California University of Pennsylvania
Guidelines for New Course Proposals
University Course Syllabus
Approved: 3/9/14

Department of Health Science

A. Protocol

Course Name: Therapeutic Exercise
Course Number: ATE 330
Credits: 4
Prerequisites: Formal acceptance into the Professional Phase of the Undergraduate Athletic Training Education Program
Maximum Class Size: 25
Maximum Class Size (online): 10

B. Objectives of the Course:

1. Objectives of the course include but are not limited to the following:

   a. Be able to demonstrate an understanding of the principles of therapeutic exercise used in athletic training and sports medicine.
   b. Be able to demonstrate the use of rehabilitation equipment and how to improvise exercise techniques.
   c. Be able to demonstrate the practical skills necessary in reconditioning the athlete to a level of pre-injury fitness through an exercise program.
   d. Be able to use evaluative tools to determine what exercise program should be used for each individual type of injury.
   e. Be able to design an exercise program for most joints of the human body.

C. Catalog Description:

The course entails the study of the use and theory of rehabilitation equipment and rehabilitative exercises in sports. The student will also be able to explain and use evaluation devices such as goniometry, girth, gait analysis, muscle testing, joint mobilization and proprioceptive neuromuscular facilitation.

D. Outline of the Course:

Lecture	Topic 1	**Concepts of Rehabilitation (ch. 1)** The Roles of Rehabilitation Team Members Interacting With Team Members Qualities of Professionalism Components of a Rehabilitation Program Basic Components of Therapeutic Exercise Return-to-Competition Criteria Psychological Considerations

Topic 2	**Concepts of Healing (ch.2)**
	Primary and Secondary Healing
	Healing Phases
	Growth Factors
	Healing of Specific Tissues
	Tensile Strength During Healing
	Factors That Affect Healing
	The Role of Therapeutic Exercise in Healing
Topic 3	**Concepts in Physics (ch.3)**
	Force
	Newton's Laws of Motion
	Center of Gravity
	Stability and Fixation
	Body Levers
	Levers and Force
	Physiological Muscle Advantages
Topic 4	**Evaluation and Assessment (ch.4)**
	Evaluation: Making a Profile
	Assessment: Planning for Action
	Keeping Rehabilitation Records
Topic 5	**Range of Motion and Flexibility (ch.5)**
	Defining Flexibility and Range of Motion
	Connective-Tissue Composition
	Effects of Immobilization on Connective Tissue
	Effects of Remobilization on Connective Tissue
	Mechanical Properties & Tissue Behavior in Range of Motion
	Neuromuscular Influences on Range of Motion
	Determining Normal Range of Motion
	Terminology in Goniometry
	Stretching Techniques Exercise Progression
Topic 6	**Manual Therapy Techniques (ch.6)**
	Critical Analysis
	Massage
	Myofascial Release
Topic 7	**Myofascial Trigger Points**
	Muscle Energy
	Joint Mobilization
	Neural Mobilization
Topic 8	**Muscle Strength and Endurance (ch.7)**
	Muscle Structure and Function
	Neuromuscular Physiology
	Fast-and Slow-Twitch Fibers\
Topic 9	**Muscle Strength, Power, and Endurance**
	Force Production
	Types of Muscle Activity
	Open and Closed Kinetic Chain Activity
	Evaluating Muscle Strength
	Gradations of Muscle Activity
	Strength Equipment

	Proprioceptive Neuromuscular Facilitation
	Strengthening Principles
	Exercise Progression
Topic 10	**The ABC's of Proprioception (ch.8)**
	Neurophysiology of Proprioception
	Central Nervous System Proprioceptor Sites
	Balance
	Coordination
	Agility
	Therapeutic Exercise for Proprioception
Topic 11	**Plyometrics (ch.9)**
	Neuromuscular Principles
	Plyometric Force Production
	Plyometric Exercise Phases
	Pre-Plyometric Considerations
	Plyometric Program Design
	Plyometric Program Considerations
	Precautions and Contraindications
	Equipment
	Lower-Extremity Plyometrics
	Upper-Extremity and Trunk Plyometrics
Topic 12	**Functional Exercise (ch.10)**
	Definitions, Foundations, and Goals
	Contributions to Therapeutic Exercise
	Basic Functional Activities
	Advanced Functional Activities
	Advanced Functional Exercise Progression
	Precautions
	Functional Evaluation
	A Lower-Extremity Functional Progression
	An Upper-Extremity Functional Progression
	Returning the Patient to Full Participation
Topic 13	**Posture and Body Mechanics (ch.11)**
	Posture
	Muscle Imbalances
	Body Mechanics
	Body Awareness Programs
Topic 14	**Ambulation and Ambulation Aids (ch.12)**
	Normal Gait
	Pathological Gait
	Normal Running Gait
	Mechanics of Ambulation with Assistive Devices
Topic 15	**Aquatic Therapeutic Exercise (ch.13)**
	Physical Properties and Principles of Water

	Equipment
	Indications, Advantages, Precautions, and Contraindications
	Aquatic Therapeutic Exercise Principles and Guidelines
	Deep-Water Exercise
	Aquatic Therapeutic Exercises
Topic 16	**Swiss Balls and Foam Rollers (ch.14)**
	Swiss Balls
	Swiss-Ball Exercises
	Foam Rollers
	Foam-Rollers Exercises
Topic 17	**Therapeutic Exercise for Tendinitis (ch.15)**
	Terminology
	Tendon Structure
	Etiology
	Tendon Response
	General Treatment
	Specific Treatment
	Examples of Tenditis Cases
Topic 18	**Spine and Sacroiliac (ch.16)**
	General Rehabilitation Considerations
Topic 19	**Rehabilitation Techniques**
	Special Rehabilitation Applications
Topic 20	**Shoulder and Arm (ch.17)**
	Mechanics of Overhead Sport Activities
	General Rehabilitation Considerations
Topic 21	**Rehabilitation Techniques**
	Flexibility Exercises
	Stabilization Exercises
	Plyometric Exercises
	Functional Activities
	Special Rehabilitation Applications
Topic 22	**Elbow and Arm (ch.18)**
	General Rehabilitation Considerations
	Soft-Tissue Mobilization
	Joint Mobilization
	Flexibility Exercises
	Strengthening Exercises
	Functional Activities
	Special Rehabilitation Applications
	Wrist and Hand
	General Rehabilitation Considerations
	Soft-Tissue Mobilization
	Joint Mobilization
	Flexibility Exercises
	Strengthening Exercises
	Plyometric Exercises
	Functional Activities
	Special Rehabilitation Applications
Topic 23	**Foot, Ankle, and Lower Leg (ch.20)**
	General Rehabilitation Considerations

	Common Structural Deformities
	Orthotic Treatment for Foot Deformities
	Determining Proper Footwear for Patients
	Soft-Tissue Mobilization
	Deep-Tissue Massage
Topic 24	**Joint Mobilization**
	Flexibility Exercises
	Strengthening Exercises
	Proprioceptive Exercises
	Functional Exercises
	Special Rehabilitation Applications
Topic 25	**Knee and Thigh (ch.21)**
	General Rehabilitation Considerations
	Soft-Tissue Mobilization
	Joint Mobilization
	Flexibility Exercises
	Strengthening Exercises
	Proprioceptive Exercises
	Functional Exercises
	Special Rehabilitation Applications
Topic 26	**Hip (ch.22)**
	General Rehabilitation Considerations
	Soft-Tissue Mobilization
	Joint Mobilization
	Flexibility Exercises
	Strengthening Exercises
	Proprioceptive Exercises
	Functional Exercises
	Special Rehabilitation Applications

Lab Schedule - TBA – labs are scheduled every week and topics follow the content above.
* Content subject to change in accordance with NATA competency requirements

E. Teaching Methodology:

1) Lectures, labs, demonstrations, classroom hands-on participation, guest lecturers, article readings, and visual presentations. This course has 3 hours of lecture and 1 hour of lab weekly.
2) Online Methodology: Same as face to face

F. Text

Human Kinetics (2001) Therapeutic Exercise for Athletic Injuries.
Champaign, IL: Houglum
Therapeutic Exercise Lab Handouts

G. Assessment Activities:

1) Exams, quizzes, skill demonstrations, homework, presentations, attendance, in class participation, group work, and discussions
2) LAB requirement: Proper attire is required for full participation in all lab sessions. For example, all lower extremity labs will require students to be dressed in shorts unless otherwise

directed by the lab instructor. Failure to dress or participate will result in grade deduction per the professor's discretion.

3) Online Assessment: Same as face to face

H. Accommodations for Students with Disabilities:

OSD
Revised December 2012

STUDENTS WITH DISABILITIES

Students with disabilities:

- Reserve the right to decide when to self-identify and when to request accommodations.
- Will register with the Office for Students with Disabilities (OSD) each semester to receive accommodations.
- Might be required to communicate with faculty for accommodations, which specifically involve the faculty.
- Will present the OSD Accommodation Approval Notice to faculty when requesting accommodations that involve the faculty.

Office for Students with Disabilities

Requests for approval for reasonable accommodations should be directed to the Office for Students with Disabilities (OSD). Approved accommodations will be recorded on the OSD Accommodation Approval notice and provided to the student. Students are expected to adhere to OSD procedures for self-identifying, providing documentation and requesting accommodations in a timely manner.

Contact Information:

- Location: Azorsky Building – Room 105
- Phone: (724) 938-5781
- Fax: (724) 938-4599
- Email: osdmail@calu.edu
- Web Site: www.calu.edu (search "disability")

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Please Note:
This syllabus attachment is also available in electronic format:

Go to:	Microsoft Outlook
Open:	Public Folders
Open:	All Folders
Highlight:	Faculty/Staff Resources
Open:	Announcement – Academic Syllabus Attachment

I. Supportive Instructional Materials, e.g. library materials, web sites, etc.

Additional Information for Course Proposals

J. Proposed Instructors: Athletic trainers in the Department of Health Science

K. Rationale for the Course:

L. Specialized Equipment or Supplies Needed:

M. Answer the following questions using complete sentences:

1. Does the course require additional human resources? (Please explain)
2. Does the course require additional physical resources? (Please explain)
3. Does the course change the requirements in any particular major? (Please explain)
4. Does the course replace an existing course in your program? (If so, list the course)
5. How often will the course be taught?
6. Does the course duplicate an existing course in another Department or College? (If the possibility exists, indicate course discipline, number, and name)

N. If the proposed course includes substantial material that is traditionally taught in another discipline, you must request a statement of support from the department chair that houses that discipline.

O. Please identify if you are proposing to have this course considered as a menu course for General Education. If yes, justify and demonstrate the reasons based on the categories for General Education. The General Education Committee must consider and approve the course proposal before consideration by the UCC.

P. Provide Approval Form (electronically).

Additional Guidelines

The following are additional guidelines that you must follow which will expedite your course proposal. Failure to follow these guidelines will result in the return of the proposal to the department.

1. Be sure that your proposal is in the correct format (Guidelines for New Course Proposals) and that all questions have been completely answered.

2. Be sure that you have completed and attached the Application to Establish a New Course form and/or the Advisement Sheet Revision form and that the **appropriate signatures** have been affixed. Please send through the process electronically (the preferred method) or by paper. No items will be placed on the agenda until the Chair of the UCC is in possession of these forms.

3. Be sure that you include an updated advisement sheet for any course that is being required by the department or is classified as a restricted elective. In addition, you must include an electronic copy (MS Word or PDF) of the current advisement sheet(s) with your proposal. Be certain that all advisement sheets affected by the proposed course change be included with your proposal.

4. When submitting materials for consideration by the Curriculum Committee, you must provide an electronic copy of each item to be reviewed to the Chairperson.

5. All completed items must be in the hands of the Chairperson of the Curriculum Committee a minimum of one week prior to the next regularly scheduled meeting.

6. Any department requesting a course name change, number change, prefix changes, credit changes, etc. must submit this request on the Application to Establish a New Course Form and submit electronically.

7. New advisement sheets, major proposals, minors, LOCs, Certificates, or changes to advisement sheets will become effective the fall semester following committee approval. **The advisement sheets must also include the committee approval date and the effective date on the advisement page.** Submit this request on the Advisement and /or Program Changes form.

8. New courses will become effective the semester following committee approval.

9. Any references listed must be in the appropriate bibliographic format for the discipline.

10. Online courses should follow the Quality Matters™ rubric and is posted on the UCC website. Be sure that you include the online teaching methodology statement (refer E.2 above) that refers to the Quality Matters™ rubric.

11. All course objectives must follow Bloom's Taxonomy learning domains located on the UCC website.