Course Name	Code	Half term	Theory (hours/week)	Application (hours/week)	Laboratory (hours/week)	ECTS
MOLECULAR NEUROBİOLOGY	**MTP 512**	2. semester/Fall	3	0	0	5
Prerequisites	No					
Course language	Turkish					
Course Type	Elective					
Teaching Methods	Interactively, Slide Presentation, If necessary,accessing data sources via internet					
Instructor(s)						
Course objectives	Biological and Electrical Properties of Neurons, Communication Between Neurons, Neural Development, Neural Structure, Learning and Memory					
Course learning outcomes	1. To understand the general organization of the nervous system 2. Nervous system and be able to interpret the information transmission mechanism between the relevant structures 3. Understand the nervous system and developing processes at the cellular level in the relevant structure 4. To understand the concepts and mechanisms of neuroplasticity					
Resources	1. The Neuron: Cell and Molecular Biology, Irwin B. Levitan, Leonard K. Kaczmarek, Oxford University Press, USA; 3rd edition (2001) 2. Arthur J. Guyton & John E. Hall: Tıbbi Fizyoloji, Nobel Tıp Kitap Evi Zach W. Hall: 3. An Introduction to Molecular Neurobiology, Sinauer Associates					

Course Topics:

AS the WEEKS	DISCUSSION TOPICS TO BE PROCESSED
1. Week	Membrane Transport Mechanisms
2. Week	Membrane Potentials
3. Week	Action Potentials
4. Week	Synaptic Transmission
5. Week	Neurotransmitter and Neuromodulators
6. Week	G-Proteins in Neuronal Transmission
7. Week	Second Messengers and Neuronal Functions
8. Week	Organization of Nervous System
9. Week	Neuronal Mechanisms and Circuits of Information Processing
10. Week	Sensory Receptors and Basic Operation Mechanisms
11. Week	Contraction of Skeletal Muscles
12. Week	Mechanism of Neuromuscular Junction
13. Week	Cellular and Molecular Mechanisms of Neuronal Plasticity
14. Week	Functions of Neuroglia

Student Workload Table

Activities	Number	Duration	Total work load
Course Duration (X14)	14	3	42
Laboratory			
Practice			
Field Study			
Study Time Of Outside Of Class (Pre-Study, Practice, Etc.)	14	4	56
Presentations (Video shoot/Poster preparation/Oral presentation, Etc.)			
Seminars			
Project			
Case study			
Role playing, Dramatization			
Writing articles, Critique			
Time To Prepare For Midterm Exam	2	10	20
Final Exam Preparation Time	1	7	7
Total Work Load (hour) / 25(s)	**125/25=5**		
ECTS	**5**		

Evaluation System

Semester Work	The number of	Contribution
Midterm Exam	1	40%
Half Year End Exam	1	60%
Laboratory		
Application		
Field Work		
Class-Specific Internship (If Any)		
Assignments		
Presentations and Seminars		
Projects		
Other		
Do your homework		
Application		
Laboratory		
The sum of the grades		100

COURSE LEARNING OUTCOMES AND A RELATIONSHIP WITH PROGRAM QUALIFICATIONS

No.	PROGRAM QUALIFICATIONS				
		LO1	LO2	LO3	LO4
1	Degree level qualification at the level of expertise in the field of molecular medicine based on up-to-date information, enhances and deepens.	3	3	3	3
2	Requires a level of knowledge of the field of molecular medicine technologies, technical equipment and machinery and tools that are specific to the field information	3	3	3	3
3	Molecular Medicine is having in the field of information integrate with information from different disciplines to create new information, comments, analysis and synthesis by using different research methods and propose solutions.	3	3	3	3
4	The report of his research the author.	3	3	3	3
5	Empirical research plans.	3	3	3	3
6	Molecular Medicine in matters requiring expertise in the field of fiction, propose solutions, and solves the problems, assesses the results obtained when necessary.	3	3	3	3
7	Molecular Medicine and public health-related priority issues Area scientific clinical and/or descriptive research/presentations/publication.	3	3	3	3
8	The information related to the field of molecular medicine evaluates and directs the learning a critical approach.	3	3	3	3
9	Professional development related to the field of molecular medicine and performs studies the principles of life-long learning.	3	3	3	3
10	Current developments in the field of Molecular Medicine information, and their work in the same field or with groups other than the written, oral and Visual systematically as he discusses and shares.	3	3	3	3
11	The vocational and professional environment, social relationships, and those relationships are a critical perspective, norms and makes the need to improve them.	3	3	3	3
12	Collection of data related to the field of molecular medicine, towards restriction, interpretation, announcing social, scientific and ethic values in oversees and teaches these values.	3	3	3	3
13	The basic unit of society, current developments in the field of Molecular Medicine is to cover the national children and family values, and evaluates in line with the realities of the country.	3	3	3	3
14	Ethical principles and the importance of the individual and of the community for the Ethics Committee, ethics.	3	3	3	3
15	Molecular Medicine in the field with strategy, policy and implementation plans and results obtained within the framework of the quality processes.	3	3	3	3
Contribution to the level of proficiency: 1. Lowest, 2. Low / Medium, 3. Average, 4. High, 5. Excellent					