In the name of GOD

Tabriz University of Medical Sciences

Course Guide for Anatomical Sciences – Nervous System

Course Code: 108

Course Instructor: Dr. Mohammad Karimi Pour

Contact Number / Student Access: 33342086

Prerequisite or Corequisite: None

Course Credits: 2 **Course Type: Theoretical / Practical**

Program Level: Doctor of Medicine (M.D.) **Number of Sessions: 22**

Course Duration: According to the academic calendar

Class Schedule: Saturdays, Mondays, and Wednesdays

Classroom Location: School of Medicine classrooms **Virtual Class Link: — (M.D.)**

Other Instructors:

First Name	Last Name	Academic Rank	Department	Preferred Method of Contact
Mohammad	Karimi Pour	Associate Professor	Anatomical Sciences	In-person
Dariush	Mohammadnejad	Professor	Anatomical Sciences	In-person

General Objective of the Course

Cognitive Domain:
By the end of this course, students should be able to identify the following and understand the importance of their key clinical and radiological features:

1. The various classifications of the nervous system.
2. The normal function of neurons and glial cells.
3. The appearance, structure, and function of the white and gray matter of the spinal cord.
4. The components of a spinal nerve and neural networks.
5. The appearance, key clinical structure, and function of the nuclei and neural tracts of the medulla oblongata, pons, and midbrain.
6. The important clinical anatomy and function of the cerebellum, diencephalon, and cerebral cortex.
7. The important clinical anatomy and function of the basal nuclei, limbic system, and reticular formation.
8. The structure of the meninges and clinically important cerebral vessels.
9. The histological structure of the clinically important parts of the central nervous system.
10. The developmental process of the clinically important parts of the central nervous system.
11. Developmental anomalies of the nervous system.

Psychomotor (Skill) Domain:

1. Identify the clinically important relationship of the spinal cord with the vertebral column on longitudinal and cross-sectional radiographic images.
2. Demonstrate clinically important dermatomes on a living human body.
3. Identify the spinal cord and its meninges on cadavers and anatomical models.
4. Identify the clinically important parts of the nervous system (brainstem, diencephalon, and cerebral hemispheres) on cadavers and models.
5. Identify cerebral vessels, meninges, and the clinically important cranial nerve exit points on cadavers and models.
6. Recognize the clinically important parts of the nervous system along with their vessels and nerves on radiographic images.
7. Identify the histological structure of clinically important parts of the nervous system under the microscope.

Specific Objectives of the Course

It is expected that upon completion of this course, learners will be able to:

1. Understand and describe the classification of the nervous system, the vertebral canal, and the external appearance and internal structure of the spinal cord.
2. Learn and explain the neural pathways.
3. Identify the medulla oblongata, pons, and midbrain and describe their details.

4. Describe the cerebellum in full detail.
5. Explain the diencephalon in full detail.
6. Explain the cerebral hemispheres in full detail.
7. Describe the white matter tracts of the brain and the basal nuclei in full detail.
8. Describe the limbic system and reticular formation in full detail.
9. Explain the cerebral vessels and meninges in full detail.
10. Describe the autonomic nervous system in full detail.
11. Explain the structure of the cranial nerves in full detail.
12. Describe in detail the formation of the neural tube.
13. Explain the histology of the central nervous system in full detail.
14. Understand and apply the clinical and radiological anatomy of the brain and spinal cord, including the construction of cerebral vessels, meninges, and cranial venous sinuses.

Method of Instruction

1. The theoretical sessions are held in the classroom in the form of lectures according to the schedule announced at the beginning of the course.

2. The practical sessions are conducted through hands-on work with cadavers, anatomical models, and osteology specimens.

Student Evaluation Method

- Written and MCQ Exam: 12 points
- Practical Exam (Cadaver Work): 8 points
- Minimum Passing Grade: 10
- Allowed Absence Hours: 0
- Allowed Excused Absence Hours (with instructor's approval):
  According to the approved educational regulations, the maximum excused absence is:
  - 4/17 of total hours for theoretical courses
  - 2/17 of total hours for practical and laboratory courses
  - 1/17 of total hours for apprenticeship and internship courses

Educational Resources

- Clinical Anatomy by Region. R.S. Snell, 11th Edition, 2024
- Junqueira's basic histology. Anthony L. Mescher. McGraw-Hill Education. 17th edition, 2024
- Langman's medical Embryology. T.W. Sadler. Lippincott Williams & Wilkins. 15th Edition, 2022

Contact Information

Instructor and Course Coordinator: Dr. Mohammad Karimi Pour

Educational Officer: Ms. Nadia Keyvani – 33342086

Full Name and Signature of the Course Instructor	Full Name and Signature of the Department Head	Full Name and Signature of the Office of Development Coordinator