Texas A&M University – Corpus Christi
Rehabilitation of Athletic Injuries

Course Number: KINE 4322
Class meeting: MWF 9-9:50am
Semester: Spring 2014

Office Telephone: (361)825-2169

I. COURSE DESCRIPTION
This course provides general knowledge of rehabilitation techniques for athletic injuries including goniometry, muscle testing, therapeutic exercise and the use of SOAP notes. Prerequisites: KINE 3318 (Prevention and Care of Athletic Injuries).

II. RATIONALE
Students interested in becoming a Certified Athletic Trainer (ATC) must complete a course in therapeutic exercise prior to applying to sit for the National Athletic Trainers’ Association Board of Certification (BOC) exam.

III. STATE ADOPTED PROFICIENCIES FOR TEACHER AND/OR ADMINISTRATOS/COUNSELORS- N/A

1. LEARNER-CENTERED KNOWLEDGE: The teacher possesses and draws on a rich knowledge base of content, pedagogy, and technology to provide relevant and meaningful learning experiences for all students.

2. LEARNER-CENTERED INSTRUCTION: To create a learner-centered community, the teacher collaboratively identifies needs; and plans, implements, and assesses instruction using technology and other resources.

3. EQUITY IN EXCELLENCE FOR ALL LEARNERS: The teacher responds appropriately to diverse groups of learners.

4. LEARNER-CENTERED COMMUNICATION: While acting as an advocate for all students and the school, the teacher demonstrates effective professional and interpersonal communication skills.

5. LEARNER-CENTERED PROFESSIONAL DEVELOPMENT: The teacher, as a reflective practitioner dedicated to all students’ success, demonstrates a commitment to learn, to improve the profession, and to maintain ethics and personal integrity.

IV. TExES COMPETENCIES

a. TExES Competencies: N/A

b. NATIONAL COMPETENCIES & PROFICIENCIES FOR ATHLETIC TRAINING
(CAATE 5th Ed.)
Evidence-Based Practice (EBP)
EBP-1. Define evidence-based practice as it relates to athletic training clinical practice.

EBP-2. Explain the role of evidence in the clinical decision making process.

EBP-3. Describe and differentiate the types of quantitative and qualitative research, research components, and levels of research evidence.

EBP-4. Describe a systematic approach (eg, five step approach) to create and answer a clinical question through review and application of existing research.

EBP-5. Develop a relevant clinical question using a pre-defined question format (eg, PICO= Patients, Intervention, Comparison, Outcomes; PIO = Patients, Intervention, Outcomes).
EBP-6. Describe and contrast research and literature resources including databases and online critical appraisal libraries that can be used for conducting clinically-relevant searches.

EBP-7. Conduct a literature search using a clinical question relevant to athletic training practice using search techniques (e.g., Boolean search, Medical Subject Headings) and resources appropriate for a specific clinical question.

EBP-8. Describe the differences between narrative reviews, systematic reviews, and metaanalyses.

EBP-9. Use standard criteria or developed scales (e.g., Physiotherapy Evidence Database Scale [PEDro], Oxford Centre for Evidence Based Medicine Scale) to critically appraise the structure, rigor, and overall quality of research studies.

EBP-10. Determine the effectiveness and efficacy of an athletic training intervention utilizing evidence-based practice concepts.

EBP-11. Explain the theoretical foundation of clinical outcomes assessment (e.g., disablement, health-related quality of life) and describe common methods of outcomes assessment in athletic training clinical practice (generic, disease-specific, region-specific, and dimension-specific outcomes instruments).

EBP-12. Describe the types of outcomes measures for clinical practice (patient-based and clinician-based) as well as types of evidence that are gathered through outcomes assessment (patient-oriented evidence versus disease-oriented evidence).

EBP-13. Understand the methods of assessing patient status and progress (e.g., global rating of change, minimal clinically important difference, minimal detectable difference) with clinical outcomes assessments.

EBP-14. Apply and interpret clinical outcomes to assess patient status, progress, and change using psychometrically sound outcome instruments.

Clinical Examination and Diagnosis (CE)
CE-7. Identify the patient’s participation restrictions (disabilities) and activity limitations (functional limitations) to determine the impact of the condition on the patient’s life.

CE-8. Explain the role and importance of functional outcome measures in clinical practice and patient health-related quality of life.

Acute Care of Injuries and Illnesses (AC)
AC-43. Instruct the patient in home care and self-treatment plans for acute conditions.
Therapeutic Interventions (TI)

TI-1. Describe and differentiate the physiological and pathophysiological responses to inflammatory and non-inflammatory conditions and the influence of these responses on the design, implementation, and progression of a therapeutic intervention.

TI-2. Compare and contrast contemporary theories of pain perception and pain modulation.

TI-3. Differentiate between palliative and primary pain-control interventions.

TI-4. Analyze the impact of immobilization, inactivity, and mobilization on the body systems (eg, cardiovascular, pulmonary, musculoskeletal) and injury response.

TI-5. Compare and contrast the variations in the physiological response to injury and healing across the lifespan.

TI-6. Describe common surgical techniques, including interpretation of operative reports, and any resulting precautions, contraindications, and comorbidities that impact the selection and progression of a therapeutic intervention program.

TI-7. Identify patient- and clinician-oriented outcomes measures commonly used to recommend activity level, make return to play decisions, and maximize patient outcomes and progress in the treatment plan.

TI-8. Explain the theory and principles relating to expected physiological response(s) during and following therapeutic interventions.

TI-11. Design therapeutic interventions to meet specified treatment goals.

TI-11a. Assess the patient to identify indications, contraindications, and precautions applicable to the intended intervention.

TI-11b. Position and prepare the patient for various therapeutic interventions.

TI-11c. Describe the expected effects and potential adverse reactions to the patient.

TI-11d. Instruct the patient how to correctly perform rehabilitative exercises.

TI-11e. Apply the intervention, using parameters appropriate to the intended outcome.

TI-11f. Reassess the patient to determine the immediate impact of the intervention.

TI-12. Use the results of on-going clinical examinations to determine when a therapeutic intervention should be progressed, regressed or discontinued.

TI-15. Perform joint mobilization techniques as indicated by examination findings.
TI-16. Fabricate and apply taping, wrapping, supportive, and protective devices to facilitate return to function.

TI-17. Analyze gait and select appropriate instruction and correction strategies to facilitate safe progression to functional gait pattern.

TI-18. Explain the relationship between posture, biomechanics, and ergodynamics and the need to address these components in a therapeutic intervention.

TI-19. Identify manufacturer, institutional, state, and/or federal standards that influence approval, operation, inspection, maintenance and safe application of therapeutic modalities and rehabilitation equipment.

TI-20. Inspect therapeutic equipment and the treatment environment for potential safety hazards.

Psychosocial Strategies and Referral (PS)
PS-1. Describe the basic principles of personality traits, trait anxiety, locus of control, intrinsic and extrinsic motivation, and patient and social environment interactions as they affect patient interactions.

PS-2. Explain the theoretical background of psychological and emotional responses to injury and forced inactivity (eg, cognitive appraisal model, stress response model).

PS-3. Describe how psychosocial considerations affect clinical decision-making related to return to activity or participation (eg, motivation, confidence).

PS-4. Summarize and demonstrate the basic processes of effective interpersonal and cross-cultural communication as it relates to interactions with patients and others involved in the healthcare of the patient.

PS-5. Summarize contemporary theory regarding educating patients of all ages and cultural backgrounds to effect behavioral change.

PS-6. Explain the importance of educating patients, parents/guardians, and others regarding the condition in order to enhance the psychological and emotional well-being of the patient.

PS-7. Describe the psychological techniques (eg, goal setting, imagery, positive self-talk, relaxation/anxiety reduction) that the athletic trainer can use to motivate the patient during injury rehabilitation and return to activity processes.

PS-8. Describe psychological interventions (eg, goal setting, motivational techniques) that are used to facilitate a patient’s physical, psychological, and return to activity needs.
PS-9. Describe the psychosocial factors that affect persistent pain sensation and perception (e.g., emotional state, locus of control, psychodynamic issues, sociocultural factors, personal values and beliefs) and identify multidisciplinary approaches for assisting patients with persistent pain.

PS-10. Explain the impact of sociocultural issues that influence the nature and quality of healthcare received (e.g., cultural competence, access to appropriate healthcare providers, uninsured/underinsured patients, insurance) and formulate and implement strategies to maximize client/patient outcomes.

V. COURSE OBJECTIVES & OUTCOMES

- Rehabilitation of Athletic Injuries Including
  - Upper Extremity
  - Lower Extremity
- Express the philosophy of rehabilitative process in a sports medicine environment
- Realize the importance of understanding the healing process, biomechanics, and the psychological aspects of a rehabilitation program
- Understand the physiological process of healing for a variety of tissue types
- Explain the role of systematic injury evaluation process in establishing a rehabilitation plan and treatment
- Understand the concept of using psychological buffers for stress management
- Explain progressive psychological reactions to injury, dependent on the length of rehabilitation
- Understand coping skills necessary for successful rehabilitation
- Understand the physiology and importance of reestablishing each of the following components during rehabilitation:
  - Neuromuscular Control
  - Range of Motion & Flexibility
  - Muscular Strength, Power & Endurance
  - Postural Stability & Balance
  - Cardiorespiratory Fitness
- Understand the procedure and demonstrate the use of the following rehabilitation tools:
  - Core Stabilization
  - Plyometrics
  - Open-versus Closed-Kinetic-Chain Exercise
  - Isokinetics
  - Joint Mobilization & Traction
  - PNF & other soft tissue mobilization
  - Aquatic Therapy
  - Functional Progressions & Functional Testing
- Understands general rehabilitation/medical terminology and the importance of documentation (SOAP notes)
- Develops a general rehabilitation protocol based on the type and severity of injury as well as the physiology of healing

VI. COURSE TOPICS

- Diagnosis
- Therapeutic Modalities
- Therapeutic Exercise
- Psychosocial Components
VII. INSTRUCTIONAL METHODS AND ACTIVITIES
A. Traditional Experience: The course will include lecture, discussions, demonstrations, and practical application of the information. Research papers on topics discussed in class will also be included.
B. Clinical Experiences: There will be some opportunity for hands-on learning in the form of mini-lab exercises.

VIII. EVALUATION AND GRADE ASSIGNMENT
A. Your grade in this class will be determined from a point percentage. Points will be given for written exams, quizzes, papers, homework and mini-labs. The grading scale is as follows:

| Exams = 300 points (100 points each) |
| Quizzes = ~100 points (10 points each) |
| In Class Group Work = ~50 points (3-5 points each) |
| Presentation & Project = 100 points |
| Labs = ~50 points (10 points each) |
| Homework (Journal Reviews, Documentation, Algorithm) =~ 200 points |
| Total possible = ~750 points |

B. Grading Scale:
90-100% = A
80-89% = B
70-79% = C
60-69% = D
Below 60 % = F

A. Final Exam:
The final exam will be cumulative and will be held in accordance with the University’s final exam schedule (found on SAIL).

IX. CLASS SCHEDULE AND POLICIES
A. TENTATIVE COURSE SCHEDULE

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<td>24-Jan</td>
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<td>27-Jan</td>
<td>Psychosocial Considerations</td>
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<td>9-May</td>
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<tr>
<td>14-May</td>
<td>Final Exam</td>
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B. CLASS POLICIES

**Attendance, Schedule and Exams**
The instructor reserves the right to change the schedule to cover all subjects thoroughly. Any changes in test dates will be announced in class at least one class prior to printed test date. Information presented in class may come from a source other than the textbooks. If you miss a class you need to obtain that material from a classmate or myself. It is to your benefit to attend class every day. **No make-up tests will be given except under extreme circumstances.** A physician’s note is necessary if you are ill. Those who know they will be missing an exam are required to speak with instructor in **advance** so that arrangements can be made to take the exam early. Attendance is strongly encouraged. Class participation is strongly encouraged, and points will be given based on participation in lab activities.

**Technology - Blackboard**
Syllabi, schedule, e-mail and discussion are available for this course on the campus Blackboard. Grades will be updated and posted via Blackboard. Any questions about course materials and/or content should be directed towards this on-line tool **first.** Announcements and e-mail will be sent by the instructor should there be any changes to the schedule (please check this often).

**Written Exams**
Three exams will be given. Make-up exams will not be given unless the student is excused from class by the university (athletics etc.) or by a physician. Exams will be 100 points each and may include multiple choice, short answer and essay questions.

**Quizzes**
Quizzes **may** be unannounced. Make-up quizzes will not be given unless the student is excused from class by the university (athletes etc.) or by a physician. Quizzes will be brief (~10 points each) and may include multiple
choice and/or short answer questions.

**In Class Group Work**
In class group work is intended to be a meaningful collaboration of student’s thoughts, ideas, knowledge and skills. **Points are given based on participation.**

**Research Presentations**
Research Presentations will be given individually to the class. Presentations should cover your research topic, and demonstrations (visual aids are strongly encouraged). The **presentation time should last no longer than 10min and should include sources cited in APA style format.** Eight to ten journal articles and 2-3 books are required reference material. The last slide of your presentation should include the bibliography for your work.

**Labs**
Mini-Labs will take place during scheduled class time and will include hands-on applications of the materials covered during the lecture. **Points are given based on participation.**

**Homework**
Homework assignments will include reading the current literature in the area of rehabilitation of athletically related injuries. Summaries of readings should be cited using APA style formatting.

Any course work done during the scheduled class time (i.e. quizzes, minilabs, exams) must be done during the scheduled time. No make-up work will be given for absences unless the student is excused from class by the University or by a physician. If a student has circumstances beyond this, it is highly recommended that the student contact the Student Affairs office (x 2612).
**Academic Integrity/Plagiarism.**

As per the university catalog, “university students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, forgery, or plagiarism. (Plagiarism is the presentation of the work of another as one’s own).  

Penalties that may be applied to individual cases of academic dishonesty include one or more of the following:

1. Written reprimand.
2. Requirement to re-do work in question.
3. Requirement to submit additional work.
4. Lowering of grade on work in question;
5. Assigning grade of ‘F’ to work in question;
6. Assigning grade of ‘F’ for course;
7. Recommendation for more severe punishment

**Dropping a Class**

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class.  

April 12, 2013 is the last day to drop a class with an automatic grade of “W” this term.

**X. TEXTBOOKS**

The textbooks adopted for this course are:

**Required Text:**

**Recommended Text:**

**XI: BIBLIOGRAPHY**


**XII. GRADE APPEALS**

As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University
Rule 13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at http://www.tamucc.edu/provost/university_rules/index.html. For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

XIII. DISABILITY ACCOMMODATIONS
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

KINE 4322 – Rehabilitation of Athletic Injuries
Syllabus Acknowledgement Form

I, (print name)____________________________________________, certify by my signature that I have read and understand the class policies that have been presented in the class syllabus for KINE 4322 – Rehabilitation of Athletic Injuries at Texas A&M University-Corpus Christi.

Student Signature ______________________________Date_______________

Student ID A# _____________________