	
1	The student will have a basic knowledge of molecular biotechnology .
Weekly Content	
1	Introduction
2	Branches of Biotechnology (White, Red, Green Biotechnology)
3	Overview: Biomolecules
4	Scientific Work, Working in Different Laboratories with Different Organisms and Chemicals
5	Intellectual Properties, Plagiarism, Plagiarism Checking and Scientific Writing
6	Literature Research (PubMed, Google Scholar) & Effective Use of Microsoft Office Word in Scientific Studies
7	Effective Use of Microsoft Office Excel in Scientific Studies
8	Biomimicry and Synthetic Biology (Introduction to Genetic Engineering)
9	Biosensors
10	Computational Biology
11	Computational Biology
12	Electrophysiology: Measurement and Application of Biopotentials, Examples of Electrical Biosignals (EEG, ECG, EDA, EMG & EOG)
13	Basics of Biosignal Processing: Brain Research and Neuroscience, Analysis of EDA Data & Emotion Recognition

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

	P1	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**
1	4	5	3	1	3	-	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	
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