

**GEORGE MASON UNIVERSITY**  
**School of Recreation, Health and Tourism**

**ATEP 365 — Clinical Techniques: Therapeutic Rehabilitation**  
**Spring 2011**

DAY/TIME:	M, W: 10:30 AM – 12:00 PM	LOCATION:	BRH 148
PROFESSOR:	Shruti Ambegaonkar, MS, PT	EMAIL ADDRESS:	sambegao@gmu.edu
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OFFICE HOURS:	W: 12 PM – 1 PM or by appointment	FAX NUMBER:	703-993-2025

**PRE/CO-REQUISITES**

**Pre-requisites:** Formal acceptance to the professional phase of the ATEP; ATEP 150, 180, 250, 255, 256, 260, 265, 266, 270; BIOL 124, 125; HEAL 110, 230; PHED 300

**Co-requisite:** Concurrently enrolled in ATEP 360 and 366.

**COURSE DESCRIPTION**

A study of the indications, contraindications, physiological effects, special programs, and resistance methods that are used in the prevention and rehabilitation of athletic injuries.

**COURSE OBJECTIVES**

At the completion of this course students should be able to complete the following:

1. Synthesize information obtained in a patient physical assessment to determine the indications, contraindications and precautions for the selection and evidence-based application of therapeutic rehabilitation to patients;
2. Interpret baseline and post-rehabilitation objective physical measurements to evaluate patient progress;
3. Appraise therapeutic rehabilitation and treatment environment for potential safety hazards;
4. Demonstrate techniques and procedures for the rehabilitation of conditions of the physically active;
5. Develop treatment and rehabilitation protocols for various conditions of the physically active.
6. Formulate a progressive rehabilitation plan from initial assessment to return-to-participation;
7. Employ appropriate clinical therapeutic rehabilitation techniques, exercises, and equipment;
8. Modify appropriate clinical therapeutic rehabilitation techniques, exercises, and equipment according to patient physiological and psychological response;
9. Conduct functional testing procedures and appraise information to determine appropriate return-to-participation;
10. Employ proper medical documentation procedures;
11. Establish lines of communication to elicit and convey information about the patient's status and the prescribed rehabilitation protocol(s); and,
12. Maintain patient confidentiality.

**COURSE OVERVIEW**

This clinical techniques laboratory course will be taught in the Athletic Training Clinical Simulation Laboratory. The focus of this course is to develop the cognitive and psychomotor competencies necessary for the safe, effective, and evidenced-based application of therapeutic rehabilitation techniques in a physically active patient population.

### **Attendance**

Students are expected to be on time, attend all class meetings and be prepared for in class assignments and projects. Excused absences include the following: illness (must bring a receipt or note from a doctor), family death, athletic/academic event, and others at the discretion of the instructor. For known upcoming absences, students must contact the instructor at least one week in advance to the missed class to make up work. In the case of illness or some other unforeseen absence, the student must contact the instructor via e-mail or telephone. At the next attended class meeting the student will discuss material that is to be completed. It is the student's obligation to pursue any make-up work.

### **Dress**

During the laboratory section of the course, students will be asked to wear appropriate clothing to expose various body parts for the purposes of practicing the application of emergency medical procedures. Tank tops and sports bras/bathing suit tops will be required when topics focus on the upper body. Shorts will be required when topics focus on the lower body.

### **Special Requirements**

This course requires a laboratory fee of \$100.00 payable to George Mason University.

### **Accreditation Standards**

Upon completion of this course, students will meet the following Commission on Accreditation of Athletic Training Education (CAATE) competencies:

Code	Competency
EX-C1	Describe the physiological and pathological processes of trauma, wound healing and tissue repair and their implications on the development, progression and implementation of a therapeutic exercise program.
EX-C2	Describe the mechanical principles applied to the design and use of therapeutic exercise equipment and techniques (leverage, force, kinesiology and biomechanics).
EX-C3	Describe common surgical techniques, pathology, and any subsequent anatomical alterations that may affect the implementation of a therapeutic exercise program.
EX-C4	Describe the appropriate selection and application of therapeutic exercises taking the following into consideration:
EX-C4a	The physiological responses of the human body to trauma
EX-C4b	The physiological effects of inactivity and immobilization on the musculoskeletal, cardiovascular, nervous, and respiratory systems of the human body
EX-C4c	The anatomical and/or biomechanical alterations resulting from acute and chronic injury and improper mechanics
EX-C4d	The physiological adaptations induced by the various forms of therapeutic exercise, such as fast- versus slow-twitch muscle fibers
EX-C4e	The physiological responses of additional factors, such as age and disease
EX-C5	Describe the indications, contraindications, theory, and principles for the incorporation and application of various contemporary therapeutic exercise equipment and techniques, including aquatic therapy, manual therapy and mobilization.
EX-C6	Define the basic components of activity-specific rehabilitation goals, functional progressions, and functional outcomes in a therapeutic exercise program.
EX-C7	Describe the process/methods of assessing and reassessing the status of the patient using standard techniques and documentation strategies in order to determine appropriate treatment and rehabilitation plans and to evaluate the readiness to return to the appropriate level of activity. This includes the ability to:
EX-C7a	Describe and interpret appropriate measurement and functional testing procedures as

	they relate to the selection and application of therapeutic exercise.
EX-C7b	Interpret objective measurement results (muscular strength/endurance, range of motion) as a basis for developing an individualized therapeutic exercise program.
EX-C7c	Interpret the results of a physical assessment and determine an appropriate therapeutic exercise program to return the patient to physical activity.
EX-C7d	Determine the appropriate therapeutic exercise program and appropriate therapeutic goals and objectives based on the initial assessment and frequent reassessments.
EX-C7e	Determine the criteria for progression and return to activity based on the level of functional outcomes.
EX-C7f	Describe appropriate methods of assessing progress in a therapeutic exercise program and interpret the results.
EX-C7g	Interpret physician notes, postoperative notes, and physician prescriptions as they pertain to a therapeutic exercise program.
EX-C7h	Describe appropriate medical documentation for recording progress in a therapeutic exercise program.
EX-C8	Explain the effectiveness of taping, wrapping, bracing, and other supportive/protective methods for facilitation of safe progression to advanced therapeutic exercises and functional activities.
EX-C9	Describe manufacturer's, institutional, state and federal guidelines for the inspection and maintenance of therapeutic exercise equipment.
EX-P1	Assess a patient to determine specific therapeutic exercise indications, contraindications, and precautions.
EX-P2	Obtain and interpret baseline and post-exercise objective physical measurements to evaluate therapeutic exercise progression and interpret results.
EX-P3	Inspect therapeutic exercise equipment to ensure safe operating condition.
EX-P4	Demonstrate the appropriate application of contemporary therapeutic exercises and techniques according to evidence-based guidelines.
EX-P5	Instruct the patient in proper techniques of commonly prescribed therapeutic exercises.
EX-P6	Document rehabilitation goals, progression and functional outcomes.
EX-P7	Perform a functional assessment for safe return to physical activity.

## REQUIRED READINGS

1) Houglum, P (2010) *Therapeutic Exercise For Musculoskeletal Injuries*. 3rd ed. Champaign, IL: Human Kinetics Co.

## EVALUATION

Students will be evaluated on content standards (knowledge gained) and psychomotor competency performance (demonstration of the skill content). Content standards and psychomotor skills will be assessed via practical skill demonstrations (Competency Evaluations) and a comprehensive practical examination. Class participation will be assessed through completion of daily class activities.

### Competency Assessment

Performance will be assessed through completion of cognitive and psychomotor competency examinations.

### Comprehensive Practical Examination

One comprehensive practical examination will be administered. The examination will require a demonstration of content knowledge and psychomotor skill gained throughout the entire semester.

### Course Grading Scale

ASSESSMENT METHOD	NUMBER	POINTS EACH	POINTS TOTAL
Quizzes	20	5	100
Competency Evaluations	5	80	400
<b>TOTAL</b>	—	—	500

The student's final letter grade will be earned based on the following scale:

A: 465 – 500 pts. (93%)	C+: 385 – 399 pts. (77%)
A-: 450 – 464 pts. (90%)	C: 365 – 384 pts. (73%)
B+: 435 – 449 pts. (87%)	C-: 350 – 364 pts. (70%)
B: 415 – 434 pts. (83%)	D: 315 – 349 pts. (63%)
B-: 400 – 414 pts. (80%)	F: < 315 pts.

### MAKE UP WORK

Students who are absent or who arrive late without an official university or a medical doctor's excuse may miss quizzes or other in-class activities. There will be no make-up quizzes or exams unless an excused absence has been warranted. Students who miss an examination quiz or other class activity because of an excused absence must complete the assignment on their first time back in class. All make-up work must be completed by the last day of class unless other approved arrangements are made. It is the student's obligation to pursue any make-up work.

DAY	DATE	TENTATIVE TOPIC
1	1/24	Introduction
2	1/26	Otoscope, breath sounds, bowel sounds, heart sounds
3	1/31	Patient assessment / profile, Goal Setting, SOAP note
4	2/2	Measurement in rehabilitation— girth and goniometry
5	2/7	Measurement in rehabilitation— girth and goniometry
6	2/9	Motor skill acquisition— Teaching methods and cues, Ambulation techniques
7	2/14	<i>Competency Evaluation #1</i>
8	2/16	Techniques to improve range of motion & flexibility
9	2/21	Manual muscle testing
10	2/23	PNF strengthening
11	2/28	Proprioception and plyometrics
12	3/2	<i>Competency Evaluation #2</i>
13	3/7	Posture and gait analysis
		3/14 – 3/20 — <b>No Classes Spring Break</b>
14	3/9	Basic joint mobilization, myofascial release, massage, and muscle energy techniques
15	3/21	Aquatic therapy
16	3/23	Functional exercises and testing
17	3/28	<i>Competency Evaluation #3</i>
18	3/30	Shoulder and Arm joint mobilizations, flexibility, strengthening exercises
19	4/4	Shoulder and Arm stabilization, plyometric, and functional exercises
20	4/6	Elbow and forearm joint mobilizations, flexibility, strengthening exercise
21	4/11	Wrist and hand joint mobilizations, flexibility, strengthening exercise
22	4/13	<i>Competency Evaluation #4</i>
23	4/18	Spine cover specific posture and cervical & pelvic stabilization and strengthening exercises
24	4/20	Spine cover specific proprioceptive, joint mobs and major flexibility
25	4/25	Hip proprioceptive, joint mobilizations, stabilization and common flexibility, strengthening exercises, functional exercises
26	4/27	Knee and thigh proprioceptive, joint mobilizations, stabilization and common flexibility, strengthening exercises, functional exercises
27	5/2	Foot, ankle, and lower leg proprioceptive, joint mobilizations, stabilization and common flexibility, strengthening exercises, functional exercises
28	5/4	Writing progress reports and discharger summaries
29	5/11	<i>Competency Evaluation #5 – 10:30 am – 1:15 pm</i>

**Note: Faculty reserves the right to alter the schedule as necessary.**

### *Student Expectations*

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].
- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].
- Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.

### *Campus Resources*

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].
- For additional information on the College of Education and Human Development, School of Recreation, Health, and Tourism, please visit our website [See <http://rht.gmu.edu>].