PT 7353
Musculoskeletal Examination & Management I
Fall 2021

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GUEST LECTURERS: Gina Karr, PT, CMTPT, Director of Adult Services at WTRC
Chris Lambaren, PT, DPT
Course Information

Course Description
This course provides the DPT entry-level physical therapist with the knowledge and skill sets to effectively manage patients/clients with musculoskeletal dysfunctions. Elements of patient management include examination, evaluation and diagnosis with special attention to differential diagnosis and screening strategies, identification of patient/client problems, prioritization of goals, treatment selection and provision including manual therapy techniques, therapeutic exercise and physical agents. Critical appraisal of musculoskeletal test characteristics, critical thinking, and evidence-based practice are emphasized.

Course Credits
3 Credits (1-6-0)

Contact Hours
Lecture: 16 Hours  
Lab: 96 Hours

Prerequisite and Co-requisite Courses
Successful completion of previous DPT coursework

Prerequisite Skills
Successful completion of previous DPT coursework

Program Outcomes
Upon completion of PT 7353 Musculoskeletal Examination & Management I, the student will be equipped for PT 7556 Musculoskeletal Examination & Management II

Student Learning Outcomes
**COURSE OBJECTIVES:** At the end of this course, the students will have demonstrated mastery of the subject by being able to:

1. Implement and internalize professional behaviors that are identified in the Professional Behavior Assessment Document, APTA’s Code of Ethics and Core Values. (7D1, 2, 3, 4, 5, 6, 7, 8)

2. Display respect and sensitivity to cultural and individual differences. (7D8)

3. Discuss the theoretical basis for the application of physical agents and manual therapy techniques to patients/clients with common musculoskeletal conditions. (7D5, 10)

4. Describe indications and contraindications for the application of physical agents and manual therapy, and therapeutic exercise techniques. (7D8, 10, 11, 16, 17, 18, 19)

5. Select the appropriate physical agents and manual therapy and therapeutic exercise techniques with emphasis on safety, effectiveness, and evidence-based practice. (7D1, 4, 5, 8, 10, 11, 27, 28)

6. Demonstrate the proper application of physical agents and manual therapy and
therapeutic exercise with regard to patient problems, patient preparation, safety, indications/contraindications, treatment parameters, and patient response. (7D27)

7. Assess response to treatments with physical agents and manual therapy and therapeutic exercises and recognize adverse patient responses. (7D1, 4, 5, 8, 11, 16, 19, 27, 28, 30, 31, 37)

8. Choose the most appropriate musculoskeletal imaging procedure according to patient presentation and current best evidence of diagnosis. (7D10, 16, 19, 20)

9. Interpret the relevance of abnormal image findings to clinical decision making. (7D16, 17, 18, 20)

10. Identify the appearance of normal musculoskeletal anatomy and common pathology on radiographs. (7D16, 17, 18, 20)

11. Define the signs and symptoms of adverse neurodynamics (7D19)

12. Duplicate neural tension tests and peripheral nerve provocation tests (7D19)

13. Demonstrate interventions for adverse neurodynamics (7D27)

14. Identify the purpose of a functional capacity evaluation, FCE. (7D17, 19)

15. Define key terms related to a functional capacity evaluation. (7D19)

16. Describe the components & strategies for a successful return to work post illness or injury (7D17, 23, 26, 27)

17. Employ pain assessment tools as part of a musculoskeletal examination (7D19)

18. Critically evaluate published studies related to topics in musculoskeletal physical therapy and integrate available evidence to determine the best management of musculoskeletal conditions. (7D 9, 10, 11)

19. Synthesize musculoskeletal examination data to make clinical judgments regarding musculoskeletal conditions. (7D 20-24)

20. Differentiate the need for further examination or consultation by a physical therapist or for referral to another health care professional. (7D11, 16, 20)

21. Determine a diagnosis and/or problem list that prioritizes and guides the management of the musculoskeletal condition. (7D10, 11, 21, 22)

22. Select patient or client prognoses based on evaluation of results of musculoskeletal examinations and medical and psychosocial information. (7D23, 26)

23. Establish goals and functional outcomes related to musculoskeletal problems that specify an appropriate time frame. (7D1, 4, 5, 6, 21, 23, 31)

24. Revise the plan of care in response to patient status and/or data collected
25. Design a motor function training program (balance, gait, motor control, movement retraining) as part of the plan of care. (7D27)

26. Determine the need for a balance assessment in a musculoskeletal population (7D19)

27. Administer balance tests and measures in a musculoskeletal population. (7D19)

28. Design a motor function training program (balance, gait, motor control, movement retraining) as required to contribute to the plan of care(7D27)

29. Differentiate between the signs and symptoms of central sensitization and nociplastic pain vs. nociceptive and acute pain.

30. Understand the neurophysiology and psychosocial aspects of central sensitization and nociplastic pain.

31. Perform an evaluation that is appropriate for a patient with central sensitization and/or nociplastic pain.

32. Design and implement an effective treatment plan for a patient with central sensitization and/or nociplastic pain.

Course Delivery
Lecture, facilitated discussion, laboratory demonstration and practice, problem-solving sessions, self-instructional materials, reading and written assignments, small group work, clinical simulations/feedback sessions, and practical examinations. Laboratory sessions require mandatory attendance.

There might be open laboratory sessions. They are for your benefit to work on your skill techniques and procedures with faculty available for guidance. They are unstructured in terms of assignments, as you know which skills, techniques and procedures you need to work on. Come prepared to utilize the time and faculty resources wisely. If you are disruptive, in terms of didactic class or laboratory material review during these open lab sessions, then you will be barred from additional open laboratory use.

ASU Department of Physical Therapy equipment sign out will be done following the procedures listed below:
• Check with the primary faculty who traditionally use the equipment for initial approval
• Check with the other faculty team members teaching the course to make sure they have not scheduled a use for the equipment while you desire to check out
• See the PT Department Secretary to sign out and sign in the equipment, stating the date of sign out, the piece of equipment and the anticipated date of return
• Inform the primary faculty member when the equipment is returned.

Required Texts and Materials
• Michael P Reimann, Orthopedic Clinical Examination, 1st ed.
• Donald A. Neumann, Kinesiology of the Musculoskeletal System Foundations for Rehabilitation, 3rd ed.
• Cameron M. Physical Agents in Rehabilitation: From Research to Practice. 4th ed.
• REQUIRED LAB CLOTHES: Shorts, T-shirt, patient gown (provided), sneakers, sport bra or full coverage brassiere (not see through, preferably of dark color). Clothing must be appropriate to expose the area being studied yet maintain modesty.

Recommended Texts and Materials
• Lynn N. McKinnis. Fundamentals of Musculoskeletal Imaging. 5th ed.

Technology Requirements
To successfully complete this course, students need to be able to access Blackboard, and have a laptop or tablet to take quizzes and exams in class.

Portions of this course may be online. 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 OS X 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

Topic Outline

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.

Virtual communication: Office hours and/or advising may be done with the assistance of the telephone, Collaborate, Skype, etc.

Grading

Evaluation and Grades
Course grades will be determined as indicated in the table below.
<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent/Points of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Modalities written exam</td>
<td>25%</td>
</tr>
<tr>
<td>#2 Final Written</td>
<td>25%</td>
</tr>
<tr>
<td>Mid-term skills check-off (modalities)</td>
<td>25% (must achieve mastery)</td>
</tr>
<tr>
<td>Final skills check-off</td>
<td>25% (must achieve mastery)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
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**Grading System**

- Written examinations may consist of multiple choice, true-false, matching, short answer, essay questions and patient case studies. The examinations will address knowledge, analysis and application of concepts. Each written examination may be cumulative including previously presented material in the curriculum. Students are expected to take all written examinations on the day they are scheduled. There will be no make-up written examinations.

- Criterion-referenced methods will be used for evaluation of the two check-offs. A mastery score of 80% is required on each check-off. If the student requires a retake and then they successfully pass, a score of 80% will be used to calculate the final grade. **Retake will be limited to one per check-off per course. Successfully achieving Mastery on each skill check-off is required to pass the course.** Students with below Mastery (80%) performance on the first check-off attempt will be subject to the program policy regarding academic probation as outlined in the Doctor of Physical Therapy (DPT) Program Student Handbook section IV K. Should mastery not be achieved after repeating the check-off, a “Fail” will be assigned for the course.

- The final course grade will be assigned based on the cumulative percentage of points earned throughout the course:
  
  - A = 90-100
  - B = 80-89
  - C = 70-79
  - F = 69 or less

  Students must score 80% or better in total (A or B grade) in order to meet mastery and receive credit for this course. Students who receive a failing course grade are subject to dismissal from the DPT program. Exceptions may be sought by petition of the Academic Committee of the Physical Therapy Program.

**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-reviewed journal articles, researching additional information and examples on the Internet, and discussing course material and clinical experiences with their peers.
Assignment and Activity Descriptions

*Please note: Rubrics for all assignments and activities are located at the end of this syllabus.

Assignment Submission

All assignments MUST be submitted through the Assignments link in 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 kendra.nicks@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.

POLICY ON LATE OR MISSED ASSIGNMENTS

Due dates and times for assignments are posted. Failure to submit your assignments on the assigned date will result in a zero for that assignment. No papers or postings will be accepted passed the assigned due date.

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
- Angelo State University DPT Student Handbook found on Blackboard in the DPT Program Contents

Student Responsibility and Attendance

ATTENDANCE/TARDINESS POLICY

Attendance and promptness to classes, meetings, and future work obligations are considered professional behaviors. As this department is preparing potential professionals in the area of physical therapy, it is part of our expectation that student presence and timeliness will be held in highest regard. Tardiness is a disruption to the instructor and fellow students. A student is considered tardy if he/she arrives for class after the instructor has begun class activities. Please see the following related to implications from excessive lateness or absences without a reasonable excuse:

a. First offense - verbal warning
b. Second offense - second verbal warning, initiation of Disciplinary Tracking Form.
c. Third offense - 1% off final course grade
d. 1% off final course grade for each additional unexcused tardy or absence

Per the student handbook, 2 or more occurrences combined or mixed will result in the initiation of a Disciplinary Tracking Form.
If the student is unable to attend class, it is the student’s responsibility to either call the PT office at 942-2545 or the office of the professor of the class directly. This notification should be made prior to commencement of said class.

Continued issues with tardiness/attendance across all courses will result in disciplinary probation and will be referred to the PT faculty for consideration of options, including program dismissal.

The PT faculty is not oblivious to doctor’s appointments and other potential hazards and emergencies in daily life. Simply taking responsibility to notify the office or the professor if issues arise is considered professional behavior. Please do not rely on a classmate or other form of notification, as these have proven unreliable in years past.

**ATTENDANCE AT ALL SCHEDULED EXAMINATIONS IS MANDATORY.** Any unexcused absence from an examination will automatically result in a score of ZERO for that examination. Any student absent from examinations due to illness or injury must have a written justification from their physician. Absence from an examination for any other reason must be excused before the time of the scheduled examination or brought about by a very serious circumstance. For excused absences only, make-up examinations must be taken no later than one week after the student returns to class. Extended absences must be approved by the Program Director of Physical Therapy.

**Technology**

It is an expectation of the program that technology be used in a way that supports learning and benefits you and your classmates. Students must silence cell phones and place them out of sight during class unless instructed to use them by the professor. Permission may be granted, at the instructor's discretion, to have a cell phone out during class. Students seeking permission to have cell phones out during class must do so prior to the start of class. Use of technology including but not limited to cell phone, tablet, and laptop in a manner that is not professional and beneficial in the learning environment will result in disciplinary action. Please see the following for implications related from inappropriate use of technology.

a. First offense - verbal warning
b. Second offense - second verbal warning, initiation of a Disciplinary Tracking Form.
c. Third offense - 1% off final course grade and convening of the Disciplinary Committee to decide upon further disciplinary action.
d. 1% off final course grade for each additional offense

**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.

**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.

Course Schedule

See under Topic Outline and separate posting in Blackboard.

Grading Rubrics

Below are the grading rubrics to be use for assignments:

Covid-19 Information

PT 7353 MSK Examine & Management I (Archer 210)

- Daily Entry into Archer College Building
  - Student completes self-screening questionnaire prior to arrival on campus
  - Temperature may be taken if fever suspected
- Lecture & Labs
During lecture, social distancing should be maintained by each student sitting at the end of the hi-lo table.

Facemask highly encouraged at all times in class

- For students or faculty at high risk - additional PPE is recommended

Hand sanitizer will be provided at various places in classroom

- Students should frequently apply sanitizer or wash hands for 20 seconds

Students will be paired for sitting at the beginning of the semester

- The pairing will be kept for the entirety of the semester to reduce exposure

Surfaces will be disinfected at the beginning, end of each class and when necessary

Only drinks with a sealed cap will be allowed

Eating will not be allowed during class times

Face to Face Office Hours

- Social distancing, facemasks, and surface disinfecting will be highly encouraged

  - If available, student and faculty conferences should be scheduled in the Archer Building's conference rooms for social distancing
  
  - If a conference room is unable, a virtual meeting is encouraged.

  - Last option is meeting the faculty's office

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.

Select the SLO’s you use

1. Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories) **Essential**
2. Developing knowledge and understanding of diverse perspectives, global awareness, or other cultures **Minor**
3. Learning to apply course material (to improve thinking, problem solving, and decisions) **Important**
4. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course **Essential**
5. Acquiring skills in working with others as a member of a team **Important**
6. Developing creative capacities (inventing, designing, writing, performing in art, music, drama, etc.) **Minor**
7. Gaining a broader understanding and appreciation of intellectual/cultural activity (music, science, literature, etc.) **Minor**
8. Developing skill in expressing oneself orally or in writing **Minor**
9. Learning how to find, evaluate, and use resources to explore a topic in depth **Minor**
10. Developing ethical reasoning and/or ethical decision making **Minor**
11. Learning to analyze and critically evaluate ideas, arguments, and points of view **Important**
12. Learning to apply knowledge and skills to benefit others or serve the public good **Essential**
13. Learning appropriate methods for collecting, analyzing, and interpreting numerical information **Minor**

End of Syllabus

1 https://www.angelo.edu/student-handbook/
2 https://www.angelo.edu/catalogs/
3 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
4 https://www.angelo.edu/services/disability-services/
5 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
6 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
7 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
Student: ______________________  Modality: ________________  Case #: __  Date: ___________

Student must perform at the level indicated by an * to meet mastery for this performance evaluation.

I. Answering questions: treatment goal and physiological mechanism
   *5 ____  Student completely answered the questions correctly.
   *4 ____  Student partially answered the questions correctly.
   3 ____  Student rarely answered the questions correctly.
   2 ____  Student completely answered the questions incorrectly.

II. Parameters selection and the justification
   *5 ____  The selected parameters are appropriate and completely make sense.
   *4 ____  The selected parameters are somewhat appropriate and partially make sense.
   3 ____  The selected parameters are not appropriate and rarely make sense.
   2 ____  The selected parameters are completely not appropriate and do not make any sense.

III. Communication and interaction: explaining and instructing to the patient
   *5 ____  Student provided clear and concise explanations and instructions effectively.
   *4 ____  Student provided somewhat unclear explanations and instructions.
   3 ____  Student provided mostly unclear explanations and instructions.
   2 ____  Student did not provide any correct explanations and instructions.

IV. Intervention procedures
   *5 ____  Student performed intervention procedures accurately.
   *4 ____  Student performed intervention procedures with few, or nonessential, errors.
   3 ____  Student performed intervention procedures with many errors or results in ineffective treatment.
   2 ____  Student failed to accurately perform appropriate intervention procedures.

V. Overall performance and skill
   *5 ____  Student demonstrated a well-prepared and confident skill to apply this modality.
   *4 ____  Student demonstrated a somewhat non-well-prepared but confident skill to apply this modality.
   3 ____  Student demonstrated a mostly non-well-prepared and unconfident skill to apply this modality.
   2 ____  Student failed to demonstrate the skill to apply this modality.

Comments
   Strengths of Performance:

   Areas of deficiency:

   Suggestions for improvement:

Total Score: ______/25  (Mastery: > 80%)  Examiner: _______________________________