Credit Hours: 4
Contact Hours: 90
Schedule: Laboratory: Sat 8:00a-11:00a OR 11:00a-2:00p, Room 113 (B-29 on Jan 30, Feb 13, Feb 7 and Mar 5)
Lecture: Thu 8:00a-11:00a, Room 113
Instructor: Daniel J. Ferraro, PT, DPT, Cert. MDT, CSCS
Contact Information: email: dferraro@utep.edu
Office Hours: Thursday before lecture (7:00a to 8:00a) and other times by appointment
Course Description: Focuses on the application of biomechanical principles as they apply to the control of human movement. Structure and functions of joints, postural control, and the basics of gait assessment are emphasized.

Course Objectives: Upon completion of this course, the student should be able to:
1. Use appropriate biomechanical and kinesiological terminology to describe and document musculoskeletal structures, specific joint motions, functional movement patterns, posture and gait. (CC-1)
2. Define the arthrokinematics that occur between any joint surfaces. (CC-1)
3. Apply and integrate basic anatomical, physiological, and biomechanical principles in order to analyze common functional positions/movements used for posture, exercise, gait, self-care activities, ergonomics, and sports. (CC-1)
4. Observe and describe various methods, which are used to analyze human movement including computerized video analysis, mathematical formulas, and functional assessment. (CC-5.30 i.,l.,m.)
5. Analyze normal motor activity and recognize abnormal motor activity. (CC-5.30 l.)
6. Analyze normal human posture and recognize abnormal human posture. (CC-5.30 q.)
7. Analyze normal human locomotion and recognize abnormal human locomotion. (CC-5.30 i.)
8. Demonstrate a fundamental knowledge of the observational and measurement techniques, which are used to conduct kinesiological research. (CC-1)
9. Apply kinesiological concepts to the cause and management of dysfunctional movement. (CC-1)
10. Educate others using various teaching methods commensurate with the unique characteristics of the learner. (CC-5.26)
11. Identify and implement appropriate professional behaviors in the classroom and lab, which will carry over to the clinic. Specific behaviors are outlined in the PROFESSIONAL BEHAVIORS
found in the student handbook.
12. Describe the significance and individual components of an ergonomic workplace evaluation.  
   (CC-5.30 h, 5.31)
13. Assess for ergonomic faults and make recommendations for an ergonomically efficient work 
   station. (CC-5.30 h, 5.31, 5.32, 5.35)
14. Apply biomechanical principles to the analysis of movement for patients/clients with LE 
   prosthesis during functional activities. (CC-5.30 r)

Texts: Required:  Neumann DA. Kinesiology of the Musculoskeletal System: Foundations for 
   
   Suggested: Perry J. Gait Analysis: Normal and Pathological Function. Thorofare, NJ: 
   Slack, Inc; 1992. (E-book available through the library)

Other: Refer to textbooks and materials from Patient Care, Anatomy, and other courses.

Teaching Methods: Lecture, readings, laboratory demonstration and assignments.

Evaluation: Evaluation of course content will consist of exams, quizzes, lab exercises, 
   homework, and a comprehensive final exam.
   Exam #1  20%
   Exam #2  20%
   Exam #3  20%
   Exam #4  20%
   Lab check outs*  15%
   Lab completion**  5%
   TOTAL  100%

*Lab checkouts are begun once joint integrity (joint play) skills are taught. They are done over 
   previous lab activities during lab time. Students select cards for a joint integrity test on another 
   student. A grading rubric is used. If a student consistently exhibits poor performance, that 
   student should consider soliciting additional help or practice time for the skills.

**Labs are not graded but will be checked for completion at the end of the semester.

The following letter grade scale is used for the UTEP Physical Therapy Program:

Letter Grade Scale | Numerical Grade Scale
-------------------|-------------------
A                  | 90-100
B                  | 80-89
C                  | 75-79
F                  | Below 75

In the event a student becomes ill and cannot be present for an examination or quiz, a doctor’s excuse 
must be presented. Once approved, arrangements can be made to reschedule the examination.

The course is designed to encourage you to pace your learning properly- instead of waiting until the 
end of the module before beginning to study in earnest- a tactic which can seriously imperil a student’s 
chances of successfully completing the course.
Students are on the honor system for examinations; however irregularities on tests (i.e. cheating) observed by faculty, teaching assistants, and/or students will be immediately brought to the attention of the program directors. **Students are not allowed to have smart phones on their person for computer exams.**

**Course and Program Policy:** See PT Program Handbook for all policies on exams, electronic device use, dress code, attendance, and scholastic dishonesty. Your instructors encourage you to periodically review all handbook policies, but in light of past experiences, particularly direct you to review the policies on cheating, accumulated knowledge, generic abilities, attendance, and the disclaimer that the syllabus is subject to change.

**Special Accommodations (ADA):** “If you have or suspect a disability and need accommodations, you should contact the Center for Accommodations and Support Services (CASS) at 747-5148.” You can also e-mail the office at cass@utep.edu or go by their office in Union Building East. For additional information, visit the CASS website at http://sa.utep.edu/cass/

**Laboratory Requirements, Rules and Regulations:** Laboratory attendance is MANDATORY and must be taken and completed along with the lectures to pass the course.

***YOUR SAFETY IS YOUR RESPONSIBILITY***

You must protect yourself from harm in this and any other class where you practice patient evaluation and treatment techniques on each other. Speak up and let your instructor or classmate know that the activity may hurt you – and don’t do it. Do not rely on others to remember an injury or condition that may put you at risk for injury. When in doubt, speak up – be safe!

**Laboratory attire:** Comfortable clothing that allows accessibility - you will be practicing on each other.

**Suggestions for class participation:**

- It is expected that you will read the assigned material prior to the associated lecture
- I often ask critical thinking questions, so expect to rationalize and substantiate your answers
- If you are a “non-speaker” in class, I will call on you anyway - not to embarrass you, but to see how you are thinking and to make sure you are tuned in.
- If you like to answer in class, try at times to hold back so others can have time to think without hearing the answer right away
- Please don’t volunteer the answer to a question I have asked specifically to someone else