Therapeutic Modalities
KIN 4345
Instructor: Sherry Ann Miller, ATC, LAT
Term: Fall 2020
Office: Center of Human Performance (CHP) 104; 942-2173(Kinesiology)/486-6171(Direct)
Course Days: Monday, Wednesday, & Friday: 11 AM to 11:50 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
Required Textbook:
Therapeutic Modalities: The Art and Science, 3rd ed., Knight, Jutte, & Draper, Lippincott Williams & Wilkins, 2021
Principles of Pharmacology for Athletic Trainers, 3rd ed., Houglum, Harrelson & Seefeldt, SLACK, Inc., 2016. {You may purchase the e-book and/or a used copy from where ever you find to be the least expensive site}.
Course Description: This course is designed to study theories, applications and methods of various modalities consisting of: cryotherapy, thermotherapy, electrotherapy, acoustic therapy, compression, traction, and massage in addition to therapeutic medications used in sports medicine.
Course Objectives: Upon completion of this course the student will be able to:
1. Describe the physiological events associated with the different phases of the healing process and specific modalities for effective use during each phase with a rationale for their use.
2. Describe pain by definition and classification along with information about painful stimuli.
3. Describe characteristics of sensory receptors and neurophysiological mechanisms for pain control by the use of therapeutic modalities.
4. Describe the principles of electricity and the characteristics of currents.
5. Discuss principles relating to the electromagnetic and acoustic spectra.
6. Describe the parameters and clinical set-up for various therapeutic modalities.
7. Describe the physiological responses and clinical applications of electrical stimulation, iontophoresis, biofeedback, diathermy, infrared modalities, ultrasound, spinal traction, intermittent compression, and massage.
8. Describe the basic physics relating to therapeutic modalities.
9. Describe the use of therapeutic modalities for reduction of acute/chronic inflammation, muscle re-education, muscle pump contraction, retardation of atrophy, muscle strengthening, increasing range of motion, and reducing edema/swelling.
10. Describe the indications and contraindication of electrical stimulation, iontophoresis, biofeedback, diathermy, infrared modalities, ultrasound, spinal traction, intermittent compression, and massage.
11. Relate the findings of a physical examination to determine the appropriate course of treatment.

12. Demonstrate the ability to apply therapeutic modalities for cryotherapy, thermotherapy, electrotherapy, ultrasound, traction, intermittent compression, and massage.

13. Demonstrate the ability to set-up and apply the following types of electrical stimulation:
   - Monophasic stimulator (high volt stimulation)
   - Biphasic stimulator (Transcutaneous Electrical Nerve Stimulation – TENS, Neuromuscular Electrical Stimulation – NMES)
   - Direct current (iontophoresis)
   - Alternating current (interferential NMES)
   - Multi-functional electrical stimulation devices

14. Demonstrate the ability to select the appropriate parameters for, and then prepare and apply with cryotherapy, thermotherapy, electrotherapy, and ultrasound.

15. Demonstrate the ability to select the appropriate parameter for, and then prepare and apply intermittent compression to the upper and lower extremities.

16. Demonstrate the ability to prepare and apply a massage treatment using various massage strokes.

17. Recognize concepts related to non-preservation, prescription, and classified pharmaceuticals, to include tracking, documentation, storage, disposal, dispensing, and transportation issues.

18. Identify terminology and abbreviations as they relate to pharmaceutical preparations.

19. Use the PDR to search for information on commonly prescribed medications.

20. Identify the indications, contraindications, precautions, adverse reactions, co-interactions of appropriate drug use. This will include cortical and anabolic steroids, androgenics, anti-inflammatory, analgesics, bronchodilators, antibiotics, gastrointestinal medications, anaphylaxis medications, beta-blockers, hypertensives, topical ointments, and regulated and non-regulated performance enhancing substances.

21. Appreciate the role of prevailing laws, regulations, and appropriate regulatory agencies and associations as to the use, storage, transportation, approval, recall, and dispensation of pharmaceuticals.

Course Delivery:
This is hybrid course offering. This course has an online component in addition to a “face to face” 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 OS X 10.8 or later
- The latest version of Google Chrome
- 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)
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](#).

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](#). 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 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 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
- Angelo State University Catalog

Student Responsibility and Attendance:
This course is a hybrid 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.

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

1. Professional behavior and language are required. Profanity is not acceptable as professional language.
2. 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.

3. It is your responsibility to report missing grades on Blackboard immediately. Waiting until the end of the semester is not a plausible excuse.

4. Punctuality is a must.

5. Please be dressed appropriately for class especially on days we do activities.

6. 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.

7. 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. Be prepared to show “wellness badge” before and/or upon entering the building and/or classrooms.
3. Face coverings and physically distancing while in class
4. On days you will be engaged in “hands on activities”, you will be provided a pair of gloves to perform such activities.
5. 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:**
First option:
• Download and use the Shannon on Demand app.
• Create an account
• Use payment code SHANNONCOVID19 which will cover your cost if it is COVID related.
• Talk to one of the physicians available
• Carefully follow the physician’s instructions

Second option:
• 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

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.

Required Use of Masks/Facial Coverings by Students in Class at Angelo State University
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.

Course Requirements:

Written Exams:
1. Each student must successfully pass 4 examinations for 500 points total.
2. Each exam will be in the format of: multiple choice, true/false, matching, fill in the blank, short answer, and essay. Each examination will consist of a different format.
3. The final written examination is worth 200 points and is comprehensive.

Assignments:
4. Case studies due for each chapter assigned. Total point value is 160. Each is worth 20 points for a total of eight (8) studies total.
5. Article critiques: 11 critiques at 20 points each – 220 points total

Lab Practical:
6. Each student must successfully pass 2 practical examinations.
7. Each practical exam will be in the format of: oral short answers, hands on demonstrations, and mock scenarios.
8. Each practical exam is worth 100 points.
Laboratories:
9. Each student must successfully complete each lab activity. Each laboratory activity \{11\} is worth 20 points for a total of 220 points. Laboratory assignments and examinations must be successfully completed, as your total points earned in lab will be combined with lecture for a complete modalities grade.

10. Missed lab activities must be made up on the students’ own time.

11. Regular course attendance correlates with success. Therefore, no make-up exams and/or quizzes will be allowed unless prior arrangements have been made with the instructor.

Grading Procedures: A grading range will be used based off point totals for lecture and lab combined. The grading range is 1500 points. This is not percentage points, and your grade will not be “rounded up”.

- **A** = 1350 – 1500
- **B** = 1200 – 1349.999
- **C** = 1050 – 1199.999
- **D** = 900 – 1049.999
- **F** = 750 – 899.999

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 in which will jeopardize your grade and date of graduation.

12. Clinical Hours – 100 points
13. Clinical Skill Assessments: 7 @ 25 points each. 175 points total. It is required that you pass 80% of the skill assessment in order to progress to the next assessment.

14. 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.

Clinical Hours: Clinical Skill Assessment:
- 240-300 hours 100 points
- 165-239 hours 70 points
- 105-164 hours 40 points
- 45-104 hours 10 points
- 0-44 hours 0 points
- 90-100% of assessment correct 25 points
- 80-89.99% of assessment correct 20 points
- 70-79.99% of assessment correct 15 points
- 60-69.99% of assessment correct 10 points
- 59.99% and below 0 points

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 1775 points. This is not percentage points, and your grade will not be “rounded up”.

- **A** = 1597.5 – 1775
- **B** = 1420 – 1597.499
- **C** = 1242.5 – 1419.999
- **D** = 1065 – 1242.499
- **F** = 887.5 – 1064.999

All athletic training specialization students must pass the course with a “C” or better in order to progress to the next course.
### Daily Lecture and Lab Schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic/In Class</th>
<th>Assignments/Exams/Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 17</td>
<td>First Day of Class&lt;br&gt;• Orientation of Class&lt;br&gt;• Syllabus&lt;br&gt;• Course Expectations</td>
<td>Due by 11:30 PM&lt;br&gt;• <strong>Review</strong> Syllabus and mark on Blackboard</td>
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<tr>
<td>August 19</td>
<td><strong>Read</strong> Knight &amp; Draper: Ch. 1: Therapeutic Modalities: What They Are and Why They Are Used&lt;br&gt;Review PPTs for Ch. 1</td>
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<tr>
<td>August 21</td>
<td><strong>Read</strong> Knight and Draper: Ch. 3: General Application Procedures, and <strong>read</strong> Ch. 4: Injury Record Keeping;&lt;br&gt;<strong>Review</strong> PPTs for Ch. 3 and Ch. 4&lt;br&gt;<strong>Read</strong> Lab 1 before class; <strong>Perform</strong> Lab 1 in class</td>
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<tr>
<td>August 24</td>
<td><strong>Read</strong> Knight and Draper: Ch. 5: Tissue Response to Injury: Inflammation, Swelling, and Edema&lt;br&gt;<strong>Review</strong> PPTs for Ch. 5</td>
<td>Due by 11:30 PM&lt;br&gt;• <strong>Complete and Submit</strong> Lab 1</td>
</tr>
<tr>
<td>August 26</td>
<td><strong>Read</strong> Knight and Draper: Ch. 7: The Healing Process&lt;br&gt;<strong>Review</strong> PPTs for Ch. 7&lt;br&gt;<strong>Read</strong> Starkey: Ch. 1: The Injury Response Process&lt;br&gt;<strong>Review</strong> PPTs for Ch. 1</td>
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<tr>
<td>August 28</td>
<td><strong>Read</strong> Knight and Draper: Ch. 6: Immediate Care of Acute Orthopedic Injuries&lt;br&gt;<strong>Review</strong> PPTs for Ch. 6</td>
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<tr>
<td>August 31</td>
<td><strong>Read</strong> Starkey: Ch. 2: The Physiology and Psychology of Pain&lt;br&gt;<strong>Review</strong> PPTs for Ch. 2</td>
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<tr>
<td>September 2</td>
<td><strong>Read</strong> Knight and Draper: Ch. 8: Understanding Pain and Its Relationship to Injury&lt;br&gt;<strong>Review</strong> PPTs for Ch. 8</td>
<td>Due by 11:30 PM&lt;br&gt;• <strong>Complete &amp; Submit</strong> Article Critique (AC) 1</td>
</tr>
<tr>
<td>September 4</td>
<td><strong>Read</strong> Knight and Draper: Ch. 9: Relieving Orthopedic Injury Pain;&lt;br&gt;<strong>Review</strong> PPTs for Ch. 9&lt;br&gt;<strong>Read</strong> Lab 2 before class; <strong>Perform</strong> Lab 2 in Athletic Training Facility</td>
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<td>September 7</td>
<td><strong>University Holiday</strong></td>
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<tr>
<td>September 9</td>
<td><strong>Read</strong> Knight and Draper: Ch. 10: Principles of Heat for Thermotherapy&lt;br&gt;<strong>Review</strong> PPTs for Ch. 10&lt;br&gt;<strong>Read</strong> Lab 5 before class</td>
<td>Due by 11:30 PM&lt;br&gt;• <strong>Written Exam One</strong>&lt;br&gt;❖ Online Only&lt;br&gt;❖ Respondus LockDown Browser &amp; Monitor&lt;br&gt;❖ 1 attempt&lt;br&gt;❖ Covers Chs. (K&amp;D) 1, 3, 4, 5, 6, 7, 8, 9, (Starkey) Chapters 1 &amp; 2</td>
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<tr>
<td>Date</td>
<td>Activity</td>
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| September 11 | **Read** Knight and Draper: Ch. 11: Superficial Thermotherapy Application  
Review PPTs for Ch. 11  
**Read** Lab 5 before class; **Perform** Lab 5 in Athletic Training Facility | Due by 11:30 PM  
• **Complete & Submit** Lab 2                                      |
| September 14 | **Perform** Lab 5 in Athletic Training Facility                                                            | Due by 11:30 PM  
• **Complete & Submit** Case study  
  – Thermotherapy                                                     |
| September 16 | **Read** Knight & Draper: Ch. 12: Cryotherapy Beyond Immediate Care  
Review PPTs for Ch. 12  
**Read** Lab 4 before class                                           | Due by 11:30 PM  
• **Complete & Submit** Lab 5                                       |
| September 18 | **Read** Knight and Draper: Ch. 13: Application Procedures: Post-Immediate Care;  
Review PPTs for Ch. 13  
**Read** Lab 4 before class; **Perform** Lab 4 in class              | Due by 11:30 PM  
• **Complete & Submit** AC 3                                        |
| September 21 | **Perform** Lab 4 in class                                                                                    | Due by 11:30 PM  
• **Complete & Submit** Case study  
  – Cryotherapy                                                      |
| September 23 | **Read** Knight and Draper: Ch. 14: Therapeutic Ultrasound.  
Review PPTs for Ch. 14  
**Read** Starkey: Ch. 8: Clinical Application of Therapeutic Ultrasound  
Review PPTs for Ch. 8                                                 | Due by 11:30 PM  
• **Complete & Submit** Lab 4                                       |
| September 25 | **Read** Lab 6 before class; **Perform** Lab 6 in class                                                      | Due by 11:30 PM  
• **Complete & Submit** AC 4  
• **Complete & Submit** Case study  
  – Ultrasound                                                       |
| September 28 | **Read** Knight and Draper: Ch. 16: Principles of Electricity for Electrotherapy  
Review PPTs for Ch. 16  
**Read** Starkey: Ch. 12: Electrical Stimulation Techniques  
Review PPTs for Ch. 12                                                 | Due by 11:30 PM  
• **Complete & Submit** AC 5  
• **Written Exam Two**  
  ❖ Online only  
  ❖ Respondus LockDown Browser & Monitor  
  ❖ 1 attempt  
  ❖ Covers (K&D) Ch. 10, 11, 12, 13, & 14; Starkey Chapter 8  
  ❖ Opens September 28 at 7 AM  
  ❖ Closes October 2 at 11:30 PM |
<table>
<thead>
<tr>
<th>Date</th>
<th>Task</th>
<th>Due by Time</th>
<th>Notes</th>
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| September 30 | **Review** Knight and Draper: Ch. 16: Principles of Electricity for Electrotherapy  
**Review** Starkey: Ch. 12: Electrical Stimulation Techniques | 11:30 PM    | Under the “Examinations” tab |
| October 2    | **Read** Knight and Draper: Ch. 17; Application Procedures: Electrotherapy  
**Review** PPTs for Ch. 17  
**Read** Starkey: Ch. 13: Clinical Application of Electrical Agents  
**Review** PPTs for Ch. 13  
**Read** Lab 8 before class; **Perform** Lab 8 in the Athletic Training Facility | 11:30 PM    | Complete & Submit Lab 6  
Complete & Submit Case study – electrical stimulation |
| October 5    | **Review** Knight and Draper: Ch. 17: Application Procedures: Electrotherapy  
**Review** Starkey: Ch. 13: Clinical Application of Electrical Agents  
**Perform** Lab 8 in Athletic Training Facility | 11:30 PM    | Complete & Submit AC 6 |
| October 7    | **Read** Lab 9 before class; **Perform** Lab 9 in Athletic Training Facility | 11:30 PM    | Complete & Submit Lab 8 |
| October 9    | **Perform** Lab 9 in Athletic Training Facility  
**Read** Lab 10 before class; **Perform** Lab 10 in Athletic Training Facility | 11:30 PM    | Complete & Submit AC 8 |
| October 12   | **Read** Knight and Draper: Ch. 18: Therapeutic Massage  
**Review** PPTs for Ch. 18 | 11:30 PM    | Complete & Submit Case study  
Iontophoresis  
Complete & Submit Lab 9 |
| October 14   | **Read** Lab 11 before class; **Perform** Lab 11 in class | 11:30 PM    | Complete & Submit Lab 10 |
| October 16   | **Lab – midterm practical**; In Athletic Training Facility | 11:30 PM    | Complete & Submit Case study  
Massage; |
| October 19   | **Lab – midterm practical**; In Athletic Training Facility | 11:30 PM    | Complete & Submit AC 10  
Complete & Submit Lab 11 |
| October 21   | **Read** Starkey: Ch. 16: Cervical & Lumbar Traction  
**Review** PPTs for Ch. 16  
**Read** Knight & Draper: Ch. 19: Spinal Traction  
**Review** PPTs for Ch. 19 | 11:30 PM    | |
| October 23   | **Read** Lab 12 before class; **Perform** Lab 12 in class | 11:30 PM    | Complete & Submit AC 9 |
| October 26   | **Read** Starkey: Ch. 14: Intermittent Compression  
**Review** PPTs for Ch. 14 | 11:30 PM    | Complete & Submit Case study  
Traction  
Complete & Submit Lab 12 |
<p>| October 28   | <strong>Read</strong> Lab 13 before class; <strong>Perform</strong> Lab 13 in Athletic Training Facility | 11:30 PM    | Complete &amp; Submit AC 11 |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
</table>
| October 30 | **Read** Chapter 1: Introduction to Pharmacology  
**Review** PPTs for Ch. 1                        | Due by 11:30 PM  
**Complete & Submit** Case study  
– Intermittent Compression |
| November 2 | **Read** Chapter 2: Pharmacokinetic Principles: Processes that Affect Drugs from Entry to Exit  
**Review** PPTs for Ch. 2                                    |                                                                         |
| November 4 | **Read** Chapter 3: Pharmacodynamic Principles: Mechanism of Drug Action and Therapeutic Considerations  
**Review** PPTs for Ch. 3                                    |                                                                         |
| November 6 | **Read** Chapter 5: Drugs for Treating Infections  
**Review** PPTs for Ch. 5                                    |                                                                         |
| November 9 | **Read** Chapter 6: Drugs for Treating Inflammation  
**Review** PPTs for Ch. 6                                    |                                                                         |
| November 11| **Read** Chapter 7: Drugs for Treating Pain  
**Review** PPTs for Ch. 7  
**Read** Chapter 8: Drugs for Relaxing Skeletal Muscle  
**Review** PPTs for Ch. 8                                    |                                                                         |
| November 13| **Read** Chapter 9: Drugs for Treating Asthma  
**Review** PPTs for Ch. 9                                    |                                                                         |
| November 16| **Read** Chapter 16: Performance Enhancing Drugs  
**Review** PPTs for Ch. 16                                    | Due by 11:30 PM  
**Written Exam Four** (Pharmacology)  
❖ Online only  
❖ Respondus LockDown Browser & Monitor  
❖ 1 attempt  
❖ Covers Chs. 1, 2, 3, 5, 6, 7, 8, 9, & 16  
❖ Opens November 13 at 7 AM  
❖ Closes November 18 at 11:30 PM |
<p>| November 18| <strong>Lab</strong> – Final practical                                                                           |                                                                         |
| November 20| <strong>Lab</strong> – Final practical                                                                           |                                                                         |</p>
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<th>November 23</th>
<th>FINAL EXAM</th>
<th>Due by 11:30 PM</th>
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Case Study:

- Create an injury/case/situation whose best treatment option encompasses that modality topic of the day.
- Write the scenario out including athlete’s subjective, objective, and assessment. The plan would be the desired treatment.
- It has to be written in such a way that your chosen modality would be the only treatment of choice.
- You need to include which modality you wrote your case for and the rational for using that modality.
- Include a cover page with your name, date, and which case study is being submitted. A reference page with at least 2 references. APA format
- 8 case studies at 20 points each. Total of 160 points

Example:

Subjective:
A patient comes to the sidelines during volleyball practice to report an immediate injury. The patient stated that she dove for a ball and hit the court with her thumb. She rates her pain as a 6/10 on a 0-10 pain scale. She denies that she has injured this thumb in the past.

Objective:
Pain 6/10 on 0-10 pain scale
Obvious swelling and ecchymosis
PPT over the DIP of the thumb
AROM is limited due to swelling and pain.
PROM is limited due to swelling
Positive (+) percussion test to the distal phalanx

Assessment:
Possible distal phalanx fracture/boney contusion

Plan:
Methods of treatment most appropriate for this athlete:

- Cold Whirlpool for comfort and to affect the whole hand

Why:

- For vasoconstriction immediately following an acute injury
- To decrease pain and muscle spasm
- To decrease the rate of secondary cell death due to hypoxia and the production of cellular waste

Parameters:

- Time: 10-20 minutes is the guideline; in this case, 10-15 minutes due to the superficial nature of the injury and the hand.
- Skin Temp: 57 degrees for optimal decrease in local blood flow, 58 degrees for analgesia
Physiological effects of the chosen modality on pain:

- Local decrease in free nerve ending sensitivity
- Increase in the threshold for nerve firing
- Slowing of synaptic activity
- Disruption of the pain-spasm-pain cycle through analgesia
Article Critiques:

There are 11 topics that you will read and critique an article pertaining to that topic. The critiques are worth 20 points each.

1. Find a referenced journal article (e.g.: Journal of Athletic Training) pertaining to the topic to be covered

2. READ the entire ARTICLE, not just the abstract

3. Summarize the article in 1-3 paragraphs at least 400 words minimal; then reflect on the article. What did you learn? What made sense? What did you not understand or was confusing? What did you agree or disagree with? How will you incorporate the information into practice?

4. Turn in at least 1 full page, typed.

5. Provide a cover sheet with your name and topic of article critique.

6. At top of page of your article critique in APA format list the article citation.

7. The journal article must be from 2002 to present.

Example of Citation:


Topics:

Article 1: Pain Perception

Article 2: Thermotherapy

Article 3: Cryotherapy

Article 4: Ultrasound

Article 5: Phonophoresis

Article 6: Electrical stimulation

Article 7: Electrical stimulation (in combination with ultrasound)

Article 8: Iontophoresis

Article 9: Spinal traction

Article 10: Massage

Article 11: Intermittent compression