ATEP 346 LAB
ATHLETIC INJURY EVALUATION II LABORATORY
FALL 2012

Instructor: Colby Mangum, ATC, SCAT
Class Time: Wednesday, Friday 10:00am-10:50am (starting Wednesday, August 29)
Location: Silcox Room 146
Office Hours: By appointment
Office Location: Room 150A in Sports Medicine Research Lab
Email: mangumlc@cofc.edu

Lab Course Description: This laboratory course is a co-requisite to ATEP 346 Athletic Injury Evaluation II and is designed to develop the student’s psychomotor skills of examination and assessment of athletic injuries occurring to the spine and torso areas of the human body.

Lecture & Lab Objectives: Upon successful completion of this course the student should be able to:
1. Explain the components of the primary and secondary survey.
2. Differentiate between injury recognition, assessment, and diagnosis.
3. Describe common injuries to the head, face, spine, abdomen, and thorax incurred by athletes and others involved in physical activity.
4. Describe and demonstrate physical examination techniques for the human face, head, spine, abdomen, and thorax such as (a) taking a history, (b) inspection and observation, (c) palpation, (d) range of motion assessment, (e) ligament testing, (f) neurological assessment, (g) special tests, (h) functional testing
5. Gather objective assessment data through assessment techniques such as (a) goniometric assessment and (b) manual muscle testing
6. Use the information obtained during an examination (of the head, spine, abdomen, or thorax) to (a) determine when to refer an injured patient for further or immediate medical attention, and to (b) safely return the patient to physical activity.
7. Describe the components of medical documentation.
8. Use correct anatomical nomenclature to communicate (written and oral) physical examination findings to medical and health care professionals.

5th Edition Educational Competencies: The content of this course will in part or completely cover the following competencies from the 5th edition of the NATA Educational Competencies:

1. Explain the importance of monitoring a patient following a head injury, including the role of obtaining clearance from a physician before further patient participation.
2. Identify the signs, symptoms, interventions and, when appropriate, the return-to-participation criteria for:
   a. brain injury including concussion, subdural and epidural hematomas, second impact syndrome and skull fracture
   b. cervical, thoracic, and lumbar spine trauma
   c. internal hemorrhage
3. Obtain a medical history appropriate for the patient’s ability to respond.
4. Differentiate between normal and abnormal physical findings (eg, pulse, blood pressure, heart and lung sounds, oxygen saturation, pain, core temperature) and the associated pathophysiology.
5. 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.

6. Apply clinical prediction rules (eg, Ottawa Ankle Rules) during clinical examination procedures.

7. 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.

8. 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.

9. Demonstrate the ability to modify the diagnostic examination process according to the demands of the situation and patient responses.

10. Recognize the signs and symptoms of catastrophic and emergent conditions and demonstrate appropriate referral decisions.

11. Use clinical reasoning skills to formulate an appropriate clinical diagnosis for common illness/disease and orthopedic injuries/conditions.

12. Incorporate the concept of differential diagnosis into the examination process.

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

14. Use standard techniques and procedures for the clinical examination of common injuries, conditions, illnesses, and diseases including, but not limited to:
   a. history taking
   b. inspection/observation
   c. palpation
   d. functional assessment
   e. selective tissue testing techniques / special tests
   f. neurological assessments (sensory, motor, reflexes, balance, cognitive function)
   g. respiratory assessments (auscultation, percussion, respirations, peak-flow)
   h. circulatory assessments (pulse, blood pressure, auscultation)
   i. abdominal assessments (percussion, palpatation, auscultation)

15. Assess and interpret findings from a physical examination that is based on the patient’s clinical presentation. This exam can include:
   a. Assessment of posture, gait, and movement patterns
   b. Palpatation
   c. Muscle function assessment
   d. Assessment of quantity and quality of osteokinematic joint motion
   e. Capsular and ligamentous stress testing
   f. Joint play (arthrokinematics)
   g. Selective tissue examination techniques / special tests
   h. Neurologic function (sensory, motor, reflexes, balance, cognition)
   i. Cardiovascular function (including differentiation between normal and abnormal heart sounds, blood pressure, and heart rate)
   j. Pulmonary function (including differentiation between normal breath sounds, percussion sounds, number and characteristics of respirations, peak expiratory flow)
   k. Gastrointestinal function (including differentiation between normal and abnormal bowel sounds)
   l. Ocular function (vision, ophthalmoscope)
   m. Function of the ear, nose, and throat (including otoscopic evaluation)
   n. Dermatological assessment
   o. Other assessments (glucometer, temperature)

16. Determine when the findings of an examination warrant referral of the patient.
17. 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.
18. Describe the principles and concepts of body movement, including normal osteokinematics and arthrokine matics.
19. Describe the influence of pathomechanics on function.
20. Describe the basic principles of diagnostic imaging and testing and their role in the diagnostic process.
21. Identify the patient’s participation restrictions (disabilities) and activity limitations (functional limitations) to determine the impact of the condition on the patient’s life.
22. Explain the role and importance of functional outcome measures in clinical practice and patient health-related quality of life.
24. Define evidence-based practice as it relates to athletic training clinical practice.
25. Apply and interpret clinical outcomes to assess patient status, progress, and change using psychometrically sound outcome instruments.
26. Explain the role of evidence in the clinical decision making process.
27. Describe and contrast research and literature resources including databases and online critical appraisal libraries that can be used for conducting clinically-relevant searches.
28. Specify when referral of a client/patient to another healthcare provider is warranted and formulate and implement strategies to facilitate that referral.
29. Identify modifiable/non-modifiable risk factors and mechanisms for injury and illness.
30. Fabricate and apply taping, wrapping, supportive, and protective devices to facilitate return to function.
31. Analyze gait and select appropriate instruction and correction strategies to facilitate safe progression to functional gait pattern.
32. Explain the relationship between posture, biomechanics, and ergodynamics and the need to address these components in a therapeutic intervention.

Required Texts:
1. Starkey & Ryan. Evaluation of Orthopedic and Athletic Injuries, 3rd Ed. FA Davis
2. Supplemental Readings on OAKS.

REQUIRED TECHNOLOGY:
• OAKS

The technology listed above can be accessed in the College of Charleston computer labs located in the Long Building, Small Library, and various other campus locations. If you do not know how to use this computer application you should arrange an appointment with the course instructor for tutoring.

OAKS: This course will be administered using OAKS. Check sheets to be used during the lab should be printed before you come to lab. You will not be allowed to use the printer in the athletic training room. Please check and use the email built into OAKS for correspondence with the instructor and your classmates. The instructor will attempt to check this email at least twice a day, but at a minimum once per day to respond to any questions you might have. In addition, the instructor will check the regular email address several times a day which would be the best means of contacting the instructor.
**ATTENDANCE:** Class attendance is vital to success in this course. Therefore, it is your responsibility as the student to attend all class meetings. If extreme circumstances necessitate an absence, you will be held responsible for the class material covered during your absence. Class activities, assignments or evaluations missed due to unexcused absences will result in a grade of zero (0) for that assignment. You are allowed one (1) unexcused absence without penalty (with the exception of assignments as noted above). Any additional unexcused absences will result in a **five (5) point** deduction from your final point total. **Three (3) tardies** are equal to one unexcused absence. Being tardy is considered reporting to class after the fifteen minute grace period. It is your responsibility to see the instructor after class to ensure the absence is changed to a tardy from an absence. If you enter class late and miss any graded quiz or assignment you will not be allowed to complete the assignment.

Absences will be considered for excusal for the following: serious illness, hospitalization, death of a family member or close friend, or attendance at an event representing the College of Charleston (i.e. athletic team, travel, gospel choir, WAVE, etc.). Appropriate documentation must be provided from the Undergraduate Dean's Office for an absence to be considered for excusal.

You are responsible for any class content/assignments you miss due to an absence. Any assignment/exam missed due to an **excused** absence must be made up within **one week** to receive full credit. It is your responsibility to schedule make-up work with the instructor.

**REQUIREMENTS:**

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<thead>
<tr>
<th>Requirement</th>
<th>Points Assigned</th>
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<tbody>
<tr>
<td>Lab Assignments/Case Studies</td>
<td>150 pts</td>
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<tr>
<td>Midterm Practical Examination</td>
<td>50 pts</td>
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<td>Final Practical Examination</td>
<td>100 pts</td>
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<tr>
<td>TOTAL POINTS</td>
<td>300 PTS</td>
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**DESCRIPTION OF COURSE REQUIREMENTS:**

**Lab Assignments/Case Studies:** Each lab will have an assignment associated with it to enhance learning. These sheets will be posted on OAKS and should be printed **before** coming to lab. You should also dress appropriately (shorts/t-shirt) for every lab. **Failure to provide the appropriate supplies will result in a 2 pt deduction from that day's lab assignment.**

**Practical Examinations:** A practical examination will be given at the midterm and conclusion of the semester covering the evaluation skills acquired during the class. These exams will be given during the regular class periods for the week listed on the course schedule.

**GRADING SCALE:**

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<tr>
<th>Grade</th>
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<td>A</td>
<td>90-100%</td>
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<td>A-</td>
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Spine Evaluation

Posture & Spineboarding

C-Spine Evaluation

Evaluation

Thorax & Abdomen

Thorax & Abdomen; Thoracic & Lumbar Spine Evaluation

October 3, 5

HONESTY TO

THAT

HONOR SYSTEM. ALL ACADEMIC WORK SHOULD BE DONE WITH THE HIGH LEVEL

OF HONESTY AND INTEGRITY THAT THIS INSTITUTION DEMANDS. Please consult the College of Charleston Student Handbook for specific details of responsibility, penalty, and appeal.

PERSONAL ELECTRONIC DEVICES:

Personal electronic devices such as smart phones, cell phones, iPods, and PDA’s are not permitted to be used in class. Students needing to bring such devices to class must be sure the device is TURNED OFF (not set to vibrate) and secured inside a book-bag, purse, or pocket for the entire class time. Students removing an electronic device from its secured location or using personal electronic devices during class time will be asked to leave the classroom for the remainder of the class meeting time.

DISABILITY STATEMENT:

This College abides by section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act that stipulates no student shall be denied access to an education “solely by reason of a handicap”. Disabilities covered by law include, but are not limited to, learning disabilities and hearing, sight or mobility impairments. If you have a documented disability that may have some impact on your work in this class and for which you may require accommodations, please see an administrator at the Center of Disability Services, (843) 953-1431 or me so that such accommodation may be arranged. If there is a student in this class who has a documented disability and has been approved to receive accommodations through SNAP Services, please feel free to come and discuss this with me during my office hours.

COURSE SCHEDULE: This schedule is tentative and subject to change based on class progress.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topic</th>
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<tbody>
<tr>
<td>August 29, 31</td>
<td>Syllabus/Intro; Concussion Assessment</td>
</tr>
<tr>
<td>September 5, 7</td>
<td>Head &amp; Face Evaluation</td>
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<td>September 12, 14</td>
<td>C-Spine Evaluation &amp; Spineboarding</td>
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<td>September 19, 21</td>
<td>Thorax &amp; Abdomen Evaluation</td>
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<td>September 26, 28</td>
<td>Thorax &amp; Abdomen; Thoracic &amp; Lumbar Spine Evaluation</td>
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<td>October 3, 5</td>
<td>Thoracic &amp; Lumbar Spine Evaluation</td>
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<tr>
<td>October 10, 12</td>
<td>Mid-term Practical Exams</td>
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<td>October 17, 19</td>
<td>Pelvis &amp; SI Joint Evaluation</td>
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<td>October 24, 26</td>
<td>Posture &amp; Alignment Assessment</td>
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<td>October 31, Nov 2</td>
<td>Posture &amp; Gait Assessment</td>
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<tr>
<td>November 7, 9</td>
<td>Gait Assessment</td>
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<tr>
<td>November 14, 16</td>
<td>Review for Final Practical Exams</td>
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<tr>
<td>November 21, 23</td>
<td>THANKSGIVING HOLIDAY (No Class)</td>
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<tr>
<td>November 28, 30</td>
<td>Final Practical Exams</td>
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