



SUL ROSS STATE UNIVERSITY
Department of Kinesiology and Human Performance
Spring 2021

PE 4307 – Therapeutic Modalities
Instructor: Billy Ray Laxton, M.Ed., LAT ATC

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Office Hours: Tuesday & Thursday 9 am – 10:30 am by appointment

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Course Description:

This course is designed to provide both a theoretical and clinical basis for the use of therapeutic modalities in the rehabilitation setting, as well as impart knowledge pertaining to the physiological effects, indications, contraindications, and applications of therapeutic modalities and in the rehabilitation of all athletic injuries.

Purpose of Course:

The purpose of this course is to have an understanding of therapeutic modalities which enables a clinician to effectively choose the most effective treatment options based on the current research, clinical circumstances and patient preferences.

Required Text:

Therapeutic Modalities in Rehabilitation, 5th Edition; William Prentice; ISBN: 9781259861185

Student Objectives:

Pathology

1. Identify the normal acute and chronic physiological and pathological responses (e.g., inflammation, immune response, and healing process) of the human body to trauma, hypoxia, microbiologic agents, genetic derangements, nutritional deficiencies, chemicals, drugs, and aging affecting the musculoskeletal and other organ systems, and musculoskeletal system adaptations to disuse.
2. Describe the body's responses to physical exercise during common diseases, illnesses, and the injury.

Acute Care

3. Explain the application principles of rest, cold application, elevation, and compression in the treatment of acute injuries.
4. Describe the signs, symptoms, and pathology of acute inflammation.
5. Describe home care and self-treatment plans of acute injuries and illnesses.

Therapeutic Modalities

6. Describe the physiological and pathological processes of trauma, wound healing and tissue repair and their implications on the selection and application of therapeutic modalities used in a treatment and/or rehabilitation program.
7. Explain the principles of physics, including basic concepts associated with the electromagnetic and acoustic spectra (e.g., frequency, wavelength) associated with therapeutic modalities.
8. Explain the terminology, principles, basic concepts, and properties of electric currents as they relate to therapeutic modalities.
9. Describe contemporary pain-control theories.
10. Describe the role and function of the common pharmacological agents that are used in conjunction with therapeutic modalities
11. Explain the body's physiological responses during and following the application of therapeutic modalities.
12. Describe the electro-physics, physical properties, biophysics, patient preparation and modality set-up (parameters), indications, contraindications, and specific physiological effects associated with commonly used therapeutic modalities.
13. Identify appropriate therapeutic modalities for the treatment and rehabilitation of injuries and illness.
14. Describe the process/methods of assessing and reassessing the status of the patient using standard techniques and documentation strategies to determine appropriate treatment and rehabilitation and to evaluate readiness to return to the appropriate level of activity. This includes the ability to:
 - a. Describe and interpret appropriate measurement and assessment procedures as they relate to the selection and application of therapeutic modalities.
 - b. Interpret objective measurement results as a basis for developing individualized therapeutic modality application and set-up (parameters).
 - c. Interpret the results of injury assessment and determine an appropriate therapeutic modality program to return the patient to physical activity.
 - d. Determine the appropriate therapeutic modality program and appropriate therapeutic goals and objectives based on the initial assessment and frequent reassessments.
 - e. Determine the criteria for progression and return to activity based on the level of functional outcomes.

- f. Describe appropriate methods of assessing progress when using therapeutic modalities and interpret the results.
 - g. Interpret physician notes, postoperative notes, and physician prescriptions as they pertain to a treatment plan.
15. Describe appropriate medical documentation for recording progress in a therapeutic modality program.
 16. Identify manufacturer's, institutional, state, and federal standards for the operation and safe application of therapeutic modalities.
 17. Identify manufacturer's, institutional, state and federal guidelines for the inspection and maintenance of therapeutic modalities.
 18. Document treatment goals, expectations and treatment outcomes
 19. Document psychosocial factors that affect persistent pain perception (i.e., emotional state, locus of control, psychodynamic issues, sociocultural factors, and personal values and beliefs) and identify multidisciplinary approaches for managing patients with persistent pain.

Therapeutic Exercise

20. Describe indications, contraindications, theory and principles for incorporation and application of various contemporary therapeutic exercise equipment and techniques including manual therapies.

Professional Development

1. Describe and differentiate the types of quantitative research in therapeutic modalities
2. Interpret the current research in athletic training and other related medical and health areas and apply the results to the daily practice of athletic training.
3. Develop a research project for a therapeutic modality related topic.

Attendance

Attendance for class is mandatory

GRADING POLICIES/TESTING/ASSIGNMENTS/ATTENDANCE/EXPECTATIONS

Grade calculation	Grade	Grading Scale
Class attendance – 100/0	30 %	90 and Above A
Mid-Term Exam	25 %	79 to 89% B
Final Exam	25 %	69 to 79% C
Lab work	20 %	59 to 69% D
		59% and Below F
Total	100%	

No Late Assignments Will Be Accepted.

No Credit Will Be Given For Any Late Assignments.

Attendance Policy:

- If you are more than **10 minutes** late for class, you will be counted as “ABSENT”.
- Make-up work is permitted for excused absences ONLY and must be completed by the next class period.
- Your instructor must be notified in writing in advance of any requested “EXCUSED” absences.
- Notify instructor via email/phone in advance of any absences that may occur. If it is a death in the family an obituary must be given to the instructor upon return to class in order for the absence to be excused.
- If you miss class due to a sickness and you go to the doctor, a doctor’s note must be produced to the instructor within **48 hours** of the missed class. After 48 hours, the absence will remain unexcused.
- Being late to class you will receive 5 Attendance points and being absent you will receive 0 attendance points.

Excessive Absence Policy:

The instructors may, at their discretion, drop a student from a course when the student has a total of 9 absences. A student who is dropped from a course for excessive absences will be notified in writing by the Center for Enrollment Services after the drop has been approved by the Provost and Vice President for Academic and Student Affairs. Any student dropped for excessive absences will receive an “F” for the course.

Unannounced Quizzes:

Throughout the semester, there will be unannounced (“pop”) quizzes over material that has been previously covered. Dates of quizzes will not be known to students in advance; therefore, it is important that you keep up with assigned readings and material covered in class.

Course Requirements:

Classroom attendance is required. Appropriate dress and classroom decorum is expected. It is the responsibility of the student to notify me before, or immediately after the absence if it is to be excused. There will be mid-terms and a final given as well.

Accidents & Injuries

In the case of bodily or personal property damage, the Kinesiology Department will not be held responsible. The student must report any field experience related injury or illness to the Instructor immediately. Any expense incurred due to injury or illness will be the student’s responsibility.

Academic Integrity Statement

Academic integrity represents the choice to uphold ethical responsibility for one’s learning within the academic community, regardless of audience or situation.

Academic Honesty:

Students are expected to do their own work. Cheating in any form will be subject to disciplinary action that can result in dismissal from the class with a grade of F. This includes plagiarism.

All of the following are considered plagiarism: (taken from: <http://www.plagiarism.org/>)

- turning in someone else's work as your own
- copying words or ideas from someone else without giving credit
- failing to put a quotation in quotation marks
- giving incorrect information about the source of a quotation
- changing words but copying the sentence structure of a source without giving credit

- copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not

Academic Civility Statement

Students are expected to interact with professors and peers in a respectful manner that enhances the learning environment. Professors may require a student who deviates from this expectation to leave the face-to-face (or virtual) classroom learning environment for that particular class session (and potentially subsequent class sessions) for a specific amount of time. In addition, the professor might consider the university disciplinary process (for Academic Affairs/Student Life) for egregious or continued disruptive behavior.

Academic Affairs Service Statement

Sul Ross faculty, staff, and students are expected to model responsible citizenship through service activities that promote personal and academic growth while enhancing the university, local, regional, national, and global communities. These activities will foster a culture of academic/public engagement that contributes to the achievement of the university's mission and core values.

Academic Excellence Statement

Sul Ross holds high expectations for students to assume responsibility for their own individual learning. Students are also expected to achieve academic excellence by:

- Honoring the core values of Sul Ross.
- Upholding high standards of habit and behavior.
- Maintaining excellence through class attendance and punctuality.
- Preparing for active participation in all learning experiences.
- Putting forth their best individual effort.
- Continually improving as independent learners.
- Engaging in extracurricular opportunities that encourage personal and academic growth.
- Reflecting critically upon feedback and applying these lessons to meet future challenges.

SRSU Library Info

The Bryan Wildenthal Memorial Library in Alpine. Offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu. Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

Disability Statement

SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Alpine students seeking accessibility/accommodations services must contact Mary Schwartze Grisham, M.Ed., LPC, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email mschwartz@sulross.edu Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

Calendar Course Outline:

The outline tentative and be subject to change. If a change is made you will be informed.

Week	T/TH	Subjects
Week 1	11-Jan & 1/13	Class introduction
Week 2	18-Jan & 1/20	Stages of healing/Basic Science
Week 3	25-Jan & 1/27	Manage pain
Week 4	2/1 & 2/3	Heat and cold
Week 5	2/8 & 2/10	US
Week 6	2/15 & 2/17	Diathermy
Week 7	2/22 & 2/24	EMS
Week 8	3/1 & 3/3 Midterm	Iontophoresis
Week 9	3/7 thru 3/11 No Class	Spring Break
Week 10	3/15 & 3/17	Massage
Week 11	3/22 & 3/24	Compression
Week 12	3/29 & 3/31	traction
Week 13	4/5 & 4/7	Biofeedback
Week 14	4/12 & 4/14	Lasers
Week 15	4/19 & 4/21	Clinical considerations
Week 16	4/26 & 4/29	Review
Finals		Final Exam:



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