Clinical Evaluation of Sports Injuries
ENS 367/367L- 3 units

Fall 2011

Contact Information:
Instructor: Denise Lebsack, PhD, ATC  E-mail: dlebsack@mail.sdsu.edu
Office: ENS 303  Office Hours: Wed. 1:45-2:45
              Fri.12:00-1:00 or by appt.

Course Prerequisites:  Credit or concurrent enrollment in ENS 389A & ENS 303

Course Materials:
Injuries, 3rd edition. FA Davis Company.
               Lippincott, Williams & Wilkins.
                Available for purchase at Cal Copy- 5185 College Ave. (next to KB Books)
                  Examination, 3rd edition. SLACK, Inc.
                  Gulick. Ortho Notes: Clinical Examination Pocket Guide. FA Davis
                  Company.

Purpose of the Course
The purpose of the course is to develop knowledge, skill and understanding of the SYSTEMATIC
DIFFERENTIAL EVALUATION PROCESS (SDEP) of common physical activity injuries. In addition,
physiological and mechanical rational of evaluation techniques will be presented. The use of evaluation as a basis
for planning the rehabilitation program will be emphasized.

Course Description
Systemic differential evaluation procedure for the ankle, foot, lower leg, knee, thigh, and hip will be presented.
Prerequisite knowledge of anatomy and kinesiology is expected. The course will be presented at a professional
level appropriate to the needs of Certified Athletic Trainers. It is expected that students will read, study and
practice techniques outside of formal class hours. It is imperative that the student review all kinesiological and
anatomical principles and concepts. You cannot successfully complete this course without at least “B” level
knowledge in Anatomy and Kinesiology.
**Course Objectives:**

The student will be able to:

1. Plan and conduct a systematic differential evaluation of various sports injuries.
2. Understand and apply the basic tools used in SDEP.
3. Make on-field and clinical evaluations of common sport injuries of the ankle, foot, lower leg, knee, thigh, and hip in a systematic differential procedure.
4. Understand the clinical basis for the various procedures in the evaluation process.
5. Understand the pertinent physiology, arthrology and mechanics and kinesiology of each body segment and the appropriate evaluation process.
6. Understand the role of thorough and sound evaluation in planning and conducting the rehabilitation process.
7. Recognize the usual symptoms and appropriate signs of common sport injury pathology of the ankle, foot, lower leg, knee, thigh, and hip

**Athletic Training and ENS Learning Goals and Objectives:**

**Learning Goal 1:** Students will use effective communication that builds positive professional relationships with patients, administrators, coaches, other healthcare providers, and the public.

<table>
<thead>
<tr>
<th>Objectives</th>
<th>ENS Goal &amp; Objective Alignment</th>
<th>Assessment Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use effective oral presentation skills to present information to peers and other professionals</td>
<td>2.2</td>
<td>Oral/Practical exams</td>
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**Learning Goal 2:** Students will use systematic differential evaluation procedures specific to the athletic training discipline.

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<thead>
<tr>
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<th>Assessment Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate the implication of intrinsic and extrinsic risk factors relating to mechanism of injury/illness.</td>
<td>1.3</td>
<td>Written &amp; Oral/Practical exams</td>
</tr>
<tr>
<td>Evaluate and interpret subjective data derived from patient population</td>
<td>1.4, 7.1</td>
<td>Oral/Practical exams</td>
</tr>
<tr>
<td>Apply subjective data to plan and execute objective phase of evaluation plan</td>
<td>1.2, 1.4, 7.2, 8.2</td>
<td>Written &amp; Oral/Practical exams</td>
</tr>
<tr>
<td>Conduct qualitative analysis of existing data to identify possible diagnoses and develop intervention strategy</td>
<td>1.2, 1.3, 1.5, 7.4</td>
<td>Oral/Practical exams</td>
</tr>
</tbody>
</table>
Learning Goal 3: Students will apply athletic training knowledge, intervention strategies, and clinical management skills through didactic and experiential learning opportunities.

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<thead>
<tr>
<th>Objectives</th>
<th>ENS Goal &amp; Objective Alignment</th>
<th>Assessment Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Design, implement and monitor an emergency management plan in the classroom and clinical setting</td>
<td>8.1</td>
<td>Written &amp; Oral/Practical exams</td>
</tr>
<tr>
<td>4. Use appropriate referral for proper management of injury/illness</td>
<td>8.3</td>
<td>Written &amp; Oral/Practical exams</td>
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</table>

Learning Goal 5: Students will integrate research into daily clinical practice through the acquisition, use, and practice of evidence-based medicine.

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<thead>
<tr>
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<th>Assessment Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Select and apply appropriate evaluation/measurement and/or management techniques based upon valid and reliable scientific evidence.</td>
<td>3.3</td>
<td>Written Exam</td>
</tr>
</tbody>
</table>

Course Requirements:

1. **STUDENT MUST WEAR NAME TAGS FOR THE FIRST FEW WEEKS.**
2. **DRESS:** SHORTS AND SHORT SLEEVE SHIRTS ARE REQUIRED FOR ALL LAB SESSIONS. Lab work will require students to review appropriate anatomy (including surface anatomy) and kinesiology prior to lab session.
3. **LAB PROCEDURES.**
   1. Lab material MAY be presented and practiced during lecture days and lab days.
   2. If you do not understand and/or did not see the demonstration of procedure/technique, please ask instructor to repeat.
4. The NATA and BOC Plan is a “learning over time” concept. Therefore the concepts, procedures and psychomotor skills required in lower division courses e.g. BIO 212, ENS 265, will be expected to be perfected in upper division courses.
5. Student should bring the following texts to class as applicable:
   A. Starkey
   B. Kendall
   C. Konin, if available
6. **ATTENDANCE:** MANDATORY
7. EVALUATION:
   a. Two Written Exams- 200 (100 points each)
   b. Two Practical Exams- 200 (100 points each)
   c. Two Quizzes- 50 (25 points each)
   d. Homework Assignments:
      1. Posture Assessment 25 points
      2. Goniometer Measures 25 points
   e. Attendance- 50 points
   TOTAL: 550 points

Grading Criteria: Grades are assigned as a percentage of the highest total class points earned.

92.5% - 100%  -  A  72.5% - 76.4%  -  C
89.5% - 92.4%  -  A-  69.5% - 72.4%  -  C-
86.5% - 89.4%  -  B+  66.5% - 69.4%  -  D+
82.5% - 86.4%  -  B  62.5% - 66.4%  -  D
79.5% - 82.4%  -  B-  59.5% - 62.4%  -  D-
76.5% - 79.4%  -  C+  59.4% and below-  F

Course Outline
SECTIONS I THROUGH IV INTRODUCE THE EVALUATION PROCESS AND INVESTIGATE THE BASIC TOOLS NEEDED BY ATC TO CARRY OUT SUCCESSFUL SYSTEMATIC DIFFERENTIAL EVALUATION (SDEP).

I. INTRODUCTION:
   1. Basis of Evaluation
   2. Purpose and Role of evaluation
   3. On-Field Evaluation of Athletic Injuries

II. OVERVIEW OF EVALUATION, PRINCIPLES AND CONCEPTS
   1. Review Principles of Athletic Injury Management
   2. Systematic Differential Evaluation Process
   3. Hops
   4. Subjective Examination
   5. Objective Examination
   6. Record Keeping

III. SUBJECTIVE EVALUATION
   1. History and Interview
   2. Behavior of Symptoms

IV. OBJECTIVE EVALUATION PROCEDURES SDEP
   1. OBSERVATION- Posture & Gait
   2. PALPATION
   3. MOVEMENT tests, selective tissue tension testing
      a. Active Range of Motion (AROM) /Selective Tissue Tension Testing

b. Quick Tests, Scanning

## B. Passive Range of Motion (PROM) /Selective Tissue Tension Testing

- a. Overpressure, Assessment of End Feels
- b. Muscle length tests (MLT)

## C. Resistive Testing (RT) Selective Tissue Tension Testing

- a. General Scanning (GMT)
- b. Mid Range of Motion (MROMMT)
- c. Specific Manual Muscle Tests (SMMT)
- d. Functional Muscle Tests (FMT)

### 4. SPECIAL TESTS

- a. Stability Tests
- b. Passive Tendon Stretch Tests
- c. Specific Tests
- d. Functional Test

### 5. ANTHROKINEMATIC ASSESSMENT

- a. Joint Play
- b. Accessory Movement
- c. Osteokinematic

### 6. NEUROLOGICAL ASSESSMENT

- a. Dermatome, Myotone, Seleratomic, Vascular
- b. Reflexes
- c. Sensorimotor Control (Proprioception)

### 7. PHYSICIANS TESTING- Roentgenograms, Arthograms, MRI, Bone Scans, etc.

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**SECTION V THROUGH VII PRESENT SDEP FOR SPECIFIC ANATOMIC REGIONS OF THE BODY**

### V. Lower Extremity

- a. Ankle & Foot Injuries
- b. Lower Leg Injuries

### VI. Knee

- a. Knee
- b. Patella

### VII. Hip and Thigh

### VIII. Application to Pathology

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**Expectations/Class Behaviors**

- Coming to class, and on time. Arriving late is better than not coming at all.
- No talking, texting, or MP3 player use during class.
- Computer use is for class-related use ONLY!
- Use blackboard on a weekly basis.
- Cell phones are turned off.
- Avoid eating that is distracting to others.
- Proper attire for lab activities
**Students with Disabilities**

If you have a documented disability and anticipate needing accommodation in this course, please make arrangements to meet with me soon. Please request that the Counselor for Students with Disabilities send a letter verifying your disability. You will receive the appropriate accommodations from the day that you provide me with the necessary documentation. Course accommodations will not be applied retroactively (e.g. after an examination).

**Academic Integrity**

All work submitted in this course must be your own and produced exclusively for this course. The use of sources (ideas, quotations, and paraphrases) must be properly acknowledged and documented. If in doubt, you are encouraged to review guidelines for the proper use of sources (e.g., [http://www.hamilton.edu/academics/resource/wc/usingsources.html](http://www.hamilton.edu/academics/resource/wc/usingsources.html)), as well as the University guidelines (including definition and policy) regarding cheating and plagiarism ([http://its.sdsu.edu/resources/turnitin/pdf/Plagiarism_AcadSen.pdf](http://its.sdsu.edu/resources/turnitin/pdf/Plagiarism_AcadSen.pdf))
<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>REQUIRED READINGS</th>
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<tbody>
<tr>
<td>8/27-29</td>
<td>LAB: Course Introduction, Injury Evaluation Process</td>
<td>Chap. 1 &amp; 3</td>
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<tr>
<td>8/31</td>
<td>Injury Evaluation Process</td>
<td>Chap. 1 &amp; 3</td>
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<tr>
<td>9/3-5</td>
<td><strong>NO CLASS- LABOR DAY</strong></td>
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<tr>
<td>9/7</td>
<td>On-Field Evaluation of Athletic Injuries &amp; Criteria for Return to Play</td>
<td>Chap. 2</td>
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<tr>
<td>9/10-12</td>
<td>LAB: Subjective Evaluation &amp; Observation/Palpation Anatomical Landmarks</td>
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<tr>
<td>9/14</td>
<td>Assessment of Posture &amp; Gait Analysis</td>
<td>Chap. 6 &amp; 7</td>
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<tr>
<td>9/17-19</td>
<td>LAB: Posture Assessment &amp; Gait Analysis</td>
<td>Chap. 6 &amp; 7</td>
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<tr>
<td>9/21</td>
<td>Range of Motion Testing</td>
<td>Chap. 1</td>
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<tr>
<td>9/24-26</td>
<td>LAB: Goniometer Testing</td>
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<tr>
<td>9/28</td>
<td>Manual Muscle Testing</td>
<td>Chap. 1</td>
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<tr>
<td>10/1-3</td>
<td>LAB: Manual Muscle Testing</td>
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<tr>
<td>10/5</td>
<td>Special Tests &amp; Neurological Assessment</td>
<td>Chap. 1</td>
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<tr>
<td>10/8-10</td>
<td>LAB: Neurological Assessment</td>
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<tr>
<td><strong>10/12</strong></td>
<td><strong>WRITTEN EXAM 1</strong></td>
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<tr>
<td><strong>10/15-17</strong></td>
<td><strong>LAB: PRACTICAL EXAM 1</strong></td>
<td>Chap. 8 &amp; 9</td>
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<tr>
<td>10/19</td>
<td>Ankle, Foot &amp; Lower Leg</td>
<td>Chap. 8 &amp; 9</td>
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<td>10/22-24</td>
<td>LAB: Ankle, Foot &amp; Lower Leg</td>
<td>Chap. 8 &amp; 9</td>
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<td>10/26</td>
<td>Ankle, Foot &amp; Lower Leg</td>
<td>Chap. 8 &amp; 9</td>
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<tr>
<td>10/29-10/31</td>
<td>LAB: Ankle, Foot &amp; Lower Leg</td>
<td>Chap. 8 &amp; 9</td>
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<tr>
<td>11/2</td>
<td>Knee</td>
<td>Chap. 10</td>
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<tr>
<td>11/5-7</td>
<td>LAB: Knee</td>
<td>Chap. 10</td>
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<tr>
<td>11/9</td>
<td>Knee</td>
<td>Chap. 10</td>
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<td>11/12</td>
<td>NO CLASS- VETERAN’S DAY</td>
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<td>11/14</td>
<td>LAB: Knee (Both Labs)</td>
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<td>11/16</td>
<td>Knee</td>
<td>Chap. 11</td>
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<tr>
<td>11/19</td>
<td>LAB: Knee (Both Labs)</td>
<td>Chap. 11</td>
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<td>11/21</td>
<td>NO CLASS</td>
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<td>11/23</td>
<td>NO CLASS- THANKSGIVING</td>
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<td>11/30</td>
<td>Hip &amp; Pelvis</td>
<td>Chap. 12</td>
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<td>12/3-5</td>
<td>LAB: Hip &amp; Pelvis</td>
<td>Chap. 12</td>
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<td>12/7</td>
<td>WRITTEN EXAM 2</td>
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<tr>
<td>12/10-12</td>
<td>PRACTICAL EXAM 2</td>
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