KINE 3333  
THERAPEUTIC MODALITIES  
(3 credit hours)  

SPRING 2004  
TR 9:30-10:50am  

Instructors:  
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TR 11-12  

Text:  

Supplemental Text:  

Prerequisite:  
BIOL 2458; KINE 4336; Admission into the Athletic Training Education Program or permission from the instructor.  
*Must be concurrently enrolled KINE 4131.  

Purpose:  
This course is designed to provide the student with an understanding of the theory and application of common therapeutic modalities for the treatment of musculoskeletal injuries. Cognitive and affective competencies addressed in class will be applied to the real world setting through the students’ clinical/field experience rotations. Additionally, the clinical proficiencies derived from the cognitive and affective competencies addressed in this class will be practiced and evaluated in the accompanying clinical practicum course KINE 4131.  

Course Objectives:  
See attached Competencies in Athletic Training.  

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 assigned chapter(s) prior to class. Two unexcused absences will automatically drop your grade by one letter (i.e., A to B, B to C, etc.)  

Notebook:  
At the end of the semester, you will be required to turn in your 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, power points, handouts, tests, quizzes, literature
reviews, articles, and worksheets. When returned, this notebook should be placed in your athletic training portfolio.

**Literature Reviews:** Each student will submit four literature reviews summarizing four separate research-based journal articles pertaining to the use of therapeutic modalities. The journal articles must have been published in either the *Journal of Athletic Training* or the *Journal of Sport Rehabilitation*. Each review should be 2 – 3 pages in length (double spaced), typed in regular Times New Roman size 12 font. Place the reference of the article on the top line of the paper, followed by your written review. Refer to the Tentative Class Schedule for due dates. **On the respective due dates, each student must come to class prepared to discuss his/her article.**

**Evaluation:**

**Written Examinations**
- TEST 1 100
- TEST 2 100
- Comprehensive Final Exam 200

**Written Literature Reviews (4 @ 50 points each)** 200

**Class Participation in Literature Review Discussions** 25

**Class Participation in Clinical Application/Problem Solving Activities** 25

**Quizzes (5 @ 10 points each)** 50

**Worksheets (5 @ 20 points each)** 100

**Notebook** 50

**Continuing Education Credits (Distinguished Lectures, department lectures, other scheduled lectures, or educational events)** 900

**Grading Scale:**
- A = 90% 810-900
- B = 80% 720-809
- C = 70% 630-719
- D = 60% 540-629
- F = 59% and below < 539

**Drop Policy**

The Department of Kinesiology will not warn students nor drop students for excessive absences. It is the responsibility of the student to complete ADDING, DROPPING or withdrawing from school within the appropriate time frame established by the University Registrar (deadlines to be found in the Schedule of Classes). Any student that does not officially drop the class by the appropriate drop dates will be given an "F" for the course.

**Americans With Disabilities Act**

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 – The Rehabilitation Act of 1973 as amended. With passage of new federal legislation entitled Americans With Disabilities Act – (ADA), pursuant to section 504 of The Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.
As a faculty member, I am required by law to provide “reasonable accommodation” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.

Academic Dishonesty

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

“Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.” (Regents’ Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22)

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 syllabi. 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.
KINE 3333
Therapeutic Modalities

COMPETENCIES IN ATHLETIC TRAINING

This course will address the following Competencies in Athletic Training:

PATHOLOGY OF INJURIES AND ILLNESSES
Cognitive Domain
9 - Describes the integration and coordination of cell function in response to injury (e.g., sources of cell injury, inflammation, healing, and repair).
11 - Defines the inflammatory response to acute and chronic injury and illness.
17 - Describes the healing process of bone.
19 - Identifies the implications of various underlying pathologies and uses this knowledge to select appropriate therapeutic modalities and therapeutic exercise protocols.

ACUTE CARE OF INJURIES AND ILLNESSES
Cognitive Domain
18 - Explains the application principles of cold application, elevation, and compression in treatment of acute non-limb-threatening pathologies.
19 - Cites the signs, symptoms, and pathology of acute inflammation.
46 - Constructs and educates the patient regarding home care and self-treatment plans.

Affective Domain
14 - Supports the application of cryotherapy, elevation, and compression as primary care for a non-threatening injury.

THERAPEUTIC MODALITIES
Cognitive Domain
1 - Determines the appropriate modality according to the treatment goals and objectives as they relate to wound healing and tissue repair.
2 - Describes methods of evaluating and recording progress of therapeutic modality treatments.
3 - Illustrates the use of volumetric and anthropometric measurements to determine the effectiveness of treatment outcomes.
4 - Identifies the body's physiological responses during and following the application of therapeutic modalities.
5 - Describes the role and function of the common prescription and nonprescription pharmacological agents that are used in conjunction with therapeutic modalities (e.g., topical ointments, phonophoresis, iontophoresis).
6 - Explains the principles of physics, including basic concepts associated with the electromagnetic and acoustic spectra (e.g., frequency, wavelength).
7 - Interprets terminology, principles, and basic concepts of electrical units (e.g., amperes, volts, watts, ohms).
8 - Compares and contrasts contemporary pain-control theories.
9 - Assesses the selection and use of therapeutic modalities for the control of acute and chronic pain.
10 - Describes the electrophysics, biophysics, set-up, indications, contraindications, and specific physiological effects associated with stimulating electrical currents.
11 - Describes the electrophysics, biophysics, set-up, indications, contraindications, and specific physiological effects associated with short-wave diathermy.
12 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with the application of superficial heat and cold.

13 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with therapeutic ultrasound.

14 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with the application of intermittent compression units.

15 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with cervical and lumbar traction devices.

16 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with therapeutic LASER.

17 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with the application of electromyogram (EMG) and biofeedback devices.

18 - Describes the physical properties, biophysics, set-up, indications, contraindications, and specific physiological effects associated with therapeutic soft-tissue massage.

19 - Illustrates the typical physiological and psychological responses to trauma as they relate to the use of therapeutic modalities.

20 - Interprets local, state, and federal standards for the operation and safety standards of therapeutic modalities.

21 - Describes the manufacturer's protocol for use to ensure safe and proper application.

22 - Applies manufacturer's guidelines for the inspection and maintenance of therapeutic modalities.

**Psychomotor Domain**

1 - Utilizes assessment skills to determine a patient's specific therapeutic modality indications, contraindications, and precautions.

3 - Takes into account patient-specific indications, contraindications, and precautions when applying a specific therapeutic modality (e.g., age, underlying pathology, disease processes).

9 - Formulates progress notes and treatment outcomes that are relevant to the selection and application of therapeutic modalities.

**Affective Domain**

1 - Accepts the professional, ethical, and legal parameters that define the proper role of the certified athletic trainer in the use of therapeutic agents to treat, rehabilitate, and recondition athletes and others involved in physical activity.

2 - Respects the role of attending physicians and other medical and allied health personnel in the use of therapeutic agents to treat, rehabilitate, and recondition athletes and others involved in physical activity.

3 - Advocates the accepted medical protocol regarding the confidentiality of medical information relative to therapeutic modality treatments.

4 - Initiates accepted medical protocol regarding therapeutic prescriptions.

5 - Promotes the accepted medical protocol regarding health care referral in the rehabilitation and reconditioning process.

**PSYCHOSOCIAL INTERVENTION AND REFERRAL**

**Cognitive Domain**

3 - Understands the psychological and emotional responses (motivation, anxiety, apprehension) to trauma and forced physical inactivity as they relate to the rehabilitation and reconditioning process.

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