COURSE DESCRIPTION: Clinical Anatomy is a course that deals with the structure of the human body and its related function. This course is designed to provide the student with an opportunity to learn anatomical structures and the relationships of these structures to each other. This course will emphasize structures observable without the aid of a microscope contained in the upper and lower extremities, trunk, spine, head, and neck. Clinical correlations relating the anatomical structures discussed to the practice of physical therapy will be presented. Lectures are designed to present basic information and will serve to orient, guide, and stimulate students toward supervised dissection of the human body. This course is heavily weighted toward laboratory dissection and identification and palpation of anatomical landmarks.

COURSE COORDINATORS:

- Shelly D. Weise, Ed.D, PT
  Professor & Chair
  Office: HHS 224E
  (325) 486-6474
  Shelly.weise@angelo.edu

- Lee T. Atkins, PhD, PT
  Assistant Professor
  Office: HHS 224S
  (325) 486-6865
  Lee.atkins@angelo.edu

- Floyd Huang, Ph.D, PT
  Associate Professor
  Office: HHS 224A
  (325) 942-2627
  Floyd.huang@angelo.edu

ALL OFFICE HOURS: By appointment

COURSE LOCATION:

- Lecture: Science III Rm 213
- Palpation Lab: Science III Rm 213
- Dissection Lab: Science III Rm 212F

MEETING HOURS:

- M-W-F Lecture: 1:00 pm – 3:00 pm
- M-W-F Lab: 8:00 am – 12:00 pm

CLOCK HOURS: 72 Lecture Hrs
144 Laboratory Hrs

CLASS ATTENDANCE: You cannot adequately learn anatomy from reading of the textbook alone. Anatomy is an active participation course, and attendance in class and the laboratories is essential in this process. The course will consist of three areas, lecture, laboratory, and examinations. Attendance policies for each of the three areas are listed below.

LECTURES: Lectures begin promptly at the hour designated on your schedule. Out of courtesy to the lecturer and your fellow students, you are expected to be in the classroom at the prescribed time. Each student is responsible for all information presented in each lecture including dissection procedural changes, schedule changes, and special announcements.

LABORATORY: Laboratory work will be divided into two categories, palpation and dissection [wet lab]. Palpation labs will allow students the opportunity to learn and practice locating and palpating soft tissue and bony landmarks on the human body.
The cadaver laboratory [wet lab] will provide you with the opportunity to gain a true, three-dimensional perspective of the structures contained within the human body, their relationships to each other, and their function.

The emphasis in laboratory sessions will be on the musculoskeletal, vascular, and nervous system structures. There is a lot to learn, and no shortcuts to learning. You must keep up with the material on a daily basis, and dedicate the time necessary to learning human anatomy. Human anatomy is a fun and exciting topic. Your working knowledge of anatomy will be the basis for your successful career as a physical therapist. You will quickly realize that many other courses throughout the curriculum will require the retention and application of your anatomical knowledge. You are expected to be present at each laboratory session and complete the assigned dissections.

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

1. Understand anatomical terminology and primary features of the human body as demonstrated by:
   1.1 Define anatomical terms
   1.2 Communicate proper use of terms verbally and in writing
   1.3 Define or demonstrate the anatomical position of the human body, and explain the clinical importance of a working knowledge of this standard position
   1.4 Define or identify the anatomical planes and axes of the human body
   1.5 Grossly diagram the basic anatomy of all of the major body systems
   1.6 Discuss the structural and/or functional relationships of a structure to all neighboring structures.

   Standard 7A; 7C

2. Develop a three dimensional image/concept of the skeletal and muscular systems of the body; with particular attention to the limbs, trunk, thorax, abdomen/pelvis, and head/neck as demonstrated by:
   2.1 Identify and applicable palpation of the bones of the body including clinically relevant bony prominences and landmarks
   2.2 Describe or identify the borders of anatomical landmarks and the structures which pass through them
   2.3 Name, describe or identify the origins, insertions, nerve innervation and primary blood supply to all muscles associated with the upper and lower extremities
   2.4 Describe the primary and secondary functions of each of these muscles
   2.5 Identify all structures contained in the upper and lower extremities, trunk, thorax, abdomen/pelvis, and head/neck on the dissected cadavers, models, skeletons, or radiographs.
   2.6 Palpate clinically applicable anatomical soft tissue landmarks and structures.

   Standard 7A; 7C

3. Demonstrate detailed knowledge of the individual joints of the body as demonstrated by:
   3.1 Discuss the structural and functional characteristics of the peripheral joints of the body as they relate to stability and mobility
   3.2 Differentiate between a fibrous, cartilaginous and synovial joint and give examples of each type of joint
   3.3 Determine the function of ligaments and knowledge of their specific attachments.
   3.4 Palpate clinically applicable joint structures

   Standard 7A; 7C

4. Develop a three dimensional image/concept of the nervous system as demonstrated by:
   4.1 Describe, identify or draw the arrangement of neural pathways from the spinal cord to the periphery including sensory, motor and autonomic pathways
   4.2 Identify the gross structures and vasculature of the brain, brainstem, and spinal cord.
   4.3 Identify the meningeal layers of the central nervous system
   4.4 Identify the individual cranial and peripheral nerves
   4.5 Diagram or identify the brachial, lumbar and sacral nerve plexus
   4.6 Discuss the relationship between individual and groups of nerves to their surrounding structures.
4.7 Describe the effect of peripheral nerve injuries in relation to structures and movements affected, and list specific deformities associated with each listed nerve injury.
4.8 Compare and contrast the cutaneous innervation pattern of spinal nerves with the sensory innervation patterns of peripheral nerves.
4.9 Palpate clinically applicable structures/landmarks within the nervous system.

Standard 7A; 7C

5. Develop a three-dimensional image/concept of the cardiovascular and pulmonary systems as demonstrated by:
   5.1 Identify surface projections of intra-thoracic structures
   5.2 Understand the location of thoracic structures within the pleural and mediastinal cavities
   5.3 Identify and describe the external and internal structures of the heart
   5.4 Identify the gross and segmental anatomy of the lungs
   5.5 Identify and/or diagram the vascular system to, through and from the heart
   5.6 Identify the major named vessels to the trunk and extremities.
   5.7 Identify and/or palpate major lymphatic structures.
   5.8 Palpate clinically applicable structures/landmarks within the cardiovascular and pulmonary system.

Standard 7A; 7C

6. Understand cross-sectional anatomy of selected body regions as demonstrated by:
   6.1 Identify and/or draw the contents of each limb compartment in any anatomical plane
   6.2 Integrate regional anatomy of the limbs, trunk, thorax, abdomen/pelvis, and head/neck to serial cross sections
   6.3 Relate structures seen on cross sections to whole body parts.

Standard 7A; 7C

7. Describe clinical conditions discussed in the text or in lectures in relation to structures and movements affected, and list specific functional limitations associated with each clinical condition.

Standard 7A; 7C

8. Develop professional skills in the classroom and laboratory.
   8.1 Acquire new skills in the art of dissecting and using dissection instruments through repeated and supervised dissection in the lab
   8.2 Develop the same sense of respect for the donor as you would a patient in your clinic
   8.3 Work effectively with group and class members in lecture and laboratory settings
   8.4 Gain confidence by identifying anatomical structures and landmarks
   8.5 Acquire an appreciation for individual variability in anatomical structures

Standard 7D4; Standard 7D5

9. Develop basic understanding of the diagnostic imaging techniques used in medical practice.
   9.1 Describe the advantages and disadvantages of the various diagnostic imaging modalities utilized in the practice of physical therapy.
   9.2 List the common imaging modality and views requested for examination of the musculoskeletal, nervous and cardiopulmonary systems.
   9.3 Identify key bony landmarks and anatomical structures on diagnostic images.
   9.4 Identify both normal and abnormal findings on diagnostic images associated with pathologies presented in class.

Standard 7D4; Standard 7D5

TEACHING METHODS/PHILOSOPHY: Knowledge of human anatomy is fundamental to the clinical practice of Physical Therapy, and is absolutely essential as the basis of our physical therapy education. The more successful we [faculty and students] are in teaching and helping each other learn anatomy early in the physical therapy curriculum, the more rewarding the rest of our physical therapy education will be, and the better we will be able to treat future patients. Through classroom lecture, discussions, presentations, and laboratory activities, we will do everything we can to create and support an environment conducive to our learning. Blackboard will be utilized to provide students with announcements and class materials in advance. We expect everyone to
put forth the effort required to be successful learners of anatomy. This requires that we all come to class each day prepared and willing to teach and learn.

**READING ASSIGNMENTS:** Reading assignments for the texts and the dissector are listed in the course schedule. You are responsible for the reading material before the beginning of class for each date. The faculty may provide additional reading assignments. **It is a waste of valuable time when students are trying to read the texts or the dissector for the first time while practicing palpations or when you are completing the dissections.**

**REQUIRED TEXTS:**

**REQUIRED SUPPLIES:**
For Dissection labs:
- Safety goggles [in stock at ASU Bookstore]
- Closed toe shoes
- Full-length lab coat
For Palpation labs:
- Baggy Running shorts and sleeveless T-shirt
- Full coverage brassiere or jogging bra that opens in the back required for females

**GRADING PROCEDURES:**
Three examinations will be given. Each exam will consist of both a written and a practical portion. The written portion will constitute 50% of the exam grade, and the practical portion will constitute 50% of the exam grade.
   - The practical portion will include a demonstration of the student’s palpation skills. Practical portion of the exam will be weighted as follows: 40% cadaver laboratory section; 10% palpation section.
   - All examinations will be comprehensive and will include material from previous lecture and lab sessions, assigned readings, and student presentations. The three examinations will count for **90%** of your course grade.

5% of your grade will be determined by quizzes. Quizzes may occur at any time [lecture or lab] and are not announced in advance. Quizzes are comprehensive and may include material from previous lecture and lab sessions, assigned readings, and student presentations.
The final 5% of your course grade will be determined by overall professional behaviors in classroom and laboratory, participation [classroom, dissection and palpation], and the completeness and neatness of your dissections. Students are not expected to be expert dissectors or experts in palpation, but you are required to be prepared for laboratory by wearing appropriate lab attire and to complete all assigned palpations and dissections. In addition, students should keep assigned areas neat, clean, and free of debris. All students will begin the course with 100 PROFESSIONAL BEHAVIOR points. Points will only be deducted if following verbal instructions from the faculty, the deficiencies or problems are not properly addressed or corrected.

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<td>EXAM I</td>
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<td>EXAM III</td>
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Course grades will be assigned based on the cumulative percentage of points earned during the course as follows:

- **A** = 100 – 90%
- **B** = 89 – 80%

*Students must score 80% or better in order to receive credit for this class.*

- **C** = 79 – 70% [no course credit]
- **F** < 70% [no course credit]

**SPECIAL ACCOMMODATIONS:**

Students with disabilities who request reasonable accommodations must meet with the Course Coordinators within the first week of classes. Reasonable accommodations will be provided as authorized by the Office of Student Affairs as long as course requirements are not compromised. Faculty will provide no accommodations without authorization from the Office of Student Affairs. It is the student’s responsibility to be a self-advocate when requesting accommodations.

**ACADEMIC HONESTY:**

Academic honesty policies and procedures are reinforced throughout all aspects of the professional program. Faculty and students should familiarize themselves with the Angelo State University Code of Student Conduct found in the ASU Student Handbook available on the ASU website (http://www.angelo.edu/student-handbook/). This document, in addition to the information listed below, will be utilized to identify and address academic dishonesty within the program. The Department of Physical Therapy bases student conduct on the APTA Code of Ethics, Guide for Professional Conduct and Standards of Practice (http://www.apta.org/), in addition to Professional Behaviors. Specifically, the Department of Physical Therapy aligns itself with Angelo State University procedures under the Code of Conduct located at http://www.angelo.edu/student-handbook/code-of-student-conduct/, and the Community Policies located at http://www.angelo.edu/student-handbook/community-policies/. Both of these documents are located in the Angelo State University Student Handbook http://www.angelo.edu/student-handbook/ and fall under the guidance of the Office of Student Affairs and Enrollment Management. Please see the Dept. of Physical Therapy Student Handbook for further explanation.

**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:

- **First offense** - verbal warning
- **Second offense** - second verbal warning, initiation of Disciplinary Tracking Form.
- **Third offense** - 1% off final course grade
- **Fourth offense** - 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.**

**Technology:** Cell phones need to be turned off upon entering the classroom. Personal e-mailing/messaging and internet surfing is not allowed during lecture or lab activities.

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.

**ACCIDENT/INCIDENT REPORTING:**

Any student involved in a safety incident on ASU property or at an ASU related educational activity (e.g. accidental needle stick, fall, etc.) must immediately notify the course coordinator, clinical instructor and/or department chair. If the incident occurs after hours, all incidents must be reported to the University Police at 942-2071. A student Accident/Incident Report must be completed no matter how insignificant the incident may appear. [See Appendix 15 of the Student Handbook for the form.]

**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 at www.angelo.edu/ADA. 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

When a student states he or she could meet the program's technical standards with accommodation(s), the Office of Student Affairs will confirm that the stated condition qualifies as a disability under applicable laws. If the condition qualifies as a disability, the University will determine if it agrees that the student can meet the technical standards with reasonable accommodation; this includes a review of whether or not the accommodation requested is reasonable, taking into account whether or not the accommodation would jeopardize clinician/patient safety or the educational process of the student or the institution, including all course work, clinical educational experiences and internships deemed essential to graduation. Students are required to read and sign the DPT program’s technical standards (DPT Program Student Handbook Appendix I) form and to update their responses on this form if their health status changes.
A student who requires accommodation to meet the technical standards must obtain verification by the Office of Student Affairs that proper reasonable accommodation is available for the student to meet the standard. The program will not provide accommodation without such written verification.

**RELIGIOUS HOLY DAYS**

Faculty will provide accommodations for student absences for observance of a religious holy day(s) (OP 10.19). Students should make every effort to inform a faculty member at the beginning of the semester regarding these absences.