

## 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: Chiropractic Biophysics TECH-418

Course Offered By: Department of Technique

DC, ACP, DPhCS.

Department Chair

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 & 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 face cloth and / or 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.

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- For Men: A crew neck T-shirt with sleeves, long pants / sweats or shorts kept at the waistline and covering all underwear (also required)
- For Women: A T-shirt with a slit cut up the back (or patient gown) with a bra underneath (no sports bras, please), long pants / sweats or shorts kept at the waistline and covering all underwear (also required)
- To maintain modesty and a professional environment, no low cut or revealing attire is permitted.
- 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.

Course Instruction: Scott Levin, DC

Email: [slevin@lifewest.edu](mailto:slevin@lifewest.edu)

Phone: 415.373.3897

Office Hours: TBD and posted by Instructor

Class Time: Tuesday 5:00-7:50pm

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.

Assessments: Midterm Written/Practical 47.5%

Final Project 47.5%

HomeWork 5%

Evaluation:

A 4.0 Superior Work (93-100%)

B 3.0 above Average (85-92%)

C 2.0 Average Work (75-84%)

D 1.0 Poor - Barely passing (70-74%) Student must repeat course

Examinations will be objective and subjective. Examination material will be derived from the printed notes, materials handed out throughout the course, lectures and lab.

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Independent

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

Procedures for

Reviewing Exams: College policy applies

Request for

Special Testing: College policy applies

Make-Up Exams: College policy applies

Extra Credit: There will be extra credit work accepted in this class determined by the instructor.

Attendance: College policy applies. No additional assignments can be used to compensate for absences except as outlined in the college course overlap policy.

Conduct and

Responsibilities: It is the student's responsibility to maintain professional standards of behavior and attire while on campus. Students are expected to be prepared for instructional activities. They must bring required supplies/equipment and dress appropriately in accordance with the instructor's directions. Failure to do so can result in the student being marked absent for the class session. Any disruptive activity (e.g. use of cell phones, side conversations) in the classroom is prohibited. If the instructor requires a disruptive student to leave the classroom, the student remains responsible for all information and will be marked absent for the class session. The dean will impose sanctions for unprofessional behavior. Any form of deceit, fraud, plagiarism, unauthorized collaboration, or theft will result in failure of the course and referral to the dean for disciplinary sanctions. Please refer to the handouts titled "Ground Rules For Technique Classes" and "Respectful Touch" posted in all technique labs, for further tips and guidelines.

Accommodations 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 Deans Office. Contact info: [Lpino@lifewest.edu](mailto:Lpino@lifewest.edu) or 510-780-4500 ext. 2061.

Course Objectives:

1. Instructor will discuss and demonstrate how to set-up the patient for Mirror Image Adjustment correction on either a drop table, upper cervical, adjusting instruments and to a lesser degree, manual adjustments.
2. Instructor will discuss and demonstrate the basic theories of CBP, including the principles of The Harrison Spinal Model, mirror image set-ups, CBP

definitions of subluxation, postural/structural assessment, and the importance that posture relates to systemic health.

3. Instructor will discuss and demonstrate how to make Postural & Structural Corrections utilizing Mirror image traction and Mirror image exercise.
4. 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 and structure.
5. Instructor will discuss and demonstrate how to manage and care for the chiropractic patient applying CBP procedure

#### Advanced Chiropractic BioPhysics Outline Weeks 1-10

- Introduction to the Class and Review of CBP Basics/Postural Analysis  
CBP Analysis Postural Examination – Theory and Application - HOMEWORK  
Postural Analysis Due
- Mirror Image Adjusting - Correcting the neuromuscular component of global
- Correcting Common Postural Combinations and Midterm Review  
MidTerm
- Cervical Traction Methods – Restoring ideal spine curvature and alignment of the cervicothorax spine, theory, implications, and hands-on application
- Lumbar Traction Methods - Restoring Ideal spine curvature and alignment of the thoracolumbar spine, theory. Implications, and hands-on application
- Thoracic and Full Spine Traction Methods – Translation traction and beginning concepts of Full Spine traction
- Exercise, Scoliosis, Leg Length Inequality, Adjusting Instruments, and Case Study  
Class overview - Final project due

#### Final Project:

Each student must pair with another student to create a complete case management report with CBP Protocols:

1. PostureRay Analysis/Hx - Student must load and mark postureray for accurate analysis as well as take a brief history, in order to target care at patient's chief complaint.
2. Student must create 2 mirror image adjustments complete with description and photo
3. Student must create 2 mirror image exercise to pair with adjustments and MI traction
4. Student must create 1 MI traction

Help Link for Posture Analysis:

Dr. Miller postural analysis review: <https://vimeo.com/199113531> (Links to an external site.)  
[Links to an external site.](#)

[\(Links to an external site.\)](#)

Helpful Link for UTS traction:

<https://vimeo.com/255817623/6d7f62743f> (Links to an external site.)  
[Links to an external site.](#)

[\(Links to an external site.\)](#)

Helpful Link for PostureRay:

PostureRay general instruction including loading from Opal:

<https://drive.google.com/file/d/1n33tLBcgd-kGvKtNa45ejr7OaCGhhIJF/view?usp=sharing> (Links to an external site.)

[\(Links to an external site.\)](#)

PostureRay General

<https://www.postureanalysis.com/knowledge-base/>

[\(Links to an external site.\)](#)

Eval from Start to finish

<https://www.postureanalysis.com/knowledge-base/postureray-eval-from-start-to-finish-basic/>

[\(Links to an external site.\)](#)

Loading x-rays from CD in library

<https://www.postureanalysis.com/knowledge-base/load-images-from-cd-thumb-drive-or-folder/>

[\(Links to an external site.\)](#)

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 ]
2. Demonstrate a practical knowledge of the basic concepts and importance of bone physiology and remodeling as it relates to the spine. [PLO:1,2,3,4,5,6,7 ]
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: 1,2,3,4,5,6,7 ]
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 ]

Program Learning Outcomes (PLO): Students graduating with a Doctor of Chiropractic degree will demonstrate proficiency 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, and laboratory tests.
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 and technology literacy are manifested in an ability to locate, evaluate and integrate research and other types of evidence, including clinical experience, to explain and manage health-related issues and use emerging technologies appropriately.

7. **INTELLECTUAL AND PROFESSIONAL DEVELOPMENT:** Intellectual and professional development is characterized by maturing values and skills in clinical practice; the seeking and application of new knowledge; and the ability to adapt to change.

8. **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

9. **PHILOSOPHY:** Demonstrates an ability to incorporate a philosophically based Chiropractic paradigm in approach to patient care. Demonstrates an understanding of both traditional and 6 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.