

# TEXAS



## Chiropractic College

5912 Spencer Highway  
Pasadena, Texas 77505  
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[www.txchiro.edu](http://www.txchiro.edu)

**Trimester/Year:** Spring 2012

**Course Title:** Orthopedics I Syllabus

**Course Number:** CH6432

**Time Requirement: (hours/week)** Lecture = 3 hours Lab = 2 hours

**Credit Units:** 4 credits

**Days & Times of Course: Lecture:** Tuesday: 2:00 pm - 3:54 pm; Friday: 8:00 am – 9:54am

**Lab:** Thursday: 2:00pm - 3:54 pm

### General Course Description:

The lecture portion of this course presents the etiology, clinical presentation, orthopedic evaluation, and management of common musculoskeletal conditions of the spine, pelvis and extremities. The lab portion of this course emphasizes proper application and interpretation of orthopedic procedures to include inspection, palpation, ranges of motion, orthopedic tests, signs and maneuvers and the beginning aspects of record keeping.

### Prerequisites:

Spinal Biomechanics

Lower and Upper Extremity Biomechanics

Physical Examination and Diagnosis

Adjusting Procedures III

### Contact Information

**Course Professor:** Dorrie M. Talmage, BSN, MEd, DC, DABCO

Office: Iwama-206

Office Hours: No appointment needed - available times: Tuesday: 11:00 am - 2:00 pm,  
Wednesday 10:00-11:00am, Thursday: 10:00-11:00am, 1:00 pm – 2:00 pm; Friday: 9:00-  
11:54am

Email: [dtalmage@txchiro.edu](mailto:dtalmage@txchiro.edu)

Phone: 281-998-5702

Edvance360 address: <http://edvance360.com/txchiro/>

**Lab Assistant:** Brad Koby, DC

**Required Textbooks/Supplies:**

- Magee, Orthopedic Physical Assessment, 5<sup>th</sup> ed., Saunders. 2008
- Lecture Notes on Edvance360
- Lab Note Pack on Edvance360
- 2 Incliners and 1 Goniometer

**CCE/TCE Competencies:**

History Taking  
Record Keeping  
Physical Examination  
Neuromusculoskeletal Examination  
Diagnosis  
Case Management

**Student Learning Outcomes:**

At the conclusion of this course, a successful student should be able to:

1. Describe the anatomy and biomechanics of the spine and extremities as they relate to the etiology and pathogenesis of orthopedic conditions and the orthopedic evaluation.
2. Perform and record a basic orthopedic examination on each area of the body to include:
  - a. Inspection
  - b. Palpation
  - c. Percussion
  - d. Ranges of motion (active, passive, and resisted)
  - e. Orthopedic tests/signs and maneuvers.
3. Interpret the results of the orthopedic evaluation in order to determine a diagnosis.
4. Identify and describe the etiology, pathology, clinical manifestations, and management for selected musculoskeletal conditions.

**Learning Objectives – Lecture & Reading Assignments:**

1. Determine the appropriate physical examination procedures to perform based on the patient's chief complaint.
2. Describe the etiology/mechanism of injury for the conditions presented.
3. Describe the pathogenesis for each condition presented.
4. Identify epidemiological factors associated with the conditions presented.
5. Identify and describe the clinical manifestations (symptoms/signs/exam findings) for each condition presented.
6. Identify the diagnostic studies that would aid in the diagnosis of each condition.
7. Describe the findings that would be seen on diagnostic studies that would aid in the diagnosis of each condition.
8. Select the most appropriate management/treatment techniques for each condition.
9. Identify when a referral may be warranted and to whom that referral should go.

10. Explain the grades of Whiplash-Associated Disorders (WAD).
11. Explain the stability concepts for the Glenohumeral joint.
12. Describe the classification of Impingement Syndrome (Neer staging vs Primary/Secondary).
13. Identify and describe the hand and foot deformities.
14. Cite the degrees for a normal versus an abnormal thoracic kyphosis.
15. Describe the classification schemes for scoliosis.
16. Define the following terms and identify what they are associated with: radiculopathy, radicular pain, radiating pain, referred pain, peripheral neuropathy, myelopathy, spondylitic myelopathy, Spondylosis, tendinitis, tendinopathy, tendinosis, bursitis, strain, sprain, sclerotogenous pain, myotogenous pain, atherosclerosis, ischemia, infarction, thrombus, embolus, and claudication.
17. Define and describe the types of disc herniations.
18. Describe the clinical presentation of each grade of sprain and strain.
19. Cite the return to play guidelines for the hip and knee.
20. Cite the Ottawa rules of imaging for the lower extremity.
21. Differentiate between a peripheral neuropathy and a radiculopathy.

#### **Learning Objectives – Lab:**

1. Demonstrate the correct performance of the orthopedic procedures presented.
2. Identify the normal ranges of motion and end feels for each area of the body.
3. Perform active and passive ranges of motion for each area of the body in a correct and safe manner
4. Identify and describe the capsular pattern of limitation for the synovial joints.
5. Describe the abnormal end feels and the type of problem that make cause them.
6. Demonstrate the appropriate use of the inclinometers and goniometer for measuring ranges of motion.
7. Perform resisted ranges of motion/muscle testing correctly and grade the responses appropriately.
8. Identify and explain the positive findings and indications associated with the diagnostic procedures.
9. Demonstrate rudimentary skills in record keeping.

#### **Teaching Philosophy:**

1. Set a tone that is conducive to learning.
  - One of interest and excitement about their chosen Chiropractic profession.
  - One that stimulates the students' thoughts, ideas, and questions regarding musculoskeletal diagnosis and Chiropractic.
  - One that emphasizes that the student is going to be Doctor and that their patient's are relying on them for the best possible care.
2. Provide information that is necessary and relevant to be a successful Doctor of Chiropractic.

## **Student Responsibilities:**

### Lecture:

- Students should act professionally to meet the challenges of this program by coming to class on time, being ready to learn and by paying attention. Additionally the student should preview the lecture material prior to coming to class.
- Students should make the most of the time in class and ask questions. Every student should participate in answering questions during lectures and in the laboratory.
- **Cell phones should be kept off in both the lecture and lab. If a cell phone is out, it will be confiscated and the student will lose 5 course points for each incident.**
- **The use of laptops in class is considered a privilege not a right. A laptop may only be used if the student sits in the first or second row in the classroom. If any student is caught using the laptop for anything other than the orthopedic lecture that is being presented in class that student will lose the right to use the computer for the rest of class and all future classes with me and 3 course points will be deducted. There are no warnings.**
- Students should contact the lead instructor, if having any difficulty with the material in the course.

### Laboratory:

- Students should dress in gowns, shorts & tank tops on each lab day and be ready to begin at the top of the hour.
- Students should bring their entire diagnostic kit to each lab each week.
- Students should practice their laboratory skills each week outside of class.

## **Methods of Instruction:**

Course material will be presented in lecture, cases and hands on laboratory format. Power point presentations and course notes will be used to present the material. Material presented will be referenced from the textbooks and journals, with references to the instructor's own clinical experiences.

The I-Clicker will be used as a means of performing both formative and summative assessment of the material covered in lecture and the reading assignments and to monitor participation. Each student is required to purchase an I-Clicker remote for in-class participation and assessment. **I-Clicker will be used daily in class and you are responsible for bringing the remote daily and that it is functioning (have extra batteries).**

## **Methods of Assessment:**

### **Lecture Exams:**

The course contains two exams and one final. These examinations will primarily be multiple-choice, and matching. However the instructor may also include some short answer questions. The material for each examination is cumulative. Students are expected to do their own work during exams. **Academic dishonesty will not be tolerated** and will result in the student being taken before academic affairs. Students will be asked to sit every other seat during exams. All note packs, books, and backpacks should be placed in the front of the classroom. Hats are to be turned back. No cell phones, pagers or lab tops will be allowed out on the desks.

**I-Clicker:**

The I-clicker will be used on a weekly basis as both a formative and summative assessment, in addition to course participation. Questions will be from the required reading for the week, additionally some questions will be on material that is being presented to see if the student comprehends the concepts and is actively engaged. Summative questions will occur at the start of the lecture for that week. At the end of the trimester the number of accurate responses will be tallied. If the student was correct:

- 87-100% = 8 points
- 75-86% = 7 points
- 65-74% = 6 points
- 57-64% = 5 points
- 50-56% = 4 points
- 42-49% = 3 points
- 34-41% = 2 points
- <34%= 0 points

**Note: participation and preparation are necessary for both the lecture and lab therefore a lack of participation or preparation in a meaningful way will result in a deduction of points from this grade.**

**Spot Lab Quizzes**

3 spot quizzes will occur over the lab trimester. Each student will be asked to perform an orthopedic procedure and provide the positive findings and indications for that procedure. Each student will have 1-2 minutes for the quiz.

**Lab Midterm & Final Practical Exams**

The exams will be held in the Assessment Center. The student will be asked to perform selected procedures on a standardized patient. Following the encounter with the SP, the student will answer questions on the computer regarding positive findings, indications, and possibly examination selections based on a brief case vignette.

**Point Distribution**

Exam #1	15 points
Exam #2	15 points
Final Examination	20 points
I-Clicker	8 points
Spot Lab Quizzes (3 @ 3 points each)	9 points
Lab Midterm Practical	16 points
<u>Final Practical</u>	<u>17 points</u>
Course Total	100 points

**Extra credit: no extra credit is offered in this course so do not ask. I always ask a few additional questions on each exam which can be graded as bonus questions. Therefore your grade is what it is.**

**Grading Scale:**

A = 90-100%

B = 80-89%

C = 70-79%

F = 69% and below

I will round up if a score is 89.5 (etc), if the score is 89.4 (etc.) it will not be rounded up.

**Course Schedule**

<b>Week</b>	<b>Lecture/Lab</b>
1	Lecture: Myofascial Pain Syndrome, Fibromyalgia; Cervicogenic Headaches, Migraines, Cluster headaches, Tension-Type Headaches Lab: Cervical spine examination Reading: Pages 2-39 (exclude outcome measures); Review the Introduction to Orthopedics I PowerPoint on performing an evaluation and overview of the conditions
2	Lecture: Cervical Sprain, Cervical strain, Facet Syndrome, Cervical Spondylosis, Burner's Syndrome. Upper cross syndrome Lab: Cervical Spine & Shoulder examinations Reading: pgs 135-158, 180-182 (For a refresher on anatomy and biomechanics read 130-135)
3	Lecture: Subacromial bursitis, Supraspinatus tendinopathy, Bicipital tendinopathy, Biceps tendon rupture, Slipped biceps tendon, Impingement Syndrome Lab: Shoulder & elbow examinations Reading: pgs 235-263, 322-327 (For a refresher on anatomy and biomechanics read 231-235)
4	Lecture: <b>Exam #1</b> Lab: Elbow & wrist/hand examinations
5	Lecture: Ulnar collateral ligament Sprain, Medial Epicondylitis, Lateral Epicondylitis, Cubital tunnel syndrome, Biceps Tendinopathy, Triceps Tendinopathy, Biceps tendon rupture, Olecranon bursitis Lab: Wrist/hand & thorax examinations Reading: pgs 364-372, 381-385 (For a refresher on anatomy and biomechanics read 361-364)
6	Lecture: DeQuervain's disease, Tendinopathy, Carpal Tunnel Syndrome, Tunnel of Guyon Syndrome, Mallet Finger, Trigger Finger, Finger Sprains Lab: Review Reading: pgs 400-419. 446-450 (For a refresher on anatomy and biomechanics read 396-400)
7	Lecture: Thoracic Postural Syndrome, Strains, Compression fractures, Scoliosis, Rib fractures, Costochondral sprain, Costochondritis, Intercostal neuritis, Slipping rib syndrome Lab: <b>Midterm Practical</b> Reading: pgs 475-492, 501-502 (For a refresher on anatomy and biomechanics read 471-475)
8	Lecture: Sacroiliac joint Syndrome, Piriformis Syndrome, Lumbar Sprain, Lumbar Strain, Facet Syndrome, Lumbar disc extrusion with radiculopathy Lab: Low back examination Reading: pgs 520-537 578-581, 619-630, 644 (For a refresher on anatomy and biomechanics read 515-520, 617-619)
9	Lecture: <b>Exam #2</b> Lab: Low back & hip examinations
	<b>Spring Break</b>
10	Lecture: Rectus Femoris Strain, Hamstring Strain, Groin Strain, Trochanteric Bursitis, Ischial bursitis, Iliopsoas bursitis, Lateral Snapping Hip, Anterior Snapping Hip, Posterior Snapping Hip, Osteoarthritis Lab: Hip & Knee examinations Reading: pgs 659-673, 701-704
11	Lecture: Patellar tendinopathy, Patellofemoral arthralgia, Chondromalacia patella, Bursitis, MCL

	sprains, ACL sprains, Meniscal tears, Shin splints Lab: Knee & foot/ankle examinations Reading: pgs 730-750, 805-810 (For a refresher on anatomy and biomechanics read 727-730, 754-759)
12	Lecture: Hallux Valgus, Claw toe, Hammer toe, Mallet toe, Metatarsalgia, Interdigital Neuroma, Plantar Fasciitis, Lateral Ankle Sprain Lab: Foot/ankle & peripheral vascular examinations; Review Reading: pgs 848-880, 898-904 (For a refresher on anatomy and biomechanics read 844-848)
13	Lecture: Atherosclerosis, Arteriosclerosis Obliterans (PAD), Monckeberg's, Hypertensive arteriosclerosis, Leriche Syndrome, Buerger's Disease, Raynaud's, Abdominal aortic aneurysm, Varicose veins, Thrombophlebitis, Chronic venous stasis Lab: <b>Final Practical</b> Reading: read the notes on PVD for the quiz
14-15	<b>Lecture Finals</b>

### **Course and TCC Policies**

#### **Make-up Examinations:**

Students must notify faculty before missing any examination. If an examination is missed for good and sufficient reason and the student has notified the faculty member in advance, a make-up examination may be given subject to a fee of \$40.00. The fee for the makeup examination is a minimum of \$75.00 if a standardized patient is required for the exam. Additional required standardized patient hours may increase this \$75.00 minimum fee. All intra-term examinations must be made up prior to final examinations. Missed final examinations must be made up within the first week of the next trimester. A student may be allowed a maximum of two missed examination dates for good and sufficient reason per trimester. These two missed examination dates are for all enrolled courses in a trimester, not for each individual course. Any request for additional make up examinations will require documentation substantiating the absence and must be approved by the Dean of Academic Affairs.

**Note: All written make-ups will be short answer/essay. All missed examinations/quizzes/etc must be taken within two weeks of the student's return to the college or the score will convert to a zero.**

Students arriving late for written examinations will not be allowed extra time. Students arriving late for lab quizzes without a valid documented reason will receive a zero on that quiz. Students arriving after another student has completed the written examination will not be allowed to take the written examination and must schedule an appointment for a make-up provided they have appropriate documentation as to why they were late.

#### **Retention of Examinations:**

The course professor will retain all scantrons. If any student desires to review any exam, he/she can contact the lead instructor to set an appointment. Each student will have two weeks from the point in which an exam grade is posted to review that exam.

**Any documentation of course grades will be kept by the lead instructor until the second Friday of the following trimester. After that time, the grades may not be reviewed.**

**Attendance policy:**

Attendance in all lectures and labs is required. A student is subject to academic penalty if absences exceed **10%**. Absences exceeding 20% subject a student to dismissal from a course. Three (3) incidences of tardiness may constitute an absence.

It is the student's responsibility to check the official class roster for your name. Any student not officially enrolled in this class is not to participate and will not receive credit for this course. Do not wait until late in the trimester to take care of this matter. Any grade received while not enrolled in the course will count as zero.

**Disclaimer statement:**

The faculty teaching this course reserves the right to reasonably alter the sequence of activities, evaluation and assignment dates. Every effort will be made to inform the class verbally and in writing prior to institution of such changes. Students are responsible to follow the syllabus and any change instituted by the faculty.