

**YORK UNIVERSITY**  
**Faculty of Health**  
**School of Kinesiology & Health Science**

**Course:** AS/SC KINE 4580.30 **Treatment and Rehabilitation of Athletic Injuries**

**Course Webpage:** Webct download for power point package

**Term:** Winter 2007

**Prerequisite / Co-requisite:** Kine 4570.30

**Course Instructor**

*C.Gus Kandilas Ext. 77482*  
*kandilas@yorku.ca*

*Office Hours: Tuesdays/Thursdays 8:00 – 9:00am*  
*Or by Appointment*

**Time and Location**

<i>Lectures</i>	<i>TR 1:30 – 3:30</i>	<i>116 Stong College</i>
<i>Lab Sessions</i>	<i>As Required</i>	

**Expanded Course Description**

This course will emphasize both acute and long term treatment and rehabilitation of orthopedic and neurological injuries. Within the course, students will be expected to gain knowledge of the background and design of rehabilitation protocols, the inflammatory response and healing of various tissues as well the origin of pain and pain management.

The students will also learn how to promote tissue healing through the application of therapeutic modalities and treatment techniques. The physiological and biological effects, indications, contraindications and precautions of each modality will also be discussed and implemented in laboratory sessions.

## **Organization of the Course**

This course involves formal lectures and laboratory sessions (therapeutic modalities and techniques) as well as implementation of various treatment protocols through class presentations and demonstrations. The lectures will be supplemented by videos. The required readings and power point lectures are central to this course.

## **Course Learning Objectives**

(1) *The purpose of this course is to assist students in developing a critical overview of acute and chronic injuries. Students will be able to implement rehabilitation protocols with the understanding of phases of injury as well as therapeutic tools and interventions which can assist the student therapist in these goals.*

## **Course Text / Readings**

*The following texts, books and course kit (webct power point package) are readings for the course:*

*Prentice, W.E. (1999). Therapeutic Modalities in Sports Medicine. (3<sup>rd</sup>, or Latest Edition) St Louis: Times/Mirror Mosby.*

*Prentice, W.E. (1999). Rehabilitation Techniques in Sports Medicine. St Louis: Times/Mirror Mosby.*

*Course WebCT Package of Power Point Slides*

*RECOMMENDED: Kisner, C.K. & Colby, L.A. (1996). Therapeutic Exercise – Foundation and Techniques. Philadelphia: F.A. Davis*

## **Evaluation**

<b>Three Quizzes</b>	-	<b>85%</b>
<b>Oral Practical Exam</b> (Therapeutic Modalities)	-	<b>15%</b>

## **Course Content**

- Introduction to Rehabilitation (Definitions, Objectives)
- Goals of Rehabilitation (Progressions, Short & Long Term Goals)
- Techniques of Rehabilitation and Reconditioning
  - Flexibility, Range of Motion, PNF Patterns, Principles of Mobilization
  - Strength Implementations (Isometric, Isotonic, Isokinetic, Closed/Open Kinetic Chain)
  - Cardiovascular Emphasis
  - Proprioception and Neuromuscular Control
  - Discharge Parameters
- The Inflammatory Response and Healing of Various Tissues
- Pathophysiology of Pain (Pain Theories and Modality Interaction)

- Therapeutic Modalities
  - Overview
  - Principles and Laws of Electricity
  - Electromagnetic and Acoustic Spectra
  - Cryotherapy/Thermotherapy, Intermittent Compression
  - Ultrasound
  - Electrical Stimulating Currents (TENS, EMS, IFC)
  - Laser
- Rehabilitation protocols outlining time lines, intensity, sets, reps of selected body parts.

### **Grading, Assignment Submission,**

#### **Lateness Penalties and Missed Tests**

**Grading:** The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). Assignments and tests will bear either a letter grade designation or a corresponding number grade (e.g. A+ = 90 to 100, A = 80 to 90, B+ = 75 to 79, etc.)

(For a full description of York grading system see the York University Undergraduate Calendar - [http://calendars.registrar.yorku.ca/pdfs/uq2004cal/calug04\\_5\\_acadinfo.pdf](http://calendars.registrar.yorku.ca/pdfs/uq2004cal/calug04_5_acadinfo.pdf))

**Missed Tests:** Students with a documented reason for missing a course test, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation (e.g., doctor's letter) may request accommodation from the Course Instructor. Further extensions or accommodation will require students to submit a formal petition to the Faculty.

### **IMPORTANT COURSE INFORMATION FOR STUDENTS**

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage (see Reports, Initiatives, Documents) - [http://www.yorku.ca/secretariat/senate\\_cte\\_main\\_pages/ccas.htm](http://www.yorku.ca/secretariat/senate_cte_main_pages/ccas.htm)

- York's Academic Honesty Policy and Procedures/Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation