

## SYLLABUS

**Name of Course:** Scientific Basis of Chiropractic and the Subluxation Complex - CPP-234

**Length of Course:** 3 Units, 44 hours (4 hours lecture/week)

**Course Description:** This course is an introduction to the literature concerning the scientific examination of the subluxation and its physiological and anatomical basis. The physiology, neurology, and biomechanics of subluxation and adjustment are surveyed. This course reviews the latest scientific publications concerning chiropractic clinical trials, articular neurology, tissue injury and repair and documentation and record keeping.

**Prerequisite:** TECH-216

**Course Offered By:** Chiropractic Philosophy and Principles Department

**Required Text:** Class Notes

**Recommended Text:** None

**Reference Text:** None

**Materials:** Class Notes

**Methods of Instruction:** Lecture

**Tests:** Two Midterms – 100 points each  
Final – 100 points  
Total – 300 points  
Final is not cumulative

**Evaluation:**

A	4.0	Superior Work (90-100%)
B	3.0	Above Average (80-89%)
C	2.0	Average Work (70-79%)
D	1.0	Poor – The student must repeat the entire course below 70%

**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:**

1. To familiarize students with the literature concerning the scientific substantiation of chiropractic adjustments, subluxation, and their impact on the body.
2. To understand the physiological and neurological principles upon which the science of chiropractic is based.
3. To understand the biomechanical and neurological consequences of subluxation.
4. To understand the biomechanical and neurological consequences of chiropractic adjustments.

5. To provide students with information and data currently available so that they will be able to articulate and explain the methods, mechanisms and benefits of chiropractic care to patients, lay people, as well as other health professionals.
6. To provide an understanding of the integration of rehabilitation and exercise with chiropractic adjustments in order to improve patients' short and long term outcomes.

**Weekly Calendar:** (Agenda)

- I. Introduction and review of the subluxation including basic concepts of proprioception and motor control. Discussion of the role of proprioception, dysafferentation and their influence on perception and the unconscious motor control necessary for joint stability, posture and balance.
- II. Continue the recent literature review on joint dysfunction, dysafferentation, joint injury, inflammation, pain, loss of motion and degeneration. Begin to review the neurological effects of spinal adjustment and the mechanisms of neuromotor control, coordination, coactivation, sequencing and recruitment of muscles for stability and movement.
- III. Describe the process of hypomobility and progressive degeneration and the role of chiropractic adjustments in reducing the progression of degeneration. Review the biomechanical and neurological consequences of gapping joints and restoration of movement.
- IV. Review the effects of mobilization on sensory, motor and autonomic function. Explain the chiropractic adjustment in terms of biomechanical and neurological consequences of the use of a high velocity low amplitude forces applied to specific joints and their effects on function and motor control.
- V. First midterm. A review of biopsychosocial models of health and disease, and the prognosis of neuromusculoskeletal problems. Begin to describe the mechanisms of progression from acute soft tissue injury to the development chronic, recurrent problems, part of the natural history of neuromusculoskeletal dysfunction.
- VI. Describe the evolution of chronicity, its mechanisms and the neurological changes that underlie it. A review of the neurological and biomechanical factors involved in the development of chronicity and chiropractic's role in prevention and management.
- VII. Review recent studies on the effectiveness of chiropractic care including the dose-response curve and the benefits of maintenance care. Discuss current issues in chiropractic practice and the identity of chiropractic care and its role in the health care system.
- VIII. Second midterm. Discuss outcomes assessment and the evaluation of severity of

a patient's condition, benefits of care to date and the need for additional care using patient self-reports, condition specific, pain, and general health outcomes, as well as, objective physical performance tests.

- IX. Discuss the role of active care and chiropractic adjustments in optimizing patients' outcomes. Review the core trunk stabilizers including the multifidi and transverse abdominus muscles and their role in providing stabilization. Explain the role of exercise prescription for balance, motor control, strength, and endurance.
- X. Describe the process of soft tissue injury and repair through the four phases of the process: active congestion, passive congestion, repair and remodeling. Explain the role of chiropractic adjustments, restoration of motion, and exercise in improving the process of tissue repair and the restoration and preservation of function.
- XI. Final Exam

**Student Learning Outcomes (SLO):** At the completion of the CPP-234 course, a student should be able to:

1. Demonstrate and apply the history of scientific research to the clinical practice of chiropractic. [PLO: 2, 6, 8]
2. Apply the latest evidence to clinical practice in order to improve patient outcomes and optimize function. [PLO: 1, 2, 6, 8]
3. Demonstrate a practical knowledge of exercise prescription and its role in chiropractic practice. [PLO: 2, 3]
4. Evaluate the need for exercise and prescribe the basic appropriate exercises for patients with back and neck problems. [PLO: 1, 2, 6]

**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.