

**School of Health Care Professions  
Athletic Training Program**

**Course Title: AT 430 - Therapeutic Interventions of Injury and Illness** (3 Credits) – HEC 147

Instructor: Holly Schmies

Term: Spring 2019

Phone: 346 – 2922 (O) or 715-572-9600 (C)

Time: Mon/Wed 9:30 – 11:00am

**Course Description:**

3cr. Examination and assessment of principles, theory and techniques for treatment of various conditions in the active populations including rehabilitation protocols, diagnostic testing, surgical techniques, counseling strategies and manual therapies. Students will be instructed and evaluated on the use of new therapeutic techniques and the ability to develop and analyze treatment interventions using the support of previously learned skills and evidence-based practice. Prereq: AT 400 or concurrent reg.

**Course Objectives:**

1. Understand pharmacologic applications, including awareness of indications, contraindications, precautions, and interactions of medications and of the governing regulations relevant to injury/illness in active populations.
2. Identify which therapeutic drugs and nontherapeutic substances commonly used by the active population and properly advise patients about pharmacodynamics and other consequences.
3. Understand principles of clinical pathology and decision-making as related to treatment and rehabilitation of the active population.
4. Understand principles of pathophysiology as related to injury and illness in active populations.
5. Differentiate the use of various diagnostic testing methods.
6. Initiate a process of systematic thinking in relation to evidence-based medicine as it relates to diagnosis, treatment, and rehabilitation.
7. Become exposed to other means of treatment and rehabilitation that don't fall into the "traditional" roles of an athletic trainer.
8. Clinically relate the research evidence to the practice of athletic training and be able to demonstrate and describe a clinically relevant protocol.

**Required Textbooks:** Pharmacology Application in Athletic Training by Mangus and Miller

Therapeutic Exercise: From Theory to Practice by Michael Higgins (text rental)

**Required Readings:** There will be additional articles for required reading for this course. The articles will either be posted in D2L or you may be required to find a relevant research article on the topic.

**Class Policies:**

The topics, projects, and course design represent theory, current trends and critical thinking in health care.

1. Be prepared. As a senior level class, there will be a lot of discussion in class and you need to be prepared. Prepared to the point that you and I could have a discussion for an hour on the topic that we are covering for class. You are busy – yes, I know this – so am I. But, we are here to learn together. You are at the point in your career when you need to realize the importance of being prepared. You might not know all the right answers – but you will have at least a good working knowledge of the concepts we are planning to talk about. You have all been in AT 381 and AT 382 which this course builds on and we are now going to take things a little further. We will also incorporate information from AT 425 into this course as we discuss pharmacology as it relates to medical conditions. We will discuss more research, we will look at different treatment techniques, and we will work to learn together for the benefit of our future patients.
2. Class attendance is mandatory. For every unexcused absence, 10 points will be deducted from the student's total points.
3. A student's grade will be dropped a ½ of letter grade for every two unexcused absences.
  - a. Please be on time. Tardiness is considered an absence.
  - b. An absence will **only** be considered excused if there is **verbal** approval from the instructor prior to the absence. No email communication will be accepted.

4. All assignments are to be completed prior to class and either brought to class for discussion or uploaded to the D2L Drop Box. Assignments will be dropped one letter grade for each day beyond the designated due date.
5. You are expected to act according to UWSP guidelines for academic honesty and integrity. Honest and intellectual work is essential to learning. It is also expected for you to act in a manner that creates an open learning environment and is respectful of all students in this class. I have every confidence you will uphold this expectation and succeed in this course. More information can be found on the Dean of Students website under University of Wisconsin System Chapter 14 – Student Academic Standards and Disciplinary Procedures.

**Course Evaluation:**

A. Students will be evaluated with the following:

- a. Assignments: Short and relevant assignments will accompany the readings for each topic we cover. The assignments will vary on points ranging between 5-20 points.
- b. Patient Project: Your patient – each one of you will pick a patient (with the help of me, your CP, and/or Melissa Wenig). This patient will be based on an idea that you have based on injury trends, a specific clinical setting, an injury you would like to rehabilitate, or a prevention program (this list can be expanded with an approved idea 😊) You will be responsible for creating your prevention/rehabilitation protocol according to current EBP. The first assignment for this project will be to identify your patient, evaluate for current status, create new goals, start to build your reference base for rehabilitation (this will be shared with the class), and complete the rehabilitations. To decrease redundancy, your assignments can mirror the documentation for your patient in the ATF (if applicable). However, they need to be notes worthy of insurance reimbursement. Not in the former fashion of: *“Pt. is doing better today. Will continue with the same exercises as yesterday.”* Must be based on goals – and goals need to be clearly written within the documentation. We will make a point to talk about each of your patients throughout the class as a Grand Rounds model of education.
  - i. Patient/Project must be identified by
- c. Final Project: *The title: Should it be a tool in your toolbox?* You will be asked to select a topic related to the treatment and rehabilitation of the patient. There are two options – it can either be treatment focused (Example: Acupuncture, Instrument-Assisted Therapies) or rehabilitation focused (multiple options). The rehabilitation focus can be looking at a certain type of therapy (underwater running vs. other methods of training) or be focused on finding evidence on how to best rehabilitate a certain area (effective ways to target VMO strength, effective methods of strengthening the rotator cuff) or looking at a certain piece of equipment to create an EBP for rehabilitation (slide board, pool for a certain population, etc).
  - i. Develop your hypothesis.
  - ii. Annotated Bibliography: EBP review. You will review the research and summarize what is there. At least 6 peer reviewed sources from 2010. Non-biased approach.
  - iii. You will present your findings to the class in an effective manner.
  - iv. You will create a poster to be handed to each of your classmates during your presentation. If using PowerPoint - your slides are limited to 50 words per slide. The other component of your presentation must be something else that promotes class activity.
- d. Participation: You are all required to have an active voice in this class. This will be assessed on a weekly basis. Lack of participation to me means lack of preparedness. This may not be true – but it is the only gauge that I have to know how prepared you are for class and the discussions we will have.
- e. Percentage breakdown: Participation – 20%; Assignments – 40%; Final project – 40%

Final grades will be awarded as follows:

<b>A:</b> 94-100%	<b>C:</b> 73-76%	<b>D:</b> 60-64%
<b>A-:</b> 90-93%	<b>C-:</b> 70-72%	<b>F:</b> 59% or below
<b>B+:</b> 87-89%	<b>D+:</b> 65-69%	

**Course Schedule:**

<b>Date</b>	<b>Topic</b>	<b>Readings (prior to class)</b>	<b>Assignment(s) Due</b>
1/22	Course introduction		
1/24	Pharmacology	Mangus & Miller – Chapter 1 and 2	
1/29	Pharmacology	Cuppet - Chapter 5	
1/31	Pharmacology		Pharmacology Field Trip
2/5	Pharmacology		
2/7	Rehab and Stages of Healing Review of the overall components	Chapter 1 -2 Skim 4-11 (for definitions)	Goal setting assignment – bring rto class and D2L
2/12	Rehab and Stages of Healing Review of the overall components	Chapter 1-2 Skim 4-11 (for definitions)	Goal setting
2/14	Foot and Ankle	Chapter 14	
2/19	Knee and Hip	Chapter 15	Balance Progression
2/21	Knee and Hip Rehabilitation	Chapter 15 and 16 and 17	ACL Protocol Review -
2/26			
2/28			
3/5			
3/7			
3/12	Shoulder Rehabilitation	Chapter 15 and 16	OKC vs. CKC exercises
3/14	Shoulder Rehabilitation	D2L article Higgins Chapter on Shoulder	Exercise Analysis – Do prior to class
3/19			
3/21	Mental Health Class		
3/26-30	Spring Break		
4/2	No Class		
4/4			
4/9			
4/11	No Class – Posters in Rotunda		
4/16			
4/18			
4/23			
4/25			
4/30			
5/2			
5/7	Patient Presentations		
5/9	Patient Presentations		
5/17	Final Exam – 10:15am – 12:15pm		
After Spring Break – the schedule with change with scheduling of guest speakers – It will be updated as all guest speakers confirm their topics and dates			
3/27	Spine Rehabilitation	Guest speaker – Scott Tauferner Chapter 18	
4/3	FMS – SFMA (Heidi Frey)		
4/10	Neurological Rehab – nerve flossing and vestibular rehab		

4/17	Functional Rehab – Bellin Health and Nick Winkler		
4/24	Acupuncture/Cupping		
5/1	Aquatic Principles – Review and Practice		
5/8	Presentations – <i>Should it be a tool in your toolbox?</i>		
5/15	Finals Week – Presentations Monday – 12:30 – 2:30 <i>Should it be a tool in your toolbox?</i>		