

University of Wisconsin-Stevens Point
School of Health Care Professions
AT 710 – Evaluation and Analysis of the Lower Kinetic Chain

Instructor: Holly Schmies
Office Hours: Tuesday and Thursday 1:30 – 2:30
Class Times: Mon – Thursday 9:30am – 1:00pm
Classroom: HEC 147
Prerequisites: Admission to the MS-AT Program

Phone: 346-2922
Office: HEC 123
Credits: 4
Term: Summer 2018

COURSE DESCRIPTION:

Orthopedic clinical evaluation and movement analysis of the lower kinetic chain. Learning outcomes include clinical decision making for injury prevention, assessment and treatment of lower kinetic chain injuries.

This course incorporates the assessment methods used in the orthopedic evaluation of lower extremity (including low back) musculoskeletal injury and illness. The study of the pathology, etiology, and physiology of lower extremity injuries common in the physically active will be presented and discussed. The topics, projects, and course design represent theory, current trends, and critical thinking in the athletic training field.

COURSE OBJECTIVES:

The student shall demonstrate proficiency of the assigned competencies outlined in the most current edition of the NATA's *Athletic Training Educational Competencies*. The competencies assigned to this course are primarily from the Clinical Examination and Diagnosis content area but also cross over into Prevention and Health Promotion, Therapeutic Interventions, and Evidence-Based Practice to better reflect current practice of athletic training. The specific competencies assigned to this course will be outlined in your Clinical Assessment packet for AT 710.

At the end of the course the student shall:

1. Discuss and identify common risk factors and causes of various athletic injuries.
2. Discuss anatomical and physiological changes, which occur in various stages of life, especially as they relate to a predisposition to injury.
3. Identify observable clinical signs commonly associated with injuries to the physically active.
4. Effectively communicate to obtain a complete patient history.
5. Demonstrate the ability to use standard techniques and procedures for clinical examination of common injuries and condition of the lower extremity – including but not limited to: palpation, range of motion, strength, neurological signs, stability and function.
6. Assess and interpret findings from an orthopedic physical examination that is based on the patients' clinical presentation.
7. Discuss and evaluate the relationship between faulty mechanics in the lower kinetic chain as related to microtrauma and injuries.
8. Demonstrate the ability to use critical thinking skills to determine the correct assessment of an injury.
9. Describe current setting-specific and activity-specific rules and guidelines for managing injuries related to the lower extremity.
10. Optimize patient outcomes by determining the correct course treatment (immediate or the general therapeutic strategy) and/or referral for the patient based on the results of the assessment.
11. Determine when findings of the examination warrant referral to another health care provider.
12. Recognize signs and symptoms of common illnesses and the need for referral.

REQUIRED TEXTBOOKS:

Starkey - Evaluation of Orthopedic and Athletic Injuries (3rd) F.A Davis. Philadelphia (purchase)

Kendall - Muscles Testing and Function (4th) Williams and Wilkins Baltimore (available in HEC 147)

Textbook reference:

- Starkey is good for the systematic process of the evaluation, ROM and special tests
- Kendall is THE source for MMT and for postural assessment

CLASS POLICIES:

1. Class attendance is **MANDATORY**. Students are expected to arrive on time and be prepared. You **must READ the text** and keep up with course material to feel confident in the course.
2. A student's grade will be dropped a ½ of letter grade for every two unexcused absences accumulated.
 - Tardiness is considered an unexcused absence.
3. Students are solely responsible for obtaining any course material missed due to absence.
4. Students are required to dress appropriately (shorts) when instructed to do so.
5. Class **PARTICIPATION** is required. The students will be required to develop critical thinking skill as they pertain to the field of athletic training. This is accomplished by participating in class discussion, projects, and lab session.
6. Students will be expected to fulfill all assignments and projects on time based on the syllabus and due dates given by the instructor in class.
7. Exams may not be made up unless the instructor gives prior approval.
8. This course will use Desire 2 Learn (D2L) throughout the semester to distribute materials, collect assignments, conduct online quizzes, and allow students to monitor their grades. Please become familiar with the D2L courseware as it will be used extensively.
9. Students are expected to adhere to UWSP's statement of academic principles. Students are responsible for the honest completion and representation of their work, for the appropriate citation of sources, and for respect of others' academic endeavors. Students who violate these standards must be confronted and must accept the consequences of their actions.

COURSE EVALUATION PROCEDURES:

1. Class Assignments (varied points): There will be various quizzes, outlines, and worksheets throughout the semester. Assignments will be determined by the instructor throughout class depending on where emphasis is needed.
 - a. Anatomy Lab Manuals: prior to every area of the body, a lab manual will be assigned to help you review and promote self-learning. (0 points assigned)
 - b. Clinical Presentation Case Studies or Pathology Assignments– You will be presented with a case study for a various injury. You will answer the questions prompted within the assignment. (20 points each)
 - c. Article summary paper (Knee) – The requirements for the written component of this assignment will be discussed during class and also posted on D2L. (30 points)
 - d. Coach my Video Gait Analysis – You will be assigned a partner to obtain a video for and to start to analyze the gait patterns. (25 points)
2. Take Home Written Examination (100 points)
3. Practical Examinations (~50 points each)
4. Cumulative final examination (40 points)

GRADING (based on % of total points)

94 – 100% = A 77 – 79% = C+ 60 – 63% = D-

90 – 93% = A- 74 – 76% = C < 60% = F

87 – 89% = B+ 70 – 73% = C-

84 – 86% = B 67 – 69% = D+

80 – 83% = B- 64 – 66% = D

Date	Topic	Reading	Assignment/Task
WEEK 1 – FOOT, ANKLE, LOWER LEG			
7/23	Course introduction – Listening and Thinking like a Clinical Athletic Trainer Foot and Ankle Anatomy and Palpation Clinical Examination Process	Starkey – Chapter 1, Chapter 8 and 9 (anatomy focus)	Foot and Ankle Anatomy Lab Manual
7/24	Systematic evaluation of injury Pathologies – general principles Pathologies of the Foot and Ankle	Starkey – Chapter 4 and Chapter 5	Clinical Presentation Case Study 1
7/25	Marshfield Clinic Continuing Education Minoqua, WI	Starkey – Chapter 8 and 9	
7/26	Re-cap from Minoqua Foot and Ankle Clinical Evaluation and Pathologies Continued	Starkey – Chapter 8 and 9	Pathology Assignment
7/27	Mini Practical Study Sessions – Optional		
WEEK 2 – LOWER LEG and KNEE			
7/30	Complete Foot/Ankle -		
7/31	9:30 – 11:30am – Practical Sessions and Debriefing Knee Anatomy Palpation Kinematics of the Knee Joint	Starkey – Chapter 10	
8/1	Kinematics of the Patellofemoral Joint Knee Clinical Evaluation and Pathologies	Starkey – Chapter 10 and 11	Knee Anatomy Lab
8/2	Knee Clinical Evaluation and Pathologies	Starkey – Chapter 10 and 11 Article - JNATA 2012	Clinical Presentation Case Study 1 and 2
	Homework: The middle of the chain – How the knee is affected from the top and the bottom	Articles – Earl 2005, and JJSPT 2016	Summary Paper – Due 8/6
8/3	Optional Study Session		
WEEK 3 – KNEE and HIP			
8/6	Knee review – Case studies and skill review Hip and Pelvis Anatomy Palpation	Starkey – Chapter 12	Summary Paper
8/7	Hip and Pelvic Clinical Evaluation and Pathologies	Starkey – Chapter 12	Hip and Pelvis Anatomy Lab Hip cause knee pain?
8/8	Marshfield Clinic SIM DAY with Beth	Hip and FAI Article	
8/9	9:00 – 11:30am – Knee Practical Sessions – Introduction to Gait with Danelle	Chapter 7	Clinical Presentation Case Study 1 and 2 - Hip Flexibility and Strength
WEEK 4 – KINETIC CHAIN AND REVIEW			
8/13	Hip and Pelvis Review Gait Analysis Continued	Chapter 7 Gait Articles	Gait worksheet
8/14	9:30 - Hip and Pelvis Practical Sessions and Debriefing 11:30 - Kinetic Chain Review –	Kinetic Chain Articles	Coach my Video Gait Analysis
8/15	Lower Kinetic Chain and Injury Evaluations		Take Home Examination
8/16	Final Examination - Written Case Studies Lower Kinetic Chain and Injury Evaluations		
8/17	FINAL ASSESSMENTS – Clinical Practicals		