UNIVERSITÀ DI PAVIA

Anno Accademico 2019/2020

NEUROSCIENCES	
Enrollment year	2018/2019
Academic year	2019/2020
Regulations	DM270
Academic discipline	BIO/09 (PHYSIOLOGY)
Department	DEPARTMENT OF INTERNAL MEDICINE AND THERAPEUTICS
Course	MEDICINE AND SURGERY
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	2nd semester (02/03/2020 - 05/06/2020)
ECTS	1
Lesson hours	8 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	D'ANGELO EGIDIO UGO (titolare) - 3 ECTS
Prerequisites	
Learning outcomes	
Course contents	The Neuroscience course is aimed at understanding the main functions and dysfunctions of the nervous system. Particular attention will be devoted to the relationships between molecular, cellular, and system events, conditions and principles of pharmacological intervention. The course will cover the following aspects. • Biophysical and biochemical functions of neurons. Mathematical models of neurons and synapses. • Coding of information in neurons and synapses. Principles of information theory. • Mechanisms of synaptic plasticity. Induction and expression. Cellular memory foundations.

	• Relationship between the cellular properties and behavior: animal models and neural networks. Animal models for the study of nervous system disorders. Circuit and cellular principles of generation of higher functions. • Consciousness, memory. Attention, motivation, reward. Thought, perception, and motor skills. • Pathophysiology: main pathologies • Principles of therapy of nervous system disorders.
Teaching methods	Practical exercise: none
Reccomended or required readings	E. D'Angelo, A. Peres, "Fisiologia: Molecole, Cellule e Sistemi", Vol I-II; EDI-ERMES.
Assessment methods	No in itinere tests.
Further information	
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile