KINE 3333-001 (Lecture)
Therapeutic Interventions II
(3 credit hours)
SPRING 2014
TR 8 – 9:20 am (Lecture)
MAC 223

Instructor: Dr. Cindy Trowbridge, ATC, CSCS, LAT
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Office Phone: (817) 272-3134
E-mail: ctrowbridge@uta.edu
Website: http://www3.uta.edu/faculty/ctrowbridge/
Office Hours: By appointment

Required Texts:

Supplemental Texts: Available in Dr. Trowbridge’s Office or Library
- Athletic Training Educational Competencies. 5th ed. NATA. 2011.

Course Description
A study of the upper extremity and low back/hip/pelvis rehabilitation protocols and the use of manual therapy techniques (muscle energy, massage, positional release) and electric therapeutic modalities (e.g., ultrasound, diathermy, laser, and electric stimulation) will guide the course. Emphasis will be placed on understanding the disablement model and learning how to plan, implement, document, and evaluate programs for the rehabilitation and reconditioning of injuries and illnesses of athletes and others involved with physical activity. Use of manual therapy techniques and the operation of electrical therapeutic modalities and how they can be incorporated into a rehabilitation program will be investigated. The underlying principles and application techniques for each modality, therapeutic exercise progressions, patient clinical goals, legal and safe practice guidelines, and evidence based therapeutic modality science will allow for critical thinking and problem solving in relation to common upper extremity and low back/hip/pelvis injuries. Both surgical and non-surgical rehabilitation models for the upper extremity and low back will be discussed with a special emphasis on the use of functional progressions. For ATEP students, concurrent enrollment in KINE 4131.

Course Objectives
1. To provide entry-level master students in the Athletic Training Education Program (ATEP) with the knowledge of select therapeutic modalities and therapeutic musculoskeletal rehabilitation and reconditioning. Specific emphasis will be placed on electric modalities and the upper extremity and low back/hip/pelvis. These skills are necessary for effective performance as athletic trainer in a rehabilitation setting.
2. To provide understanding of the underlying principles and techniques of safe and efficient application of select therapeutic modalities and prescription of upper extremity and low back/hip/pelvis musculoskeletal rehabilitation programs.
3. To present the art and science of evidence based learning as it pertains to therapeutic modalities and musculoskeletal rehabilitation and conditioning. Students will be taught how to critically read and
assess peer-reviewed literature as it relates to therapeutic modalities and musculoskeletal rehabilitation.

4. To provide athletic training students with knowledge and skills related to the following educational competencies contained in the Athletic Training Education Competencies (5th ed).
   a. **Therapeutic Interventions: TI 1-20** (specific to upper extremity/lower back/hip/pelvis, manual therapy, and electric modalities).
   b. **Clinical Examination: CE 4,5,10,14.**
   c. **Evidence Based Practice: EBP 5-7, 9-14.**
   d. **Prevention and Health Promotion: PHP 19**
   e. **Psychosocial Strategies and Referral: PS 2, 7-9**

5. To expose kinesiology students to the four main components of problem solving approach of therapeutic exercise design: 1) assess needs, 2) develop plan, 3) implement plan, and 4) evaluate plan.

6. To allow for **active learning** and active participation throughout class.

7. To allow for critical thinking that involves application of scientific knowledge and problem solving to musculoskeletal rehabilitation program prescription.

8. To provide entry-level master students with further understanding and application of the Foundational Behaviors of Professional Practice of Athletic Training.
   a. Primacy of patient; Teamed approach to patient; Legal practice; Ethical practice; Advancing knowledge; Cultural competence; Professionalism.

9. To assess knowledge and skills through assignments and examinations.

**Active Learning**

Your active participation in this class will be required. As a result you will self-direct your studies by being responsible for your own learning. I will guide you in this process; however, in the end the **onus of learning will be your responsibility.** Organize your learning around the tasks and problems you encounter as an athletic training or kinesiology student. Use the vast number of resources (perceptors, internship mentors, books, ATEP lab, and articles) around you to synthesize the information you are learning and apply it whenever you get the chance. Do not be afraid to ask questions or challenge the current medical or scientific assumptions. Your brain will only grow in response to how much it is challenged and used. Become **intrinsically motivated** to improve yourself and your musculoskeletal rehabilitation skills and techniques; if you do this you will succeed every time.

**Student Learning Outcomes**

After completing this course, students should be able to:

1. apply the concepts of evidence based practice to produce a critically appraised topic review.
2. understand the terminology, principles, and basic concepts of manual therapy and electrical modalities (e.g., ultrasound, diathermy, laser, and electric stimulation).
3. understand the terminology, principles, and basic concepts of musculoskeletal rehabilitation planning for the upper extremity and low back/hip/pelvis.
4. understand the terminology and process of different types of orthopedic surgeries.
5. integrate the use of musculoskeletal exercises and techniques to meet the needs of the individual patient.
6. develop a rehabilitation treatment plan based on the results of a thorough injury assessment and evaluation.
7. critically think and problem solve using the most recent evidence based medicine.
Tentative Evaluation:

Knowledge and Skills

*Lecture*
Examinations (in class/online) 40%
  TEST 1
  TEST 2
  TEST 3
Comprehensive Final
Worksheets 15%
Quizzes 5%
Problem Solving 10%
Clinical Case Study 5%
Research Article presentation 10%
Critically Appraised Topic Paper 10%

Professional Development 5%
Complete Course Notebook, Attendance, and Active class participation
Membership in professional or University associations

Grading Scale: A = 90%; B = 80%; C = 70%; D = 60%; F = 59% and below

Grading
Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

Attendance
Class attendance is required. Excused absences include university approved absences or those that I receive prior notification of (i.e. illness, doctor appointments, etc.). Each student is expected to prepare for class by reading the lab material prior to class. If you miss a class, you are responsible for obtaining all information presented. Remember: *Poor planning on your part is not an emergency on my part.* Two unexcused absences will automatically drop your grade by one letter (i.e., A to B, B to C, etc.).

Cell Phone Policy
*No cell phones in class for verbal or text message conversations.* Please turn them off or silence them during our class period. If you actively perform or receive cell phone calls or text messaging during class, I may confiscate your electronic device. No exceptions.

Assignments
Assignments are DUE on the posted or announced date at the beginning of class or via Blackboard submission. If an assignment is turned in late, points will be deducted from the assignment. If an assignment is not completed within one week of posted due date you will receive a zero grade for that assignment.
Missed exams can only be made up if absence was excused. All missed homework must be made up within one week of original due date.

Exams
There will be three unit exams and one comprehensive final exam for this class. Exams will be multifaceted with recall, application, and analysis questions throughout. Exams will include multiple choice, short answer, and problem solving questions. Use your lecture notes, textbooks, and assignments to prepare yourself for the exams.
Exams may be in-class portions, Blackboard portions, or they may be take-home. Missed exams can only be made up if absence was excused. All missed exams must be made up within one week of original due date.

Quizzes
Quizzes will be announced or “pop”. They will be on material covered or readings assigned. Missed quizzes can only be made up if absence was excused. All missed quizzes must be made up within one week of original due date. If you are late on a quiz day, you will have the time remaining after your arrival to take the quiz.

Quizzes may be in-class portions or Blackboard.

Worksheets
Throughout the semester there will be worksheets posted on Blackboard. Each worksheet will pertain to specific topic areas and should be handed in according to due date on tentative schedule. You may work together on these worksheets; however, each student must turn in his/her own work to receive credit. Worksheet MUST be submitted via Blackboard.

Article Presentation
You will be required to present 1 research article within the topic of therapeutic exercise or modalities. This article will be provided by Dr. Trowbridge and assigned dates will be given at least one week prior to presentation. Each student will summarize the article (Background, Purpose, Methods, Results, and Conclusions) and present to the class using PowerPoint and handouts as appropriate. Presentations should not be longer than 5-8 minutes. Grades will be assigned based on quality of presentation. Specific examples will be provided for assistance.

Critically Appraised Topic Assignment
More details regarding the project will be posted on Blackboard and discussed in class. Important due dates will be posted on Blackboard site as this project will be completed in steps.

The general purpose of this assignment is for student to write one (1) critically appraised topic papers following the guidelines laid out in the Journal for Sport Rehabilitation. Paper will focus on a either a therapeutic modality or on rehabilitation technique.

Clinical Case Study
Each student will complete one (1) case study paper following guidelines for Journal of Athletic Training. You must choose a patient that is being treated in your clinical setting. Ideally, you will be directly involved in the clinical decision-making during the patient’s musculoskeletal rehabilitation.

Problem Solving
Each activity will pertain to specific topic areas and should be handed in or presented according to due dates announced in class. These will be individual and group led discussions involving clinical practice. They may occur live or over Blackboard. They will include modalities and rehabilitation exercises.

Notebook (MUST be separate section or notebook for Lecture Material and Lab material)
At the end of the semester, each student is required to turn in his/her course notebook for a grade. The three-ring notebook is expected to be neat and organized with section tabs and a table of contents. The notebook should include lecture notes, handouts, tests, quizzes, worksheets, EBM projects. When returned, this notebook should be placed in your own athletic training portfolio for use in studying for certification exam.
Expectations for Out-of-Class Study
A general rule of thumb is this: for every credit hour earned, a student should spend 3 hours per week working outside of class. Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 9 hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

University Policies

Grade Grievances
Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate / graduate catalog. For undergraduate courses, see http://www.uta.edu/catalog/content/general/academic_regulations.aspx#10. Paperwork can be obtained in MAC 147.

Drop Policy
Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student’s responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://www.uta.edu/ses/fao).

Americans with Disabilities Act
The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Academic Integrity
All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Per UT System Regents’ Rule 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.
Student Support Services

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Electronic Communication

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey

At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Librarian to Contact

For assistance with your library needs in this course, please consult: Suzanne Beckett (sbeckett@uta.edu); Central Library, Room 212; 817.272.0923.

The following web links are provided to help you navigate the library system.

- Library Home Page http://www.uta.edu/library
- Subject Guides http://libguides.uta.edu
- Subject Librarians http://www-test.uta.edu/library/help/subject-librarians.php
- E-Journals http://utalink.uta.edu:9003/UTAlink/az
- Off- Campus Connection http://libguides.uta.edu/offcampus
- Ask A Librarian http://ask.uta.edu
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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapter(s)/Materials</th>
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<tr>
<td>T 1/14</td>
<td>Course introduction and Syllabus Review of KINE 5433</td>
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<tr>
<td>TH 1/16</td>
<td>Principles and Physiology of Massage, Myofascial Release, &amp; Muscle Energy</td>
<td>CH 6 (Houglum) – topics CH 18 (Knight)</td>
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<tr>
<td>T 1/21</td>
<td>Principles and Physiology of Traction &amp; Positional Release</td>
<td>CH 18 &amp; 19 (Knight)</td>
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<td>TH 1/23</td>
<td>Clinical Use of Manual Therapy Evidence Based Moments - Articles</td>
<td>Articles</td>
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<td>T 1/28</td>
<td>Rehabilitation of Hip Joint and Pelvic Asymmetry</td>
<td>CH 16, 17, &amp; 24 (Houglum)</td>
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<tr>
<td>TH 2/4</td>
<td>Aquatic Therapy</td>
<td>CH 13 (Houglum)</td>
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<td>T 2/6</td>
<td>Exam #1</td>
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<tr>
<td>TH 2/11</td>
<td>Concepts of Core Rehabilitation Vertebral Spine and Sacroiliac Region</td>
<td>CH 11, 14, 18 (Houglum) topics</td>
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<td>T 2/13</td>
<td>Rehabilitation of Spine and Sacroiliac Region</td>
<td>CH 18 (Houglum)</td>
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<td>TH 2/18</td>
<td>Rehabilitation of Thoracic Spine</td>
<td>CH 11, 14 (Houglum)</td>
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<tr>
<td>T 2/20</td>
<td>Principles of Electrotherapy</td>
<td>CH 16 &amp; 17 (Knight)</td>
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<tr>
<td>TH 2/25</td>
<td>Principles and Physiology of Electrotherapy</td>
<td>CH 16 &amp; 17 (Knight)</td>
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<td>T 2/27</td>
<td>Physiology and Clinical Use of Electrotherapy</td>
<td>CH 16 &amp; 17 (Knight)</td>
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<td>TH 2/28</td>
<td>Clinical Use of Electrotherapy Evidence Based Moments - Articles</td>
<td>Articles</td>
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<td>T 3/4</td>
<td>Exam #2</td>
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<td>TH 3/6</td>
<td>Throwing progressions Rehabilitation of Shoulder</td>
<td>CH 10, 19 (Houglum)</td>
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<td>3/10-3/14</td>
<td>SPRING BREAK</td>
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<td>T 3/18</td>
<td>Rehabilitation of Shoulder</td>
<td>CH 19 (Houglum)</td>
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<td>TH 3/20</td>
<td>Rehabilitation of Shoulder</td>
<td>CH 19 (Houglum)</td>
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<tr>
<td>T 3/25</td>
<td>Principles of Therapeutic Ultrasound</td>
<td>CH 14 (Knight)</td>
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<tr>
<td>TH 3/27</td>
<td>Principles and Physiology of Therapeutic Ultrasound</td>
<td>CH 14 (Knight)</td>
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<td>T 4/1</td>
<td>Clinical Use of Therapeutic Ultrasound</td>
<td>CH 14 (Knight)</td>
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<td>TH 4/3</td>
<td>Ultrasound Evidence Based Moments - Articles</td>
<td>Articles</td>
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<td>T 4/8</td>
<td>Exam #3</td>
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<td>TH 4/10</td>
<td>Rehabilitation of Elbow &amp; Forearm</td>
<td>CH 20 (Houglum)</td>
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<td>T 4/15</td>
<td>Rehabilitation of Wrist &amp; Hand</td>
<td>CH 20 (Houglum)</td>
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<td>TH 4/17</td>
<td>Rehabilitation of Wrist &amp; Hand</td>
<td>CH 20 (Houglum)</td>
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<td>T 4/22</td>
<td>Principles, Physiology and Clinical Use of Pulsed Shortwave Diathermy</td>
<td>CH 15 (Knight)</td>
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<td>TH 4/24</td>
<td>Principles and Physiology of Light and Laser Modalities</td>
<td>CH 20 (Knight)</td>
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<tr>
<td>T 4/29</td>
<td>Upper Extremity Rehabilitation and Clinical Use of Pulse Shortwave Diathermy Evidence Based Moments - Articles</td>
<td>Articles</td>
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<tr>
<td>TH 5/1</td>
<td>Upper Extremity Rehabilitation and Clinical Use of Light and Laser Modalities Evidence Based Moments - Articles</td>
<td>Articles</td>
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**FINAL EXAM**

May 6th 8-10:30 am
Final Take Home Exam due May 9th
MISSION: To develop and deliver an educational program that ensures the highest teacher, administrator and allied health science preparation and performance and To be a recognized contributor in the field of educational and allied health science research and practice through effective teaching, quality research and meaningful service.

The Educator and Administrator Preparation units’ collaboratively developed shared vision is based on these CORE VALUES, dispositions and commitments to:

- Excellence
- Learner-centered environment
- Research-based
- Collaboration
- Diversity
- Technology
- Field Experiences
- Life-long Learning

Each candidate in the Educator and Administrator Unit of the College of Education of UT-Arlington will be evaluated on PROFESSIONAL DISPOSITIONS by faculty and staff. These dispositions have been identified as essential for a highly-qualified educator. Instructors and program directors will work with candidates rated as “unacceptable” in one or more stated criteria. The candidate will have an opportunity to develop a plan to remediate any deficiencies.

Demonstrates excellence
- Meets stated expectations of student performance.
- Keeps timelines. Arrives on time for class and other activities.
- Produces significant artifacts of practitioner evidence.
- Possesses a willingness to set goals.
- Attends all classes/trainings and practicum experiences.
- Completes activities as assigned.
- Has appropriate personal appearance and/or hygiene for professional setting.

Participates in a learner centered environment and shows respect for self and others
- Uses appropriate and professional language and conduct.
- Supports a “high quality” learning environment.
- Shows respect and consideration for the thoughts and feelings of others.

Research-based pedagogy
- Has an awareness of and willingness to accept research-based concepts.
- Identifies important trends in education.
- Demonstrates interests in learning new ideas and strategies.
- Relates class discussions and issues to current events in education.

Participates in on-going collaboration with peers and professionals
- Demonstrates kindness, fairness, patience, dignity and respect in working with peers, staff and instructors.
- Works effectively with others.
- Assists others in the university classroom or practicum setting.
- Demonstrates an openness to assistance from others.
- Receives feedback in a positive manner and makes necessary adjustment.

Exhibits stewardship of diversity
- Shows appropriate stewardship and tolerance to diverse people, environments, and situations.

Advocates use of technology
- Uses and applies existing technologies sufficiently in work.
- Shows a willingness to use and apply emerging technologies in work.

Shows interest in the learner and the learning-process
- Demonstrates significant learning improvement over time.
- Shows interest in the learning process and demonstrates the necessary amount of time, energy, and enthusiasm for becoming better learners, teachers, and practitioners.