

## SYLLABUS

**NAME OF COURSE:** NMS Diagnosis and Management (DIAG-416)

**LENGTH OF COURSE:** 2 units, 33 hours (3 hours lecture/week),

**COURSE DESCRIPTION:** This course is designed as a synthesis class concerning neuromusculoskeletal diagnosis and management. The course will serve to review and integrate knowledge and skills previously covered in the curriculum. Selected topics will be chosen from among the common clinical conditions affecting the spinal and relative neuromuscular systems. Common systemic neuropathologies will also be chosen.

**COURSE GOAL:** The goal of this course is to build upon the foundation of the student doctor's ability to critically evaluate a patient's clinical presentation. This will be achieved by utilizing clinical tools such as patient history, physical examination, specialized orthopedic and neurological testing, clinical chemistry, and imaging. By integrating the outcomes of these clinical tools, the student doctors will be able to differentially diagnose, and recommend appropriate management. Interwoven into this course will be class discussion of clinical cases, ethical considerations as they relate to patient paradigms, and professional co-management of patients.

**PREREQUISITES:** DIAG-340, HC 310

**COURSE OFFERED BY:** Clinical Science Department

**REQUIRED TEXT:** Differential Diagnosis and Management for the Chiropractor. Souza.

**RECOMMENDED TEXTS:** National Board of Chiropractic Examiners reference texts

M.J.T. Fitzgerald, Jean Folan-Curran Clinical Neuroanatomy and Related Neuroscience. 4<sup>th</sup> Edition or 6<sup>th</sup> Edition

Beck R (2008) Functional Neurology for Practitioners of Manual Therapy

Patten, J (1996) Neurological Differential Diagnosis

Blumenfeld H. Neuroanatomy through Clinical Cases, 2<sup>nd</sup> ed. 2011

Waxman, S. (2003) Clinical Neuroanatomy (25th ed.)

Greenberg, D., et al. Clinical Neurology 6<sup>th</sup> ed. 2005 Souza T. Differential Diagnosis and Management for the Chiropractor 4<sup>th</sup> ed. 2009

Stanley Hoppenfeld, Orthopedic Neurology

**REFERENCE TEXTS:** Atlas of Human Anatomy – 4<sup>th</sup> 2006 edition, Netter. Durrant and True, Myelopathy, Radiculopathy, and Peripheral Entrapment Syndromes 2002

**MATERIALS:** Course notes available on Canvas page.

**METHOD OF INSTRUCTION:** Lecture, collaborative clinical casework, critical evaluation discussion, worksheets, and quizzes.

**EVALUATION:** All quizzes and exams will be in multiple choice format.

Quizzes (7 pts each)  
-6 total (5 highest recorded)

35 points Midterm Exam

30 points Professional Referral Letter

10 points

Final Exam (comprehensive)

**TOTAL**

40 points  
**115 points**

**GRADING SCALE:**

- A Superior work (103 – 115) 90 - 100%  
(103)
- B Above average work (92 – 102) 80 - 89%

C Average work (80 – 91)  
F Failure ( $\leq 79$ )

70 - 79%  
below 70%

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.

Incomplete: The student has failed to take all the required exams and/or has failed to turn in other required work

**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](mailto: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 OBJECTIVES:**

Week 1 to Week 10, the following clinical presentations will be covered:

- Nociception and pain types
- Headaches
  - Tension, Migraine, Cervicogenic, Cluster
- Vertigo / Dizziness
- Seizures
- Cervical spine / upper extremity presentations
  - Sprain / strain
  - Facet / disc
  - Radiculopathy / myelopathy
  - TOS
- Thoracic spine presentations
  - Compression fracture
  - Rib fracture /
  - Intercostal neuritis
  - Scheuermann's disease
- Lumbopelvic presentations
  - Disc lesion w/ radiculopathy
  - Facet syndrome
  - Spondylolesthesis
  - Piriformis syndrome
- Neuropathologies
  - Alzheimer's Disease
  - Parkinson's
  - Multiple sclerosis
  - Amyotrophic Lateral Sclerosis

## **STUDENT LEARNING OBJECTIVES:**

1. The student will be able to discuss the normal & abnormal findings of a standard neurologic examination and discuss the significance/interpretation of the abnormal findings. (PLO: 1,4)

2. The student will be able to diagnose and differentially diagnose radiculopathies and various neuromuscular pathologies of the cervical, thoracic, and lumbopelvic spine. (PLO: 1,4)
3. The student will be able to discuss the overall management of patients with radiculopathy, including timeframes for trial of conservative chiropractic care, rationales for ordering special studies and referral, etc. (PLO: 1,2,4,6)
4. The student will be able to identify cases requiring interprofessional referral and management as well as communicate relevant clinical information to appropriate professionals. (PLO: 1,2,8)

**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.