DEPARTMENT OF MOLECULAR BIOTECHNOLOGY
MODULE DESCRIPTION

Course Details				
Code		**Academic Year**		**Semester**
MBT363		3		5
Title	**T**	**A**	**L**	**ECTS**
Immunology	3	0	2	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	To gain knowledge of the mammalian immune system					
Content	1. Immune system 2. Native, humoral and adaptive immune responses 3. Organs, cells and molecules of immune system 4. Antigen Recognition 5. Antigen receptors in lymphocytes 6. Immune signaling 7. Vaccinations 8. Recombinant Antibody Technology					
Prerequisites	-					
Coordinator	-					
Lecturer(s)	Doç. Dr. Orkide Coşkuner-Weber					
Assistant(s)	Res. Asst. Şeyma İş					
Work Placement	-					

Recommended or Required Reading	
Books / Lecture Notes	Immunologie, Janeway, Spektrum Verlag Lecture Script
Other Sources	

Additional Course Material	
Documents	
Assignments	
Exams	

Course Composition		
Mathematics und Basic Sciences		%
Engineering		%

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Engineering Design		%
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	78
Assignments	1	10	10
Presentation / Seminar Preparation	-	-	-
Midterm Exam	1	2	2
Recitations	-	-	-
Laboratory	13	2	26
Projects	-	-	-
Final Exam	1	2	2
		Total Work Load	**157**
		ECTS Points (Total Work Load / Hour)	**6**

Learning Outcomes

1	Understanding the mammalian immune system
2	Knowledge of immune system disorders and vaccines

Weekly Content

1	Immune system: Native, humoral and adaptive immune responses
2	Characteristics of innate and acquired immunity
3	Organs, cells and molecules of the immune system

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4	Mechanisms of induction of an immune defense - Antigen recognition
5	Effector mechanisms of the immune system
6	Antigen receptors in lymphocytes - genetic and molecular aspects of antibody and T cell receptor variability
7	Evolution of the adaptive immune system
8	Immune signaling - regulation of the immune response
9	Vaccinations
10	Recombinant Antibody Technology
11	Methods and techniques for immunology studies
12	Methods and techniques for immunology studies
13	Methods and techniques for immunology studies

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

	P1	P2	P3	P4	P5	P6	P7
1	5	5	5	5	-	5	-
2	5	5	5	5	-	5	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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