Course plan

Year: 2024-2025	**Semester:** ☐ First, ■ Second, ☐ Summer	**Number of students:**
Major: Medical doctorate	■ Basic sciences, ☐ Physiopathology	**Department:** Physiology
Course Title: Neurophysiology	… Theoretical, … Practical	**Credit:** 1.41 **Code N.:** 1294029
Prerequisite: Cell physiology	**Day & Time:** S☐day, 10-12 A.M.	**Place:** Shahid Soleimani Building
Instructor: Prof. HojjatAllah Alaei & Prof. Parham Reisi	**Office address:** School of Medicine, Department of physiology	**Tel:** 031-3792 9007-9033
Email: alaei@med.mui.ac.ir , p_reisi@med.mui.ac.ir	**Response Hours and Days:**	**Student representative name and mobile number:**

Main objective: Introduction to neurophysiology and familiarity with somatic and special sensory systems, Motor system and higher brain functions

Specific objects:

1- Functional Levels of the Nervous System, Synapses, and Synaptic Transmission (Knowledge Domain)
2- Function of Sensory Receptors, Neuronal Signal Production, and Information Processing (Knowledge Domain)
3- Somatic Sensations: Stimulation, Transmission, Interpretation, and Perception Across Nervous System Levels (Knowledge Domain)
4- Special Sensations: Vision, Hearing, Taste, and Smell - Stimulation, Transmission, Interpretation, and Perception (Knowledge Domain)
5- Disorders with Physiological Basis (Knowledge Domain)
6- Functional Levels of Motor Activity (Knowledge Domain)
7- Basics of Voluntary and Involuntary Muscle Control (Knowledge Domain)
8- Mechanisms of Sensory Perception and Generation of Motor Responses (Knowledge Domain)
9- Higher Functions of the Brain (Knowledge Domain)

References (Text books):

1- Guyton and Hall Textbook of Medical Physiology (Latest Version)
2- Berne & Levy Physiology (Latest Version)
3- Class Slides and Contents

Student evaluation and the value related to each evaluation:
(The assessment tools employed to evaluate students' comprehension of course content and their attainment of the skills and competencies outlined in the learning outcomes.)

ASSESSMENT TOOLS	From
Midterm Exam	8
Final Exam (Written exam)	12
TOTAL MARKS	**20**

Students' responsibilities:

1- Prepare for class by reviewing topics beforehand and afterwards.
2- Adhere to class order and rules.
3- Ensure attendance in all classes.

Discipline and educational rules:

1- Attendance Policy:

- A deduction of 0.5 points from a total of 20 points will be applied for each unplanned absence. If the number of absences exceeds the permissible limit, the overall score for the course will be reduced to zero.

2- Punctuality:

- Participants are allowed a maximum grace period of 5 minutes after the scheduled start time to join the class. Beyond this timeframe, latecomers may not be admitted.

3- Mobile Phone Usage:

- The use of mobile phones is strictly prohibited during class. Participants are expected to keep their phones on silent or vibrate mode and refrain from any phone-related activities to maintain a focused learning environment.

Other important notes for students:

Reading the guidelines and rights governing both professors and students.
Note: In each class session, a quiz may be taken or questions asked.

Mid exam date: **Final exam date:**

Row	date	Time	Topic	Professor	Theoretical or practical	References	Chapter	Pages
1	Feb/2	10-12	Organization of the Nervous System, Basic Functions of Synapses, and Neurotransmitters	Prof. Reisi	In-person	Textbook of Medical Physiology (Guyton and Hall)	46	567-585
2	Feb/9	10-12	Sensory Receptors, Neuronal Circuits for Processing Information	Prof. Reisi	In-person	Textbook of Medical Physiology (Guyton and Hall)	47	586-598
3	Feb/16	10-12	Somatic Sensations: I. General Organization, the Tactile and Position Senses	Prof. Reisi	In-person	Textbook of Medical Physiology (Guyton and Hall)	48	599-611
4	Feb/23	10-12	Somatic Sensations: II. Pain, Headache, and Thermal Sensations The Eye: II. Receptor and Neural Function of the Retina	Prof. Reisi	In-person	Textbook of Medical Physiology (Guyton and Hall)	49 & 51	612-623 637-640
5	Mar/2	10-12	The Eye: II. Receptor and Neural Function of the Retina The Sense of Hearing	Prof. Reisi	In-person	Textbook of Medical Physiology (Guyton and Hall)	51 & 53	640-651 663-673
		Mid-Term Exam						
6	Mar/9	10-12	Motor Functions of the Spinal Cord; the Cord Reflexes	Prof. Alaei	In-person	Textbook of Medical Physiology (Guyton and Hall)	55	683-695
7	Apr/6	10-12	Cortical Control of Motor Function	Prof. Alaei	In-person	Textbook of Medical Physiology (Guyton and Hall)	56	696-700

8	Apr/13	10-12	Brain Stem Control of Motor Function	Prof. Alaei	In-person	Textbook of Medical Physiology (Guyton and Hall)	56	700-709
9	Apr/20	10-12	Contributions of the Cerebellum and Basal Ganglia to Overall Motor Control	Prof. Alaei	In-person	Textbook of Medical Physiology (Guyton and Hall)	57	710-726
10	Apr/27	10-12	Cerebral Cortex, Intellectual Functions of the Brain, Learning, and Memory Behavioral and Motivational Mechanisms of the Brain—The Limbic System and the Hypothalamus	Prof. Alaei	In-person	Textbook of Medical Physiology (Guyton and Hall)	58 & 59	727-752
11	May/4	10-12	States of Brain Activity—Sleep, Brain Waves, Epilepsy, Psychoses, and Dementia	Prof. Alaei	In-person	Textbook of Medical Physiology (Guyton and Hall)	60	753-762
12	May/11	10-12	The Autonomic Nervous System and the Adrenal Medulla	Prof. Alaei	In-person	Textbook of Medical Physiology (Guyton and Hall)	61	763-775