DEPARTMENT OF MOLECULAR BIOTECHNOLOGY
COURSE SYLLABUS

Course Details				
Code	**Academic Year**			**Semester**
MBT460	4			8
Title	**T**	**A**	**L**	**ECTS**
Biophysics of Sensory Organs	2	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	The students gain a clear understanding of the biophysical basics of the functional principles of the sensory organs in humans and animals					
Content	Sight, Hearing, Smell, Taste, Touch, Internal Senses, Brain and Perception					
Prerequisites	-					
Coordinator	-					
Lecturer(s)	Asst. Prof. Dr. Neşe Aral Sözener					
Assistant(s)						
Work Placement	-					

Recommended or Required Reading	
Books / Lecture Notes	S. Frings, F. Müller; Biologie der Sinne, Springer Spektrum, 2. Edition
Other Sources	-

Additional Course Material	
Documents	-
Assignments	-
Exams	-

Course Composition		
Mathematics und Basic Sciences		%
Engineering		%
Engineering Design		%
Social Sciences		%
Educational Sciences		%
Natural Sciences	100	%

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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	4	52
Self-Study	13	8	104
Assignments	-	-	-
Presentation / Seminar Preparation	-	-	-
Midterm Exam	1	2	2
Recitations	-	-	-
Laboratory	-	-	-
Projects	-	-	-
Final Exam	1	2	2
		Total Work Load	**160**
		ECTS Points (Total Work Load / Hour)	**6**

Learning Outcomes

1	Understanding of the biophysical basics of the functional principles of the sensory organs of humans and animals

Weekly Content

1	Sensory organs in humans and animals
2	Evolution of sensory organs
3	Structure of nerve cells
4	Sensory signal processing in brain
5	Taste
6	Smell

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7	Sight
8	Hearing
9	Touch
10	Navigation and orientation
11	Internal senses
12	Perception
13	Sensory organs of animals

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

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

Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High
Compiled by:	Asst. Prof. Dr. Neşe Aral Sözener
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