

## SYLLABUS

- Name of Course:** Advanced Chiropractic Biophysics - TECH-182
- Length of Course:** 1.5 units, 30 hours (3 hour lab/week)
- Course Description:** Chiropractic Biophysics (CBP), aka Clinical Biomechanics of Posture, is a full spine and pelvis corrective / rehabilitative procedures having a firm foundation in the sciences of mechanics and physics. CBP Technique integrates Drop Table, Diversified, Toggle, Instrument-assisted postural mirror image adjusting, mirror image exercises and mirror image traction to restore normal biomechanics. Analytical procedures include visualization, postural analysis and x-ray analysis.
- Prerequisites:** TECH-082
- Course Offered By:** Technique Department
- Recommended Text:**
1. Harrison DD and Harrison, SO. *CBP Technique*. 2002
  2. Harrison DE, Harrison DD, and Haas JW. Spinal Biomechanics for Clinicians Volume I. 2003
  3. Harrison DE, Harrison DD, and Haas JW. CBP: *Structural Rehabilitation of the Cervical Spine*. 2002
  4. Harrison DE, et al. CBP: Structural Rehabilitation of the Lumbar Spine. 2007
- Reference Texts:** CBP published articles.

### Materials & Technique Lab Attire Policy:

All students are required to follow the policy outlined in this section. Failure to wear proper attire or follow the guidelines may result in being counted as absent for that lab and / or not being allowed to participate. Please notify the instructor if you have any health concerns (skin conditions, injuries, etc.) or other issues that may hinder your ability to comply to these guidelines.

Keep in mind that everything we ask and expect of students is focused on clinical practice and providing a safe professional environment not only for the students in the lab, but eventually for the patients under your care.

**Healthy clean hygiene is expected from all students.** Common courtesy and mutual respect suggests you do not show up wearing the same gym clothes you wore during your daily workout. It is recommended that students bring a towel to place on the table. Towels maintain sanitary standards and reduce the need for the use of chemical sanitation treatments on the adjusting tables. Plus, vinyl can be cold and uncomfortable to lie on at times.



- **For Men:** A crew neck T-shirt with sleeves, gym shorts to expose the lower extremity (long pants may be worn after the midterm)

- **For Women:** A crew neck T-shirt with a bra underneath and shorts.
- To maintain modesty and a professional environment, no low cut or revealing attire is permitted. After the midterm women will need to wear a bathing suit type of top to expose the anterior ribcage and clavicle. (long pants may be worn after the midterm)
- **Covered shoes** (sandals and flip flops do not qualify) **are required for all participants.**

The bottom line is we need to be able to easily palpate the spine for specific landmarks and structures. If you have any questions or concerns as to whether an article of clothing meets the criteria for lab attire check with the instructor before the lab begins.

- Copies of your DACBR report and *current* CMR from clinic. Copies may be requested from your intern.

**Method of Instruction:** Lecture and practical demonstration of the technique. Student will get hands on experience during every class.

**Technique Department Elective Policy:**

*NOTE: All electives at LCCW are pass / no pass. Any student who drops or does not pass an elective will not be eligible to take an elective the following quarter.*

In accordance with technique department regulations Elective classes must be passed with at least 75% successful completion rate of the required assessments.

<b>Assessments:</b>	Midterm Written	50%
	Final Practical	50%

**Independent Student Work:**

All assignments and exams must be the product of the individual student’s original efforts for this class. Collaboration is prohibited.

**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. Instructor will discuss and demonstrate how to set-up the patient for correction on either a drop table, upper cervical and, to a lesser degree, manual adjustments.
2. Instructor will discuss the basic concepts and importance of bone physiology and remodeling as it relates to the spine.
3. Instructor will discuss and demonstrate the basic theories of CBP, including the principles of The Harrison Spinal Model, mirror image setups, CBP definitions of subluxation, and the importance that posture relates to systemic health.
4. Instructor will discuss and demonstrate how to make postural corrections utilizing mirror image exercises and adjusting.
5. Instructor will discuss and demonstrate the relationship of A-P and Lateral spinal radiographs as they relate to the analysis and correction of permutations of posture.
6. Instructor will discuss and demonstrate how to manage and care for the chiropractic patient applying CBP procedure

**Weekly schedule:** Advanced Chiropractic BioPhysics

<b>Week 1</b>	Introduction to the Class and Review of CBP Basics
<b>Week 2</b>	CBP Analysis Technology - using PostureRay and PostureScreen to understand document and educate
<b>Week 3</b>	Mirror Image Adjusting - correcting the neuromuscular component of global Subluxation
<b>Week 4</b>	Correcting Common Postural Combinations and Midterm Review
<b>Week 5</b>	MidTerm
<b>Week 6</b>	Cervical Traction Methods - restoring lordosis and reducing cord tension
<b>Week 7</b>	Lumbar Traction Methods, improving locomotion and nerve conduction to digestive and reproductive organs
<b>Week 8</b>	Thoracic and Full Spine Traction Methods - connecting spinal regions, improving lung capacity and rebalancing the para and sympathetic nervous systems
<b>Week 9</b>	Review
<b>Week 10</b>	Final Exam

**Student Learning Outcomes (SLO):** At the completion of the TECH-182 course, a student should be able to:

1. Demonstrate the appropriate patient setup for correction utilizing a drop table, upper cervical and instrument adjusting. [PLO: 2,3,7]
2. Demonstrate a practical knowledge of the basic concepts and importance of bone physiology and remodeling as it relates to the spine. [PLO:1,2,3,4,5,6,9]
3. Demonstrate a practical knowledge of the basic theories of CBP, including the principles of The Harrison Spinal Model, mirror image set-ups, CBP definitions of subluxation, and the postural relationship to systemic health, and patient management and care utilizing the CBP protocol and procedure [PLO: 1,2,3,4,5,6,9 ]
4. Apply the concepts of mirror image exercises, traction, and adjusting for postural correction. [PLO: 1,2,3,4,5,6]
5. Apply the relationship between the appropriate spinal radiographs and the permutations of postural analysis and correction. [PLO: 1,2,3,4,5,6,7,9 ]

**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.