Instructor: Michael Terrill, MS, ATC, LAT
Email: mterrill1@angelo.edu
Phone: 325-486-6127
Office: Archer Building (HHS) 222D
Office Hours: TBA

Course Information

Course Description
This course will study the principles, biophysical effects, indications, and contraindications associated with therapeutic modalities used in the treatment and rehabilitation of orthopedic injuries. Topics include thermal agents, therapeutic ultrasound, electrical stimulation, and mechanical devices.

Course Credits
3

Prerequisite and Co-requisite Courses
TBA

Student Learning Outcomes

<table>
<thead>
<tr>
<th>Student Learning Outcome</th>
<th>Assignment(s) or activity(ies) validating outcome achievement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a comprehensive individual care plan for patients that will include assessment, collection of outcome measures, development of goals, and appropriate follow-up and reassessment.</td>
<td>Examination and Scenario,</td>
</tr>
</tbody>
</table>
### Student Learning Outcome

By completing all course requirements, students will be able to:

<table>
<thead>
<tr>
<th>Assignment(s) or activity(ies) validating outcome achievement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select and use appropriate test for assessing pain levels.</td>
</tr>
<tr>
<td>Select and apply therapeutic appropriate modality interventions that align with the patient's care plan.</td>
</tr>
</tbody>
</table>

### Competencies Evaluated in this Course

<table>
<thead>
<tr>
<th>Competencies</th>
<th>Assignment(s) or activity(ies) validating outcome achievement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCL-69</td>
<td>Examination and Scenarios</td>
</tr>
<tr>
<td>Develop a care plan for each patient. The care plan includes (but is not limited to) the following:</td>
<td></td>
</tr>
<tr>
<td>PCL-69.1</td>
<td>Examination and Scenarios</td>
</tr>
<tr>
<td>Assessment of the patient on an ongoing basis and adjustment of care accordingly</td>
<td></td>
</tr>
<tr>
<td>PCL-69.2</td>
<td>Examination and Scenarios</td>
</tr>
<tr>
<td>Collection, analysis, and use of patient-reported and clinician-rated outcome measures to improve patient care</td>
<td></td>
</tr>
<tr>
<td>PCL-69.3</td>
<td>Examination and Scenarios</td>
</tr>
<tr>
<td>Consideration of the patient’s goals and level of function in treatment decisions</td>
<td></td>
</tr>
<tr>
<td>PCL-69.4</td>
<td>Examination and Scenarios</td>
</tr>
<tr>
<td>Discharge of the patient when goals are met or the patient is no longer making progress</td>
<td></td>
</tr>
<tr>
<td>PCL-69.5</td>
<td>Examination and Scenarios</td>
</tr>
<tr>
<td>Referral when warranted</td>
<td></td>
</tr>
<tr>
<td>PCL-71.4</td>
<td>Examination, Scenarios, Laboratory Assignments</td>
</tr>
<tr>
<td>Competencies</td>
<td>Assignment(s) or activity(ies) validating outcome achievement:</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>PCL-71.4.j Pain level</td>
<td>Examination, Scenarios, Laboratory Assignments</td>
</tr>
<tr>
<td>PCL-73 Select and incorporate interventions (for pre-op patients, post-op patients, and patients with nonsurgical conditions) that align with the care plan. Interventions include (but are not limited to) the following:</td>
<td>Examination, Scenarios, Laboratory Assignments</td>
</tr>
<tr>
<td>PCL-73.7 Therapeutic modalities</td>
<td>Examination, Scenarios, Laboratory Assignments</td>
</tr>
</tbody>
</table>

- Note:
  - EBP – Evidence-Based Practice
  - HCA – Health Care Administration
  - HCI – Health Care Informatics
  - IPE – Interprofessional Practice and Interprofessional Education
  - PCC – Patient-Centered Care
  - PCL – Patient Client Care
  - PHP – Prevention, Health Promotion, and Wellness
  - PRE – Prerequisite Coursework and Foundational Knowledge
  - PRO – Professionalism
  - QIM – Quality Improvement

### Course Delivery
This is a face-to-face and online course with learning resources and supplemental materials posted in Blackboard.

### Required Texts and Materials

### Technology Requirements
To participate in one of ASU's distance education programs, you need this technology:

- A computer capable of running Windows 7 or later, or Mac OSX 10.8 or later
- The latest version of one of these web browsers: Internet Explorer, Firefox, or Safari
- 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](#)

## Topic Outline

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Ch 1 – The Injury Response Process&lt;br&gt;Ch 2 – The Physiology and Psychology of Pain&lt;br&gt;PCL-71.4, PCL-71.4.J</td>
<td>Study Chapters 1-4</td>
</tr>
<tr>
<td>Week 2</td>
<td>Ch 3 – Development and Delivery of Intervention Strategies&lt;br&gt;CH 4 – Administrative Considerations&lt;br&gt;PCL-69.1-5 PCL-73 PCL-73.7&lt;br&gt;Lab – Pain Tolerance</td>
<td>Study Chapters 5&amp;6&lt;br&gt;Complete Reflection on Lab 1</td>
</tr>
<tr>
<td>Week 3</td>
<td>Chapter 5 – Thermal Modalities&lt;br&gt;Chapter 6 – Clinical Application of Thermal Modalities&lt;br&gt;Lab 2 – Superficial Heating and Cooling</td>
<td>Exam 1 – Ch 1-4&lt;br&gt;Study Chapters 7-10&lt;br&gt;Complete Reflection on Lab 2</td>
</tr>
<tr>
<td>Week 4</td>
<td>Chapter 7 – Therapeutic Ultrasound&lt;br&gt;Chapter 8 – Clinical Application of Therapeutic Ultrasound&lt;br&gt;Chapter 9 – Shortwave Diathermy&lt;br&gt;Chapter 10 Clinical application of Shortwave Diathermy&lt;br&gt;Lab 3 – Ultrasound</td>
<td>Study Chapters 11 – 13&lt;br&gt;Complete Reflection on Lab 3</td>
</tr>
<tr>
<td>Week 5</td>
<td>Chapter 11 – Principles of Electrical Stimulation&lt;br&gt;Chapter 12 – Electrical Stimulation Techniques&lt;br&gt;Chapter 13 – Clinical Application of Electrical Agents&lt;br&gt;Lab 4 – Electrical Stimulation</td>
<td>Exam 2 – CH 5-10&lt;br&gt;Study Chapters 14, 15&lt;br&gt;Complete Reflection on Lab 4</td>
</tr>
<tr>
<td>Week 6</td>
<td>Chapter 14 – Intermittent Compression&lt;br&gt;Chapter 15 – Continuous Passive Motion</td>
<td>Study Chapters 16, 17&lt;br&gt;Complete Reflection on Lab 5</td>
</tr>
</tbody>
</table>
Communication

Faculty will respond to email and/or telephone messages within 48 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.

Grading

Evaluation and Grades

Course grades will be determined as indicated in the table below.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflections</td>
<td>20%</td>
</tr>
<tr>
<td>Labs</td>
<td>30%</td>
</tr>
<tr>
<td>Exams</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
</tr>
</tbody>
</table>

Grading System

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:
A = 90% - 100%
B = 80% - 89.99%
C = 70% - 79.99%
D = 60% - 69.99%
F = 0 - 59.99% (Grades are not rounded up)

**Teaching Strategies**

Students are expected to be "active learners." It is a basic assumption of the instructor that students will be involved (beyond the materials and lectures presented in the course) discovering, processing, and applying the course information using peer-review journal articles, researching additional information and examples on the Internet, and discussing course material and clinical experiences with their peers.

**Assignment and Activity Descriptions**

**Reflections: 7 Reflections = 20%**

Reflections are an opportunity for you to think about the lab experiences critically. You are expected to write at the graduate level using APA protocols. Limit your reflection to two full pages, not counting cover sheets or reference pages. The focus of the grading will be on content, but you will be penalized for grammatical mistakes. All reflections are on Sunday at 11:59 pm. and will be turned in on BlackBoard.

**Labs: 7 Laboratory Assignments = 30%**

Laboratory assignments will consist of procedural data collection, scenarios, and simulations. All labs will be compiled into one grade for the week. All data collection, scenarios, and simulations will be completed in class, but outside class time may be required for the analysis and compilation of data. All information is to be turned in by Sunday at 11:59 pm. and will be turned in on BlackBoard.

**Exams: 4 Exams = 30%**

Exams will be completed in class on assigned dates. Exams will only cover the chapters listed for that exam. If a student will not be present for the exam, it is the student's responsibility to make arrangements with the faculty member to take the exam prior to the exam date. If an emergency occurs resulting in the student missing the exam, it is the student’s responsibility to contact the faculty member as soon as possible.
Final Exam: 1 = 20%
The Final Exam will be taken at the assigned final exam time and comprehensive of the entire course. Students will have two hours to complete the final exam.

Assignment Submission
All assignments will be submitted through the Assignments link on the Blackboard except for Scenarios and Simulations. 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 mtterrill1@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 in Blackboard. 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
Late work will not be accepted unless you have received permission from the instructor prior to the due date. If you miss an assignment due to an unexcused absence, you are out of luck. Show up for class!

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
- Angelo State University Catalog
Required Use of Masks/Facial Coverings by Students in Class At ASU
As a member of the Texas Tech University System, Angelo State University has adopted the mandatory *Facial Covering Policy* to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability. For the safety of everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.

**Student Responsibility and Attendance**
It is the student's responsibility to be on time for class, participate in class discussions, and be actively engaged in the learning process. Instructions and assignments will often be given during class, therefore it is in your best interest to attend. If you have to miss class due to an unforeseen event/accident or illness, please contact the instructor prior to the start of class. Pending the reason for your absence, the instructor may inform you of any missed homework assigned during class. Not acceptable reasons for absences include but are not limited to: oversleeping, work, wanting to leave early or come back late from the weekend, and celebrating a friend, relative or pet's birthday. If you are sick, let the instructor know and bring a physician's note when you come back to class.

**Food and Drink Policy**
Only bottles of water or water in containers with lids are allowed in the HHS building.

**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 to disciplinary action and possible expulsion from ASU.

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

**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. For more information about the application process and requirements, visit the Student Disability Services website. 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
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 for more information.

Plagiarism
Plagiarism is a serious topic covered in ASU's Academic Integrity policy 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.
**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 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 Boone, J.D. You may submit reports in the following manner:
Online: www.angelo.edu/incident-form
Face to face: Mayer Administration Building, Room 210
Phone: 325-942-2022
Email: michelle.boone@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.

**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 Outcomes**

Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)

Learning to apply course material (to improve thinking, problem solving, and decisions)

Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

**End of Syllabus**

1. [https://www.angelo.edu/student-handbook/](https://www.angelo.edu/student-handbook/)
2. [https://www.angelo.edu/catalogs/](https://www.angelo.edu/catalogs/)
4. [https://www.angelo.edu/services/disability-services/](https://www.angelo.edu/services/disability-services/)
5. [https://www.angelo.edu/content/files/14197-op-1011-grading-procedures](https://www.angelo.edu/content/files/14197-op-1011-grading-procedures)
7. [https://www.angelo.edu/dept/writing_center/academic_honesty.php](https://www.angelo.edu/dept/writing_center/academic_honesty.php)
8. [https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of](https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of)