

# Therapeutic Exercise

KIN 4346

Instructor: Sherry Ann Miller, ATC, LAT

Term: Spring 2022

Office: Center of Human Performance (CHP) 104;325-942-2173(Kinesiology)/325-486-6171(Direct)

Course Days: Tuesday and Thursday: 9:30 AM to 10:45 AM in CHP 143

Office Hours: Monday and Wednesday: 1 PM to 3 PM; Tuesday: 11 AM to 12 PM; and Thursday: 11 AM to 2 PM

E-mail: [smiller@angelo.edu](mailto:smiller@angelo.edu)

Required Textbook:

- Therapeutic Exercise for Musculoskeletal Injuries, 4<sup>th</sup> edition, 2016, Peggy Houglum, Human Kinetics

Course Description:

The student will implement a comprehensive rehabilitation/ reconditioning program for injuries sustained by an active population. The programs involve techniques of flexibility, muscular strength, muscular power, muscular endurance, and cardiovascular training.

Course Objectives:

Upon completion of this course the student will be able to:

1. Predict the physiological process of wound healing, tissue repair, and its implications on the development and progression of an appropriate rehabilitation/reconditioning program.
2. Describe and interpret appropriate measurement and function testing procedures as they relate to therapeutic exercise.
3. Recommend the appropriate therapeutic exercise plan and determine appropriate therapeutic goals and objectives based on the initial assessment, frequent reassessments, and appropriate goal setting.
4. Describe the basic components of activity-specific functional progressions in a therapeutic exercise program.
5. Use objective measurement results (muscular strength/endurance, range of motion, etc.) as a basis for developing individualized rehabilitation or reconditioning programs.
6. Measures the physical effects of injury using contemporary methods (isokinetic devices, goniometers, dynamometers, manual muscle testing, calipers, functional testing) and use this data as a basis for developing individualized rehabilitation or reconditioning programs.
7. Describes the indications, contraindications, theory and principles for the incorporation and application of various contemporary therapeutic exercise and demonstrate the appropriate application of contemporary therapeutic exercises including the following:
  - a) Isometric, isotonic and isokinetic
  - b) Eccentric and concentric exercise
  - c) Open and closed chain exercise
  - d) Elastic, mechanical and manual resistance exercise
  - e) Joint mobilization exercise
  - f) Plyometric-dynamic reactive exercise
  - g) Proprioceptive neuromuscular facilitation (PNF) for muscular strength/endurance, muscle stretching, and improving range of motion
  - h) Exercises to improve neuromuscular coordination and proprioception
  - i) Passive, active, and active-assistive exercise
  - j) Cardiovascular exercise, including the use of stationary bicycles, upper-body ergometer, treadmill, and stair climber

- k) Aquatic therapy
- l) Functional rehabilitation and reconditioning
- m) Sport specific activity
- n) Soft tissue mobilization
- o) Demonstrate the proper techniques for performance of commonly prescribed rehabilitation and reconditioning exercises
- p) Accept the professional, ethical, and legal parameters that define the proper role of the athletic trainer in the treatment, rehabilitation, or reconditioning of athletes and others involved in physical activity.

#### Course Delivery:

This is “in person” or “face to face” course offering. This course has an online component in addition to an “in person” component. Both components are required in order for the student to be successful. The online course component will be delivered via the Blackboard Learning Management System. The course site can be accessed at [ASU's Blackboard Learning Management System](#)

#### Technology Requirements:

To participate in the online portion of this course, you need this technology:

- A computer capable of running Windows 7 or later, or Mac OSX 10.8 or later
- The latest version of Google Chrome, Firefox, Safari, or Internet Explorer
- Microsoft Office Suite or a compatible Open Office Suite
- Adobe Acrobat Reader
- High Speed Internet Access
- Ethernet adapter cable required (wireless connections can drop during tests and Collaborate sessions)
- Webcam

Refer to Angelo State University's Distance Education website for further technology requirements: [Angelo State University's Distance Education Website](#)

#### Communication:

Faculty will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line.

#### Academic Integrity:

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Health and Human Services adheres to the university's [Statement of Academic Integrity.](#)<sup>1</sup>

#### Accommodations for Students with Disabilities:

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the

Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at [ADA@angelo.edu](mailto:ADA@angelo.edu). For more information about the application process and requirements, visit the [Student Disability Services website](#).<sup>ii</sup> The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
[dallas.swafford@angelo.edu](mailto:dallas.swafford@angelo.edu)  
Houston Harte University Center, Room 112

#### Incomplete Grade Policy:

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)<sup>iii</sup> for more information.

#### Plagiarism:

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)<sup>iv</sup> in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the [ASU Writing Center](#).<sup>v</sup>

#### Student Absence for Observance of Religious Holy Days:

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#)<sup>vi</sup> for more information.

#### Copyright Policy:

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

#### Syllabus Changes:

The faculty member reserves the option to make changes as necessary to this syllabus and the course content. If changes become necessary during this course, the faculty will notify students of such changes by email, course announcements and/or via a discussion board announcement. It is the student's responsibility to look for such communications about the course on a daily basis.

#### Title IX at Angelo State University:

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual

nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D. You may submit reports in the following manner:

Online: [www.angelo.edu/incident-form](http://www.angelo.edu/incident-form)

Face to face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: [michelle.miller@angelo.edu](mailto:michelle.miller@angelo.edu)

*Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).*

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit: [www.angelo.edu/title-ix](http://www.angelo.edu/title-ix).

#### Student Evaluation of Faculty and Course:

Students in all programs are given the opportunity to evaluate their courses and the faculty who teach them. Evaluations are most helpful when they are honest, fair, constructive, and pertinent to the class, clinical experience, or course. Faculty value student evaluations, and use student suggestions in making modifications in courses, labs and clinical experiences.

Angelo State University uses the IDEA (Individual Development and Educational Assessment) system administered through Kansas State University for all course evaluations. The Office of Institutional Research and Assessment administers IDEA for the entire university, online and has established a policy whereby students can complete course evaluations free from coercion.

#### Student Learning Objectives for this course:

1. Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)
2. Learning to apply course material (to improve thinking, problem solving, and decisions)
3. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

#### Assignment Submission:

All assignments must be submitted according to each assignment criteria on the Blackboard site. This is for grading, documenting, and archiving purposes. Issues with technology use arise from time to time. If a technology issue does occur regarding an assignment submission, email me at [smiller@angelo.edu](mailto:smiller@angelo.edu) and attach a copy of what you are trying to submit. **Please contact the IT Service Center at (325) 942-2911 or go to your Technology Support tab to report the issue.** This lets your faculty know you completed the assignment on time and are just having problems with the online submission feature. Once the problem is resolved, submit your assignment through the appropriate link. This process will document the problem and establish a timeline. Be sure to keep a backup of all work.

### Late Work or Missed Assignments Policy:

Due dates and times are posted for all assignments, quizzes, and examination. Online homework and exams will not be extended beyond their due date nor accepted past the due date and time. Other assignments, quizzes, and/or exams will not be accepted passed their due date and time.

### General Policies Related to This Course:

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)<sup>vii</sup>
- [Angelo State University Catalog](#)<sup>viii</sup>

### Student Responsibility and Attendance:

This course is an “in person” class which means that the student is responsible for completing the online portion of this course asynchronously. The student is also responsible to complete and submit this material by its due date and time. The “face to face” portion of this class, the student is required to be present in order to receive credit. The material that will be presented in class will not be presented online. Points will be deducted from cumulative total for each absence. Ten (10) points for each absence. All students must have medical documentation to return to class and clinical rotations from any and all illnesses.

### Instructor Expectations:

The instructor and/or instructors have several expectations of you, the student, while in this course.

1. All faculty, staff, and students will comply with “ASU Core Values” in all of their professional and personal lives. ASU Core Values are:
  - Integrity: do the right thing, even if no one knows.
  - Diversity & Inclusion: celebrate, appreciate, and build on our differences.
  - Significance: construct a legacy and reputation of dynamic impact beyond ourselves.
  - Community: collaborate to develop an inclusive sense of place and purpose.
  - Commitment: hold ourselves and each other accountable to our responsibilities.
2. Professional behavior and language are required. Profanity is not acceptable as professional language.
3. It is your responsibility to read and comply with the syllabus. There will be no e-mail reminders to do homework or to take exams.
4. It is your responsibility to report missing grades on Blackboard immediately. Waiting until the end of the semester is not a plausible excuse.
5. Punctuality is a must.
6. Please be dressed appropriately for class especially on days we do activities.
7. Electronic devices need to be on silence mode and put away unless you are using these devices to take notes. It is acceptable and encouraged to have them out in this situation. Please understand that if you have an emergency and are expecting a call, please let the instructor know. Step outside of the classroom and attend to your affairs. Otherwise if your phone rings during class and/or you are “on” your phone during class time, you will be counted as absent.
8. All assignments are due on the day and time listed on the syllabus. If an assignment is to be turned in during class, the assignment must be submitted at the beginning of class. If late submissions are accepted, points will be deducted as follows: 1 class day: 5 points; 2 class days: 10 points; 3 class days: 15 points.

### Physical Health and Well Being Expectations:

Students are responsible to monitor and self-screen their physical health everyday they attend campus. To assist you with this endeavor, the following information is for you to comprehend and apply to the daily wellness screen:

### COVID-19 symptoms:

- Fever of 100 degrees Fahrenheit or greater

- A new cough that is not attributable to another medical condition
- New muscle aches not attributable to another medical condition or another specific activity (e.g., due to physical activity and/or exercise)
- New or worsening headache
- New loss of taste or smell
- Throat pain not attributable to another medical condition
- Congestion and/or runny nose not attributable to another medical condition
- New shortness of breath not attributable to another condition
- Nausea or vomiting
- Diarrhea

#### Expectations for class:

1. Complete the “Daily COVID-19 Wellness Screening” tool found on the ASU website BEFORE coming on to campus. Go to: <https://www.angelo.edu/wellness-screening>.
2. Face coverings are optional on campus and in class.
3. On days you will be engaged in “hands on activities”, you will be provided a pair of gloves to perform such activities.
4. If you are experiencing symptoms, email the instructor after you have sought medical attention.

If you are exhibiting COVID-19 symptoms and/or have a temperature of 100 degrees Fahrenheit or greater, it is recommended that the student stay home and seek medical attention.

- Seek medical attention:
- Call and make an appointment with ASU Shannon Clinic – Jackson by calling 325-942-2171
- Attend appointment
- Carefully follow the physician’s and/or healthcare provider’s instructions

In addition to your physical health, your mental and emotional health should be monitored and screened as well. If you are experiencing signs and symptoms related to anxiety and /or depression revolving around this current pandemic situation, please contact the ASU Counseling Services at 325-942-2371 or visiting [Counseling Services](#).

#### Safety Standards in Class at Angelo State University

- Students, faculty and staff are required to complete the wellness screen every day before coming to campus or leaving your residence hall.
- Masks are optional everywhere on campus.
- Washing hands is highly encouraged to prevent spread of all germs.
- Students who do not pass the wellness check should contact their instructors, just as they would for any illness.

#### Course Requirements:

1. Each student must successfully pass 3 written examinations. Total points are 300.

Each examination will be in the format of multiple choice, true/false, matching, fill in the blank, short answer, listing, and essay.

2. Rehabilitation protocols for specific injuries will be assigned. Each protocol is worth 100 points. Seven protocols total. {700 points}

3. Teaching presentations over the rehabilitation topics assigned. 25 points total

4. Rehabilitation portfolio: The portfolio is worth a total of 300 points.
5. Participation in and teaching presentation of exercise protocol activities – labs: 6 labs at 15 points each. {90 points}
6. Final exam – 100 points. Guidelines attached at the end of daily schedule.

Grading Procedures: A grading range will be used based off point totals as follows. The grading range is 1515 points. **This is not percentage points, and your grade will not be “rounded up”.**

Letter Grade	Point Ranges
A	1363.5 - 1515
B	1212 – 1363.499
C	1060.5 – 1211.999
D	909 – 1060.499
F	757.5 – 908.999

**Athletic Training Specialization Students:** All students in the Athletic Training Specialization Program must comply with clinical hours and clinical skill assessments even if you decide to withdrawal from the program. If students do not comply with the clinical skill assessments, you will be suspended from clinical hours which will jeopardize your grade and date of graduation.

7. Clinical Hours – 100 points

Clinical Hours	Point Value
240-300	100
165-239	70
105-164	40
45-104	10
0-44	0

8. Any Athletic Training Specialization student who is ill and misses class due to that illness must bring documentation from a physician that they can return to class AND clinical observation rotations. A copy of this documentation must be submitted to the clinical education coordinator and your assigned clinical preceptor.

9. Clinical Skill Assessments: 9 @ 40 points each. 360 points total. It is required that you pass 80% of the skill assessment in order to progress to the next assessment.

Clinical Skill Assessment	Point Value
90-100% of assessment correct	40
80-89.99% of assessment correct	20
70-79.99% of assessment correct	5
69.99% and below of assessment correct	0

**Athletic Training Specialization:** A grading range will be used based off point totals for lecture, lab, clinical hours, and clinical skill assessments combined. The grading range is 1975 points. **This is not percentage points, and your grade will not be “rounded up”.**

Letter Grade	Point Ranges
A	1777.5 – 1975
B	1580 – 1777.499
C	1382.5 – 1579.999
D	1185 – 1382.499
F	987.5 – 1184.999

**All athletic training specialization students must pass the course with a “C” or better in order to progress to the next course.**

**All athletic training specialization students must make an “80%” or better on all skill assessments in order to be certified to take the Texas State Licensure (LAT) Examination.**

## Skill Assessment Guidelines and Rules:

Skill Assessments need to be completed in the following manner. Assessments are not optional.

- Due by the assigned due date.
- Peer checked at least 24 hours prior to clinical preceptor check.
- Must schedule an approved time with your clinical preceptor to complete your skill assessment (up to clinical preceptor's discretion (i.e. 24 hours prior, 1 week in advance, etc.))
- Must score an 80% or better on ALL skill assessments in ALL athletic training related courses in order to be certified to take your LAT exam.
- Must make an 80% or better on first attempt of a skill assessment with your clinical preceptor. Points for the class will be awarded based on the grading scales below.
- If you score below an 80% on the first attempt:
  - ❖ You are required to re-do that skill assessment with your clinical preceptor for a second attempt within 1 week from the assigned due date for a maximum of 20 points in the class.
  - ❖ A first attempt must be made by the assigned due date in order to perform a second attempt.
- If a first attempt is not made by the assigned due date, you will receive 0 points for that skill assessment in the class. (However, you must make an 80% or better to be certified to take your LAT exam. The date and time will be scheduled at your preceptor's discretion by the end of the current semester.)

First Attempt:	Class Grading Scale	Second Attempt	Class Grading Scale
90-100%	40 points	90-100%	20 points
80-89%	20 points	80-89%	10 points
70-79%	5 points	<79%	0 points
<69%	0 points		

Due Date:	Skill Assessment:
Friday, January 21	Introductory Quiz
Friday, February 4	Neuromuscular Control
Friday, February 18	ROM & Flexibility
Friday, March 4	Manual Therapy
Friday, March 25	Muscle Strength & Endurance
Friday, April 1	Balance & Proprioception
Friday, April 15	Plyometrics
Friday, April 29	Functional Exercise & Testing
May 6 – 13, 2022	Proprioceptive Neuromuscular Facilitation

**Daily Lecture and Lab Schedule:**

Date	Topic/In Class	Assignments/Exams/Due Dates
January 18	First Day of Class <ul style="list-style-type: none"> <li>• Orientation of Class</li> <li>• Syllabus</li> <li>• Course Expectations</li> </ul>	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Review</b> Syllabus and mark on Blackboard</li> </ul>
January 20	<b>Read</b> Ch. 1 Concepts of Rehabilitation	
January 25	<b>Read</b> Ch. 2 Concepts of Healing	
January 27	Ch. 2 Concepts of Healing cont.	
February 1	<b>Read</b> Ch. 3 Concepts in Physics in Therapeutic Exercise	
February 3	<b>Read</b> Ch. 4 Examination and Assessment for Rehabilitation	
February 8	<b>Read</b> Ch. 5 Range of Motion and Flexibility	
February 10	Ch. 5 Range of Motion and Flexibility <b>Perform: Lab One – In class</b>	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Written Exam One</b> <ul style="list-style-type: none"> <li>❖ Online Only</li> <li>❖ Respondus LockDown Browser &amp; Monitor</li> <li>❖ 1 attempt</li> <li>❖ Covers Chs. 1, 2, 3, 4, &amp; 5</li> <li>❖ Opens: February 10, 2022 @ 6 AM</li> <li>❖ Closes: February 11, 2022 @ 10 PM</li> <li>❖ Under the “Examinations” tab</li> </ul> </li> <li>• <b>Complete &amp; Submit</b> Lab One</li> </ul>
February 15	In class: Demonstrate and Instruct about Range of Motion and Flexibility development from protocols	
February 17	<b>Read</b> Ch. 13 Manual Therapy	
February 22	Ch. 13 Manual Therapy <b>Perform: Lab Two – In class</b>	
February 24	Ch. 13 Manual Therapy <b>Perform: Lab Two – In class</b>	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Lab Two</li> </ul>
March 1	<b>Read</b> Ch. 7 Muscle Strength and Endurance	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Rehabilitation Protocol for Shoulder</li> </ul>
March 3	Ch. 7 Muscle Strength and Endurance <b>Perform: Lab Three – In class</b>	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Lab Three</li> </ul>
March 8	In class: Demonstrate and Instruct about Muscle Strength and Endurance development from protocols	
March 10	<b>Read</b> Ch. 6 The ABCs of Proprioception	
March 14-18, 2022	<b>University Holiday (Spring Break)</b>	No class

Date	Topic/In Class	Assignments/Exams/Due Dates
March 22	<b>Perform</b> Ch. 6 The ABCs of Proprioception	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Rehabilitation Protocol for Elbow</li> </ul>
March 24	<b>Read</b> Ch. 8 Plyometrics	
March 29	<b>Read</b> Ch. 9 Functional and Performance Specific Development	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Rehabilitation Protocol for Wrist/Hand</li> </ul>
March 31	Ch. 8 Plyometrics <b>Perform: Lab Four – In class</b>	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Rehabilitation Protocol for Foot/Ankle</li> </ul>
April 5	In class: Demonstrate and Instruct about Proprioception and Plyometrics from protocols	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Written Exam Two</b> <ul style="list-style-type: none"> <li>❖ Online Only</li> <li>❖ Respondus LockDown Browser &amp; Monitor</li> <li>❖ 1 attempt</li> <li>❖ Covers Chs. 6, 7, 8, 9, &amp; 13</li> <li>❖ Opens: April 5, 2022 @ 6 AM</li> <li>❖ Closes: April 6, 2022 @ 10 PM</li> <li>❖ Under the “Examinations” tab</li> </ul> </li> </ul>
April 7	Ch. 9 Functional and Performance Specific Development <b>Perform: Lab Four – In class</b>	
April 12	In class: Demonstrate and Instruct about Functional and Performance Specific development from protocols	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Lab Four</li> </ul>
April 14	<b>Read</b> Ch. 12 Aquatic Therapeutic Exercise	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Rehabilitation Protocol for Knee</li> </ul>
April 19	Ch. 12 Aquatic Therapeutic Exercise <b>Perform: Lab Five – In class</b>	
April 21	<b>Read</b> Ch. 14 Therapeutic Exercise Equipment	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Lab Five</li> <li>• <b>Complete &amp; Submit</b> Rehabilitation Protocol for Hip/pelvis</li> </ul>
April 26	Ch. 14 Therapeutic Exercise Equipment <b>Perform: Lab Six – In class</b>	
April 28	<b>Read</b> Ch. 17 Sacroiliac and Pelvic Stabilization	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Complete &amp; Submit</b> Rehabilitation Protocol for spine</li> <li>• <b>Complete &amp; Submit</b> Lab Six</li> </ul>

Date	Topic/In Class	Assignments/Exams/Due Dates
May 3	<b>Perform:</b> Ch. 17 Sacroiliac and Pelvic Stabilization	Due by 10:00 PM <ul style="list-style-type: none"> <li>• <b>Written Exam Three</b> <ul style="list-style-type: none"> <li>❖ Online Only</li> <li>❖ Respondus LockDown Browser &amp; Monitor</li> <li>❖ 1 attempt</li> <li>❖ Covers Chs. 12, 14, &amp; 17</li> <li>❖ Opens: May 3, 2022 @ 6 AM</li> <li>❖ Closes: May 4, 2022 @ 10 PM</li> <li>❖ Under the “Examinations” tab</li> </ul> </li> </ul>
May 5		<b>Due by 9:30 AM</b> <ul style="list-style-type: none"> <li>• <b>Rehabilitation Portfolio</b></li> <li>• <b>Written portion of final exam</b></li> </ul>
May 12	<b>Final Examination</b>	Presentations: <ul style="list-style-type: none"> <li>• In class</li> <li>• Professional Attire</li> <li>• Begins @ 8 AM</li> </ul>

# Design and Production of a Therapeutic Exercise Device

For your final examination, you will design, produce, and provide a detailed description of the therapeutic exercise device and/or tool. It is your choice as to which category of therapeutic devices and/or tools you develop. (ie: ROM, Aqua, Plyometrics, Manual Therapy). You may re-create a device as long as you do not “copy” or “clone” the original device. Create something that would be useful to you as a clinician.

## Guidelines:

1. Design of device/tool
2. Produce the device/tool
3. Cost of construction is limited to no more than 25 dollars.
4. Written, detailed description of how to use, in what manner, and if a commercially made product, how your product is comparable. Include instructions on how device was created and the budget that was used. The paper should be typed, use 11point, Arial font, APA format for documentation, and single spaced with a cover page and reference page due **May 5, 2022**.
5. Please be creative. Original concepts are stressed.
6. Presentation during exam time, which needs to include a description of the device, budget and construction of device, demonstration of how the device is to be used, and how this device will benefit sports medicine. Power points, google slides and/or Prezi software may be used to present material.
7. A paper copy of presentation turned into instructor on **May 11, 2022**

## Grading:

- 50 points for design, production, and written description of device
- 50 points for presentation
- 100 points total

## Rehabilitation Portfolio:

Comprehensive Rehabilitation portfolio which consists of the following:

- A. A three ring, 3inch notebook with dividers
- B. Completed rehabilitation protocols over the injuries you were assigned (7 total protocols)
- C. Diagnostic Testing
- D. Pictures and/or diagrams of exercises
- E. Indications and contraindications for rehabilitation exercises
- F. Instructions for when to use and/or not use a “heating” and “cooling” modalities
- G. Critique of rehabilitation protocols for the following anatomical sites:
  1. Shoulder
  2. Elbow
  3. Wrist/hand
  4. Foot/ankle
  5. Knee
  6. Hip/pelvis
  7. Spine

A. A three ring, 3inch notebook with dividers for each topic. You will receive these notebooks back on May 11, 2022.

### B. Rehabilitation protocols:

The rehabilitation protocol for each injury that you are assigned should include the following information. Each one should be in a SOAP note format. More emphasis should be on the “plan” portion of the SOAP note.

- The “Subjective” should provide enough history in order to understand why you developed this protocol.
- “Objective” should include the basic information on what was positive and/or negative; ranges of motion; neurological, and whatever else should be provided so others reading it have enough information to know why you chose the exercises you did.
- “Assessment” is what the injury assigned to you is.
- The “Plan” Portion is a very detailed section including the following: Physicians orders; short term and long-term goals for each week or month or phase; rehabilitation protocol for “return to activity/participation”; pictures and/or diagrams of exercises; sets and repetitions, and resistance amounts. Instructions about when to progress and when the patient will be considered “released” should be developed and included in the protocol. Please document your sources including pictures/diagrams of exercises. You will be assigned the injuries for the following anatomical sites: shoulder; elbow; wrist/hand; foot/ankle; knee; hip/pelvis, and spine.

### C. Diagnostic Testing:

You are going to research the following diagnostic imaging techniques. Once you know the pertinent information about each, you are going to create a one page “information and/or fact sheet”. This sheet would be what you would give to your patients/clients/athletes before they have any of the following tests. Be creative.

#### *Diagnostic Tests:*

Magnetic Resonance Imaging (MRI)

Computed Tomography (CT)

Radiograph

Electrocardiogram (ECG)

Bone scan  
Echocardiogram

D. Pictures and/or diagrams of exercises for the following categories:

1. Range of motion/flexibility
2. Muscular strength
3. Muscular endurance
4. Balance
5. Cardiorespiratory endurance
6. Core stabilization
7. Plyometrics
8. Open kinetic chain
9. Closed kinetic chain
10. Isometrics
11. PNF
12. Aquatic
13. Functional progressions
14. "Thrower's Ten"
15. Williams' Flexion Exercises
16. McKenzie back program

This project is to help you develop a working knowledge of the different types of exercises to accomplish rehabilitation protocols for the different injuries that could be present in the active population. The exercises can be found in different sources such as journals, books, and the internet. There needs to be instructions and some sort of picture, diagram, and/or drawing of what the exercise is. There must be documentation as to where you received the information. Make sure that the sheets are in good order that you may make copies to give to patients/client/athletes when you set up a rehabilitation protocol for them. You will need 6 exercises in each category except for the last three categories. For the last three categories, you will need to include the entire exercise protocol only once.

E. Indications and contraindications for rehabilitation exercises

A one to two-page chart; flyer; and/or "fact" sheet about the generalized indications and contraindications for most exercises that you select for your rehabilitation protocols. This needs to look professional enough to give to patients/athletes so that they are aware of the indications and contraindications of exercises. Include instructions on what to do if patient/client/athlete becomes aware of either condition. Please document your information.

F. Instructions for when to use and/or not use a "heating" and "cooling" modalities.

A one to two page "fact" sheet with instructions when to use and not use a heating modality and/or cold modality. Please make sure to document your work. Here again provide detail instructions about what to do if your patient is experiencing any of the indications and/or contraindications.

G. Critiques over rehabilitation protocols of the following anatomical sites:

1. Shoulder
2. Elbow
3. Wrist/hand
4. Foot/ankle
5. Knee
6. Hip/pelvis
7. Spine

You are to find a rehabilitation protocol for each anatomical site, but not a protocol over the injury you were assigned. Please make a copy of the protocol, and then write a one-page critique over this protocol. What to include:

- Summary about what you learned from this protocol.
- What you plan to include in your own protocol
- Why you chose to include these exercises in your own protocol.
- Please document your sources.



performing activities of daily living and can use brace for rehabilitation exercises. The patient will receive instructions on how to use and the proper care of the brace. The patient will apply brace, and stationary cycling will be performed for 15 minutes. The patient is instructed to pedal at a pace that is pain free for them. Patient is iced after exercises, and given a home program of exercises to do. The home program consists of elevation and ankle pumps for 15 minutes at least three times a day. Instruct patient in normal gait pattern before leaving the athletic training facility.

**Days 4-7:** Modalities of ice, compression, and elevation before and ice and elevation after session.

AROM: plantarflexion, dorsiflexion, inversion with no weight 3 sets of 15 reps. Initiate eversion with no weight as long as pain free, 2 sets of 15 reps.

Towel crunches with 1 # weight, 3 x 15

Towel slides with no weight, 3 x 15

Marble pick up – 4 times total; 2 to each side of cup

Cardiorespiratory:

**Days 4 and 6** – Patient in brace to cycle for 25 minutes above 50 rpms. 15 minutes on the UBE to work the upper body.

**Days 5 and 7** – Aquatic program: swimming laps with arms only 5 laps (Down and back is one lap; the length of the pool)

Walking for 10 minutes the width of the pool

Aqua-jogger – 20 minutes jogging in the deep end.

Week two:

**Days 8 – 14:**

If inflammation is minimal, start patient with the warm whirlpool for 10 minutes before exercise session; ice and elevation after exercises session.

**Days 8-10**

AROM: plantarflexion, dorsiflexion, and eversion with red thera-band 3 x 15; inversion, red thera-band – 2 x 15

Towel crunches with 2 # weight, 3 x 15

Towel slides with 1 # weight, 3 x 15

Marble pick up – 4 times total; 2 to each side of cup

Heel raises – 3 x 20

Toe raises – 3 x 20

Dyna-disk – bilateral; balance for 30 second intervals for 3 times.

**Days 11 – 13**

If patient is pain free and minimal inflammation progress to:

AROM: all planes of motion with red thera-band, 3 x 10

Towel crunches with 3 # weight, 3 x 15

Towel slides with 2 # weight, 3 x 15

Marble pick up – 4 times total; 2 to each side of cup

Heel raises – 3 x 20

Toe raises – 3 x 20

Dyna-disk – bilateral, balance for 30 second intervals for 3 times.

BAPS board while seated – clock wise 3 times for one minute each; and counter clock wise 3 times for one minute each

Cardiorespiratory:

**Days 8, 10, and 12** – Patient in brace to cycle for 15 minutes above 50 rpms; 15 minutes on the UBE; and 10 minutes of walking on the treadmill at a 1% grade.

**Days 9, 11, and 13** – Aquatic program: swimming laps with arms only 5 laps; swimming laps with the kickboard 5 laps.

Jogging in waist high water for 10 minutes the width of the pool

Aqua-jogger – 20 minutes jogging in the deep end; cross country skiing for 10 minutes

**Day 14** – Activities of daily living, ice and elevation for 15 minutes

Patient is to continue home program of ice and elevation at least twice a day. Patient may start doing more activities of daily living while braced.

## Professionalism:

You as a student are responsible for your academic career. The Athletic Training Specialization faculty and clinical preceptors expect you to develop certain attributes and qualities as a professional athletic trainer. One attribute is to establish professional goals and develop and foster professional relationships.

In order to reach your goal to become a licensed professional, here are some priorities that must be met:

### A. Academic Endeavors

Your courses should be your first priority. Academic endeavors must be pursued rigorously. This means all of your courses. Attending class, supplemental instruction, study hours, and study sessions should be your main focus. For every hour of course work you take, you should spend approximately 3 hours studying. For example – if you have 15 credit hours, you should spend a minimum of 45 hours a week in study and preparation for that course. You need to be present for all courses no matter if the professor/instructor has an attendance policy or not. If you are ill, please seek medical attention. You will need to provide medical documentation to return to classes and clinical hours.

### B. Clinical Experience

Clinical experiences and opportunities should be your second priority. Your clinical hours should be viewed as another learning opportunity and an extension of what you are learning in the classroom. You need to establish professional habits while in the clinical setting. Some of these habits and actions include but are not limited to:

- Dressing appropriately and being in professional work attire
- Actively seeking learning opportunities in the clinical setting
- Being productive in the clinical setting
- Practicing your knowledge, skills, and abilities while in the clinical setting with the guidance of your clinical preceptors
- Developing professional relationships with your clinical preceptors
- Being punctual and/or early to your clinical rotation

### C. College life

I understand and acknowledge your need to be social and possess healthy relationships with your peers, but this should not be a priority for your entire academic career. Starting this semester, you may study in the athletic training facility from 7 am to 12 pm, but in the afternoons you will no longer will be allowed to study and do homework at the expense of patient care and your athletic training knowledge, skills, and abilities. In other words, “no more sitting at the counter, hiding in the athletic training facility, and/or sitting in your clinical preceptor’s office” to avoid participating in patient care and learning opportunities.

### Statement of Acknowledgement:

My signature is my acknowledgement that I have read the syllabus and “Professionalism Statement.”

\_\_\_\_\_  
Signature:

\_\_\_\_\_  
Date:

*Please print and return to Sherry Ann Miller by the second course day.*

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<sup>i</sup> <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

<sup>ii</sup> <https://www.angelo.edu/services/disability-services/>

<sup>iii</sup> <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>

<sup>iv</sup> <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

<sup>v</sup> [https://www.angelo.edu/dept/writing\\_center/academic\\_honesty.php](https://www.angelo.edu/dept/writing_center/academic_honesty.php)

<sup>vi</sup> <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>

<sup>vii</sup> <https://www.angelo.edu/student-handbook/>

<sup>viii</sup> <https://www.angelo.edu/catalogs/>