

SYLLABUS

Name of Course: Central Neuroanatomy Lecture ANAT-137/637 Lab (CNS)

Length of Course: 2 units, 33 hours (3 hrs lecture week), 0.5 units, 10 hours (lab)

Course Description:

This is a course that provides students with a detailed examination of the brain and spinal cord. Emphasis is placed upon the anatomical and functional organization of the central nervous system.

Prerequisites: None

Co-requisites: ANAT-637

Course Offered by: Basic Sciences Department

Required Texts: Class Notes

Fitzgerald, Clinical Neuroanatomy and Neuroscience, 6th ed. 2011 Electronic Textbooks for the Neurosciences. <http://nba.uth.tmc.edu/neuroscience/m/s2/chapter01.html>
<http://thebrain.mcgill.ca>

Reference Texts: Kandel ER. Principles of Neural Science. 5th ed. 2013 Waxman S. Clinical Neuroanatomy. 27th ed. 2013

Blumenfeld Neuroanatomy through Clinical Cases, 2nd ed 2010 Felten DL Netter's Atlas of human Neuroscience. 2nd ed 2010

Method of Instruction: Lectures, videos, handouts, reading assignments, case studies, Lab specimens, Lab Hit List handout

Combination Grade Lecture is 60% of total course grade

Lab is 40% of total course grade

Both lecture & lab

Evaluation/Grading Criteria:	Exams	% of Grade	Date
	Midterm (2)	60	As scheduled
	Final	40	Final Exam Week

GRADES WILL BE ASSIGNED ACCORDING TO THE FOLLOWING SCALE FOR LECTURE:

A - 4.0 100 - 90%

B - 3.0 89 - 80%

C - 2.0 79 - 70%

F - 0.069.4% or below. Must repeat the course

GRADES WILL BE ASSIGNED ACCORDING TO THE FOLLOWING SCALE FOR LAB:

A - 4.0 100 - 90%

B - 3.0 89 - 80%

C - 2.0 79 - 70%

F - 0.069.4% or below. Must repeat the course

Grades and the Grading System Final Grades are available online through the CAMS student portal. If there are any questions on grading procedures, computation of grade point average, or the accuracy of the grade report, please contact the Registrar's Office or the Office of Academic Affairs. Grades will be reported and evaluation will be based on the Academic Policies, Procedures, & Services. Please refer to Evaluation Policy **(Policy ID: OAA.0007)**

In order to maintain **Satisfactory Academic Progress**, a student must maintain a 2.0 or better in each and every course. Any grade less than a C must be remedied by repeating the class. Please refer to Satisfactory Academic Progress **(Policy ID: OAA.0006)**

Attendance: Please refer to Attendance Policy **(Policy ID: OAA.0002)**

Conduct and Responsibilities: Please refer to the Personal Conduct, Responsibility and Academic Responsibility Policy **(Policy ID: OAA.0003)**

Make-up Exams: Please refer to Make-up Assessment Policy **(Policy ID: OAA.0001)**

Request for Special Testing: Please refer to Request for Special Testing (**Policy ID: OAA.0004**)

Accommodation for Students with Disabilities:

If you have approved accommodations, please make an appointment to meet with your instructor as soon as possible. If you believe you require an accommodation, but do not have an approved accommodation letter, please see the Academic Counselor Lori Pino in the Office of Academic Affairs. Contact info: Lpino@lifewest.edu or 510-780-4500 ext. 2061. Please refer to Service for Students with Disabilities **Policy (Policy ID: OAA.0005)**

Electronic Course Management:

Canvas is LCCW's Learning Management System (LMS). Canvas will be used throughout the quarter during this course. Lectures, reminders, and messages will be posted. In addition, documents such as the course syllabus and helpful information about the class project will be posted. Students are expected to check Canvas at least once a week in order to keep updated. The website address for Canvas is <https://lifewest.instructure.com/login/canvas> Please refer to the Educational Technologies Policy (**Policy ID: OAA.0009**)

Course Goals: This course provides students with an understanding of the functional role of the nervous system in providing for the integration of the cells, tissues and organs of the body, and its relationship to the clinical science of chiropractic.

Week 1: The instructor will explain the structural and functional divisions of the central nervous system and explain general concepts of the embryological of the CNS. References: Fitzgerald Ch 1

Week 2: The instructor will introduce and explain histology of the CNS. The instructor will introduce and explain accessory structures of the CNS including the meninges, CSF and blood supply. References: Fitzgerald Ch 4, 5, 6, 9

Week 3: The instructor will identify and name the major ascending and descending spinal tracts; their origins, terminations and functions. References: Fitzgerald Ch 15, 16

Week 4: The instructor will continue discussion on major ascending and descending spinal tracts; their origins, terminations and functions. References: Fitzgerald Ch 15, 16

Week 5: The instructor will explain the organization of the spinal grey matter and white matter. **TEST 1** References: Fitzgerald Ch 15, 16

Week 6: The instructor will identify the specific functional regions of the Brainstem and its relationships. References: Fitzgerald Ch 3, 17

Week 7: The instructor will continue the discussion on the specific functional regions of the Brainstem and Cranial Nerves. References: Fitzgerald Ch 18, 19, 20, 21, 22, 23

Week 8: The instructor will explain the specific functional regions of the Cerebellum and its relationships. References: Fitzgerald Ch 25

Week 9: The instructor will identify the specific functional regions of the Cerebral cortex, white and grey matter. **TEST 2** References: Fitzgerald Ch 2, 29, 32, 26, 27, 33

Week 10: Review for final.

Week 11: FINAL EXAM

Student Learning Outcomes

This course aligns to PLOs: (1 and 8) Students will be able to:

1. Identify the major components of the central nervous system distinguishing grey matter from white matter. Understand the basic neural embryological development and neuro histology.
2. Distinguish between the different meningeal layers and major cranial blood vessels. Understand the blood supply of the brain and the formation and absorption of CSF.
3. Identify the external and internal structure of telencephalon and diencephalon. Understand the function of the cortex, basal ganglia, thalamus, hypothalamus and pituitary gland.
4. Describe the connections between the cerebellum and other regions of the CNS and outline the functional relationships.
5. Describe the organization of the spinal grey matter and white matter and explain the major tracts.
6. Identify the external and internal structure of the brain stem. Understand the function of each division of the brainstem and each cranial nerve.

Program Learning Outcomes (PLO): Students graduating with a Doctor of Chiropractic degree will be proficient in the following:

- 1. ASSESSMENT AND DIAGNOSIS:** An assessment and diagnosis requires developed clinical reasoning skills. Clinical reasoning consists of data gathering and interpretation, hypothesis generation and testing, and critical evaluation of diagnostic strategies. It is a dynamic process that occurs before, during, and after the collection of data through history, physical examination, imaging, laboratory tests and case-related clinical services.
- 2. MANAGEMENT PLAN:** Management involves the development, implementation and documentation of a patient care plan for positively impacting a patient's health and well-being, including specific therapeutic goals and prognoses. It may include case follow-up, referral, and/or collaborative care.
- 3. HEALTH PROMOTION AND DISEASE PREVENTION:** Health promotion and disease prevention requires an understanding and application of epidemiological principles regarding the nature and identification of health issues in diverse populations and recognizes the impact of biological, chemical, behavioral, structural, psychosocial and environmental factors on general health.
- 4. COMMUNICATION AND RECORD KEEPING:** Effective communication includes oral, written and nonverbal skills with appropriate sensitivity, clarity and control for a wide range of healthcare related activities, to include patient care, professional communication, health education, and record keeping and reporting.
- 5. PROFESSIONAL ETHICS AND JURISPRUDENCE:** Professionals comply with the law and exhibit ethical behavior.
- 6. INFORMATION AND TECHNOLOGY LITERACY:** Information literacy is a set of abilities, including the use of technology, to locate, evaluate and integrate research and other types of evidence to manage patient care.
- 7. CHIROPRACTIC ADJUSTMENT/MANIPULATION:** Doctors of chiropractic employ the adjustment/manipulation to address joint and neurophysiologic dysfunction. The adjustment/manipulation is a precise procedure requiring the discrimination and identification of dysfunction, interpretation and application of clinical knowledge; and, the use of cognitive and psychomotor skills.
- 8. INTERPROFESSIONAL EDUCATION:** Students have the knowledge, skills and values necessary to function as part of an inter-professional team to provide patient-centered collaborative care. Inter-professional teamwork may be demonstrated in didactic, clinical or simulated learning environments.
- 9. BUSINESS:** Assessing personal skills and attributes, developing leadership skills, leveraging talents and strengths that provide an achievable expectation for graduate success. Adopting a systems-based approach to business operations. Networking with practitioners in associated fields with chiropractic, alternative medicine

and allopathic medicine. Experiencing and acquiring the hard business skills required to open and operate an on- going business concern. Participating in practical, real time events that promote business building and quantifiable marketing research outcomes

10. PHILOSOPHY: Demonstrates an ability to incorporate a philosophically based Chiropractic paradigm in approach to patient care. Demonstrates an understanding of both traditional and contemporary Chiropractic philosophic concepts and principles. Demonstrates an understanding of the concepts of philosophy, science, and art in chiropractic principles and their importance to chiropractic practice.