

**The University of Texas at El Paso
College of Health Sciences
Doctor of Physical Therapy Program**

PT 6207

Motor Control and Motor Learning

Spring 2019

COURSE SYLLABUS

Credit Hours: 2

Contact Hours: 30 (15 weeks)

Schedule: Thursdays, 11:30 am- 1:30 pm
Rm 113 Campbell Building

Coordinator/Instructor: Jason B. Boyle, Ph.D.
Office: Rm 114 Campbell Building (Motor Control Lab)
Office hours: by appointment
E-mail (best way to reach me): jdboyle@utep.edu

Course Description: The neural, physical, and behavioral processes that govern human motor performance across the lifespan are studied. Theories of motor learning and re-learning following trauma are emphasized, with attention given to how intervention and feedback variables impact the learning process. Factors that influence postural control and gait during life are addressed.

Course Objectives: Upon completion of this course, the student will be able to:

1. Identify the theoretical framework of motor control and learning. (7A, 7D)
2. Define several of the neuroscientific principles and anatomical influences underlying motor control and motor learning. (7A, 7D)
3. Identify the sequence of motor development for mobility and posture control. (7D, 19M,P,N)
4. Isolate and explain the elements of the motor function examination. (7D)
5. Analyze/Identify the functional consequences of deficits in motor planning. (7A,7D)
6. Differentiate between different teaching and learning styles (7D/2)
7. Critically analyze scientific literature (7D/9)

Required Text:

Shumway-Cook A, Woollacott MH. *Motor Control: Translating Research into Clinical Practice, 5th ed.* New York: Lippincott, Williams and Wilkins; 2011. ISBN-10: **1608310183** | ISBN-13: **978-1608310180**

Methods of Instruction: Hybrid Lecture/Online: assignments, discussions, tests, textbook and scientific article readings.

Methods of Evaluation: Evaluation of course content will consist of two exams, a group project and a comprehensive final exam. A minimum average of 75% is needed to pass the course with a grade of “C.” Graded activities and their weight are as follows:

Course Evaluation:

Component	% final grade
Exams: 1, 2, 3 & 4 (20%)	80%
Final Exam (10%)	10%
Unit Proposals (10%)	10%
Total	100

Exams: Five Exams will be administered. There will be four exams covering current class content and a cumulative final exam at the end of the semester. Students must be present on those days to take the exam. Students not present will receive a grade of zero on the exam. Conflicts with the exam dates must be brought up two weeks in advance to the instructor for accommodation. Conflicts notified after this period will not be accommodated.

Unit Proposals: There will be 4 unit proposals due on exam day. We will talk about research studies regularly in this class and the fun, at least for me, is in the beginning stages of research/experiment design proposals. Each proposal will consist of a 1 page proposal with a clear question as well as experimental design to answer the question. A detailed document over the proposal format will be posted on the class Blackboard page.

UTEP DOCTOR OF PHYSICAL THERAPY PROGRAM GRADING SCALE

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

Course and Program Policy: See DPT 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.**

Students in Need of Assistance: UTEP seeks to provide reasonable accommodations for all qualified individuals who need accommodations or support for their learning. This university adheres to all applicable federal, state, and local laws, regulations and guidelines with respect to providing reasonable accommodations as required, affording equal educational opportunity. It is the *student's responsibility* to register with the Center for Accommodations and Support Services <http://sa.utep.edu/cass/> in the UTEP Union Bldg. East Wing, Room 106 *within the first two weeks of classes*, and inform the faculty member to arrange for appropriate accommodations or support.

Jan 24	Thurs	Introduction to Motor Control/ Theory	Chapters 1 & 2
Jan 31	Thurs	Physiology of motor control / Motor recovery	Chapters 3 & 4
Feb 7	Thurs	Motor Constraints / Clinical practice	Chapters 5 & 6
Feb 14	Thurs	Exam 1	Chapters (1-6)
Feb 21	Thurs	Normal posture	Chapter 7
Feb 28	Thurs	Posture through the life span	Chapters 8 & 9
March 7	Thurs	Abnormal posture / Clinical practice	Chapters 10 & 11
March 14	Thurs	Exam 2	Chapters (7-11)
March 21	Thurs	SPRING BREAK	
March 28	Thurs	Normal Mobility	Chapter 12
April 4	Thurs	Mobility through the life span	Chapters 13 & 14
April 11	Thurs	Abnormal mobility / Clinical practice	Chapters 15 & 16
April 18	Thurs	Exam 3	Chapters (12-16)
April 25	Thurs	Reach, grasp and manipulation	Chapter 17

May 2	Thurs	Reach, grasp and manipulation across the lifespan & abnormal	Chapters 18 & 19
May 3	Thurs	Exam 4	Chapters (17-19)
May 9	Thurs	FINAL EXAM (1pm – 4pm)	Chapters (1-19)