I. Course Description
KINE 3324 provides the student with general knowledge of evaluation techniques of athletic injuries to the lower extremities including range of motion testing, neurologic and orthopedic evaluations. Prerequisite: KINE 2325, KINE 3318, or BIOL 2401. Materials fee required.

II. Rationale
This course will provide information on medical terminology, risk management, general medical conditions and other topics that are related to the athletic trainer/sports medicine team relationship. This course is required for students majoring in Athletic Training and accepted into the Athletic Training Program at Texas A&M University-Corpus Christi. This course is to be taken concurrently with KINE 3192 (Clinical experiences in Athletic Training IV) for all Athletic Training majors. This is a preparatory course for students seeking to be a Certified Athletic Trainer (ATC) as they plan to sit for the National Athletic Trainers’ Association Board of Certification (NATABOC) exam.

III. State Adopted Proficiencies for Teachers and/or Administrators/Counselors
1. LEARNER-CENTERED KNOWLEDGE: The teacher possesses and draws on a rich knowledge base of content, pedagogy, and technology to provide relevant and meaningful learning experiences for all students.
2. LEARNER-CENTERED INSTRUCTION: To create a learner-centered community, the teacher collaboratively identifies needs; and plans, implements, and assesses instruction using technology and other resources.
3. EQUITY IN EXCELLENCE FOR ALL LEARNERS: The teacher responds appropriately to diverse groups of learners.
4. LEARNER-CENTERED COMMUNICATION: While acting as an advocate for all students and the school, the teacher demonstrates effective professional and interpersonal communication skills.
5. LEARNER-CENTERED PROFESSIONAL DEVELOPMENT: The teacher, as a reflective practitioner dedicated to all students’ success, demonstrates a commitment to learn, to improve the profession, and to maintain ethics and personal integrity.

IV. TExES Competencies & CAATE Competencies/Proficiencies
a. TExES COMPETENCIES
N/A
b. ATHLETIC TRAINING EDUCATION COMPETENCIES (CAATE 5th Ed.)
Evidence-Based Practice (EBP):
EBP-1: Define evidence-based practice as it related to athletic training clinical practice.
EBP-2: Explain the role of evidence in the clinical decision making process.
EBP-3: Describe and differentiate the types of quantitative and qualitative research, research components, and levels of research evidence.
EBP-9. Use standard criteria or developed scales (eg, Physiotherapy Evidence Database
Scale [PEDro], Oxford Centre for Evidence Based Medicine Scale) to critically appraise the structure, rigor, and overall quality of research studies.

**Clinical Examination and Diagnosis (CE):**

**Systems and Regions:**
- Musculoskeletal
- Integumentary
- Neurological

**CE-1.** Describe the normal structures and interrelated functions of the body systems.

**CE-2.** Describe the normal anatomical, systemic, and physiological changes associated with the lifespan.

**CE-3.** Identify the common congenital and acquired risk factors and causes of musculoskeletal injuries and common illnesses that may influence physical activity in pediatric, adolescent, adult, and aging populations.

**CE-4.** Describe the principles and concepts of body movement, including normal osteokinematics and arthrokinematics.

**CE-5.** Describe the influence of pathomechanics on function.

**CE-6.** Describe the basic principles of diagnostic imaging and testing and their role in the diagnostic process.

**CE-7.** Identify the patient’s participation restrictions (disabilities) and activity limitations (functional limitations) to determine the impact of the condition on the patient’s life.

**CE-10.** Explain diagnostic accuracy concepts including reliability, sensitivity, specificity, likelihood ratios, prediction values, and pre-test and post-test probabilities in the selection and interpretation of physical examination and diagnostic procedures.

**CE-11.** Explain the creation of clinical prediction rules in the diagnosis and prognosis of various clinical conditions.

**CE-12.** Apply clinical prediction rules (eg, Ottawa Ankle Rules) during clinical examination procedures.

**CE-13.** Obtain a thorough medical history that includes the pertinent past medical history, underlying systemic disease, use of medications, the patient’s perceived pain, and the history and course of the present condition.

**CE-14.** Differentiate between an initial injury evaluation and follow-up/reassessment as a means to evaluate the efficacy of the patient’s treatment/rehabilitation program, and make modifications to the patient’s program as needed.

**CE-15.** Demonstrate the ability to modify the diagnostic examination process according to the demands of the situation and patient responses.

**CE-16.** Recognize the signs and symptoms of catastrophic and emergent conditions and demonstrate appropriate referral decisions.

**CE-17.** Use clinical reasoning skills to formulate an appropriate clinical diagnosis for common illness/disease and orthopedic injuries/conditions.

**CE-18.** Incorporate the concept of differential diagnosis into the examination process.

**CE-19.** Determine criteria and make decisions regarding return to activity and/or sports participation based on the patient’s current status.

**CE-20.** Use standard techniques and procedures for the clinical examination of common injuries, conditions, illnesses, and diseases including, but not limited to:
   - **CE-20a.** History taking
   - **CE-20b.** Inspection/observation
   - **CE-20c.** Palpation
   - **CE-20d.** Functional assessment
   - **CE-20e.** Selective tissue testing techniques / special tests
   - **CE-20f.** Neurological assessments (sensory, motor, reflexes, balance, cognitive function)

**CE-21.** Assess and interpret findings from a physical examination that is based on the patient’s clinical presentation. This exam can include:
CE-21a. Assessment of posture, gait, and movement patterns
CE-21b. Palpation
CE-21c. Muscle function assessment
CE-21d. Assessment of quantity and quality of osteokinematic joint motion
CE-21e. Capsular and ligamentous stress testing
CE-21f. Joint play (arthrokinematics)
CE-21g. Selective tissue examination techniques / special tests
CE-21h. Neurologic function (sensory, motor, reflexes, balance, cognition)

CE-22. Determine when the findings of an examination warrant referral of the patient.
CE-23. Describe current setting-specific (e.g., high school, college) and activity-specific rules and guidelines for managing injuries and illnesses.

Acute Care (AC):
AC-4. Demonstrate the ability to perform scene, primary, and secondary surveys.
AC-5. Obtain a medical history appropriate for the patient’s ability to respond.
AC-43: Instruct the patient in home care and self-treatment plans for acute conditions.

V. Course Objectives/Learning Outcomes

This course is designed to enable students to:

- Become proficient at recognizing potential emergency situations related to orthopedic injuries.
- Identify clinical anatomy.
- Assess an athlete’s posture and gait as it relates to injury prevention and return to play.
- Understand the relationships between joints, ligaments, muscles, and the nervous system in the presence of pathology.
- Become proficient at palpating anatomical landmarks.
- Perform deep tendon reflexes and other neurological screenings.
- Perform manual muscle testing.
- Recognize and understand different orthopedic conditions and be able to discern appropriate care, treatments, rehabilitation, and possible referral to a physician.
- Perform musculoskeletal evaluations that will reveal what injury is present.
- Become proficient in writing SOAP notes and progress notes.
- Apply evidence to the diagnostic process and choose appropriate orthopedic special tests in each case.
- Become proficient at performing all orthopedic special tests and putting all the findings together to come up with a final assessment.
- Understand when an athlete should be referred to a physician or another appropriate medical provider within the sports medicine team.

VI. Course Topics

The major topics to be considered are:

1. Recognizing orthopedic emergencies.
2. Performing the orthopedic evaluation – from the history through special testing.
3. Evaluating both acute and chronic injuries and recognizing associated signs and symptoms.
4. How to choose appropriate orthopedic special tests and how to interpret those results.
5. How to compile the results of the physical examination and make a final assessment.
6. When to refer an athlete to an orthopedic physician.

VII. Instructional Methods and Activities
Methods and activities for instruction include:
A. Traditional Experiences: 80% (lecture/discussion; demonstration; guest speaker)
B. Clinical Experiences 20% (laboratory activities and demonstrations in class)

VIII. Evaluation and Grade Assignment
The methods of evaluation and the criteria for grade assignment are:
A. Methods and Percentage of Final Course Grade Each Assessment Constitutes
   1. Traditional Assessment
      Written Exams (2) = 100pts/apiece
      Final Exam = 150pts
      Quizzes (~10) = 10-15pts/apiece
      Assignments (~10) = 10-20pts/apiece
      Class Participation = 30pts
      Total = ~630 pts
   2. Performance Assessment
      Your final grade will be determined from your performance on exams, quizzes, and assignments. There are also points awarded for participation, which may be adversely affected by poor attendance.

B. Grading Scale
   90.00-100% = A
   80.00-89.99% = B
   70.00-79.99% = C
   60.00-69.99% = D
   < 60.00% = F

IX. Course Schedule and Policies (see attached)
A. Tentative Course Schedule for KINE 3324 – Eval. of Lower Extremity Injuries (Spring 2014)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Associated Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-Jan</td>
<td>Syllabus &amp; Intro</td>
<td>Ch. 1,2</td>
</tr>
<tr>
<td>27-Jan</td>
<td>The Injury Examination Process &amp; Acute Injuries</td>
<td>Ch. 1,2</td>
</tr>
<tr>
<td>29-Jan</td>
<td>Evidence Based Process &amp; Injury Nomenclature</td>
<td>Ch. 3,4,5</td>
</tr>
<tr>
<td>3-Feb</td>
<td>Foot &amp; Toes</td>
<td>Ch. 8</td>
</tr>
<tr>
<td>5-Feb</td>
<td>Foot &amp; Toes</td>
<td>Ch. 8</td>
</tr>
<tr>
<td>10-Feb</td>
<td>Foot &amp; Toes</td>
<td>Ch. 8</td>
</tr>
<tr>
<td>12-Feb</td>
<td>Foot &amp; Toes</td>
<td>Ch. 8</td>
</tr>
<tr>
<td>17-Feb</td>
<td>Ankle &amp; Lower Leg</td>
<td>Ch. 9</td>
</tr>
<tr>
<td>19-Feb</td>
<td>Ankle &amp; Lower Leg</td>
<td>Ch. 9</td>
</tr>
<tr>
<td>24-Feb</td>
<td>Ankle &amp; Lower Leg</td>
<td>Ch. 9</td>
</tr>
<tr>
<td>26-Feb</td>
<td>Review for Exam #1</td>
<td>Ch. 1-5,8,9</td>
</tr>
<tr>
<td>3-Mar</td>
<td>EXAM #1</td>
<td>Ch. 1-5,8,9</td>
</tr>
<tr>
<td>5-Mar</td>
<td>Knee &amp; Patellofemoral joints</td>
<td>Ch. 10,11</td>
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<tr>
<td>10-Mar</td>
<td>Spring Break – No Class</td>
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</tr>
<tr>
<td>12-Mar</td>
<td>Spring Break – No Class</td>
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<td>Ch. 10,11</td>
</tr>
</tbody>
</table>
B. Class Policies

Written Exams & Final

Two written exams will be given at the conclusion of their respective section. Material covered on the exam will mainly be from class lectures & notes as well as the Starkey textbook. There will also be material included on the exams from the lectures that don’t correspond with a chapter in the Starkey book. The cumulative Final exam will include test questions from the previous exams as well as a portion of questions over new information covered since the 2nd exam. No make-up exams will be given except under extreme circumstances. If you are late to an exam or quiz you will not be given extra time to take it.

When taking an exam or quiz – you may not touch your cell phone or any other electronic device during the exam or quiz. All bags, hats, etc. must be kept under your desk. Not adhering to these rules will be considered an attempt to cheat.

Quizzes

Quizzes will be both announced and unannounced. If you are absent and unexcused you will not be able to re-take the quiz.

Assignments

Examples are: handouts of anatomy, critiques of journal articles, outlines of chapters, or in-class activities, etc.

Class Participation & Attendance

There will be a performance assessment (30 points) of your class participation. To receive all 30 points you must be present and participate in ALL class discussions and laboratory activities. Your 3rd unexcused absence and every absence thereafter will result in the reduction of 5 points.

You are expected to be present each time the class meets; however, I will allow for two unexcused absences this semester. It’s to your benefit to attend class and participate daily. This course is challenging and it’s to your own benefit to be present to ask questions and get the notes.

An unexcused absence is any absence that is not an emergency or not due to a university related function/event in which you are required to participate. An emergency constitutes you going to the ER and bringing me a note from the ER doctor. A university event would be an athlete traveling with their team, traveling to represent the university, and similar situations. If you know you will miss a day of class for a university event you MUST communicate this with me beforehand or else you will not be able to make up the points from that day AND it will be counted as an unexcused absence. If you have a situation occur out of your control that you feel is an emergency then let me know ASAP and I will handle these situations with
discretion. Obviously, communication is of most importance in all of these situations. You should call me or email me to inform me if you will not be able to attend a class in the future.

X. Textbook(s)

_The textbook(s) adopted for this course is/are:_


_Recommended but not required supplementary textbook(s) is/are:_


XI. Bibliography

_The knowledge bases that support course content and procedures include:_

5. Peer-reviewed literature related to orthopedic evaluation and orthopedic conditions.

XII. Grade Appeals

As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html). For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

XIII. Disabilities Accommodations

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in CCH 117. If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.