

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

PT 6207

Motor Control and Motor Learning

Spring 2021

COURSE SYLLABUS

Credit Hours: 2

Contact Hours: 30 (15 weeks)

Schedule: - Fully ONLINE.

Coordinator/Instructor: Jason B. Boyle, Ph.D.
Office: Rm 114 Campbell Building (Motor Control Lab)
Office hours: by appointment
Phone: Ext #7239
E-mail (best way to reach me): jboyle@utep.edu
*Please see email example at end of syllabus

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 Prerequisites for DPT Students: The UTEP DPT Program curriculum is a lock-step curriculum. Therefore, students must pass all courses in the prior semester of the DPT Program in order to enroll in courses in the subsequent semester. Faculty may consider exceptions for PT 6116 PT Capstone Project I and PT 6117 PT Capstone Project II.

Course Objectives for PT 6207 Motor Control and Motor Learning

1. Identify the theoretical framework of motor control and learning. (7A: Neuroscience; 7B: Teaching and Learning) [Comprehension]
2. Define key neuroscientific principles and anatomical influences underlying motor control and motor learning. (7A: Neuroscience) [Comprehension]
3. Identify the sequence of motor development for mobility and posture control. (7A: Neuroscience; 7C: Nervous System) [Comprehension]
4. Identify components of normal and abnormal gait patterns and their related mechanisms. (7A: Anatomy, Neuroscience; 7C: Nervous System) [Comprehension]
5. Explain the elements of the motor function examination. (7A: Neuroscience ; 7D19n) [Comprehension]
6. Identify the functional consequences of deficits in motor planning. (7A: Neuroscience) [Comprehension]

7. Differentiate between different teaching and learning styles (7B: Teaching and Learning)
[Analysis]

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

Methods of Evaluation: Evaluation of course content will consist of four exams, a number of quizzes, 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:

Graded Components	% final grade
Chapter Quizzes 1-20 (2 points each)	40
Exams 1, 2, 3 & 4 (12 points each)	48
Final Exam (Cumulative) (10 points)	10
Exit Survey (2 points)	2
Total	100%

Chapter Quizzes: There will be a quiz at the end of each chapter. The questions will be related to the ppt notes, textbook chapter and lecture video. **The quizzes will be open note/open book.** The point of the quizzes is to prepare you for the exams.

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. The exams will be closed note/closed book and taken on Respondus lockdown browser webcam enabled.

UTEP DOCTOR OF PHYSICAL THERAPY PROGRAM GRADING SCALE

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

<u>Letter Grade Scale</u>	<u>Numerical Grade Scale</u>
A	90-100
B	80-89
C	75-79
F	Below 75

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

Resources Available for Student Success:**Confidential Resources:**

- **Center for Accommodations and Support Services (CASS):** 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, room 106 (next to the UTEP post-office). For additional information, visit the CASS website at <http://sa.utep.edu/cass>.
- **The UTEP Student Health Center:** Union East Suite 100; 915.747.5624; www.utep.edu/chs/shc
- **The UTEP Counseling and Psychological Services:** 202 Union West, 915.747.5302; www.utep.edu/student-affairs/counsel

Additional Resources:

- Division of Student Affairs. 915.747.5076, www.utep.edu/student-affairs
- DPT Library Research Guide: <http://libguides.utep.edu/pt>
- Writing Center: 915.747.5112. <https://uwc.utep.edu>
- Computer Labs: Independent Learning Center (ILC), 1st floor Campbell Building
- Military Student Success Center: 915.747.5342, www.utep.edu/student-affairs/mssc
- Student Wellness Program. 915.747.6738, www.utep.edu/chs/wellness

University Policies: All students are responsible for following UTEP policies and procedures found in the Handbook of Operating Procedures at www.utep.edu/vpba/hoop

Program Policies: All DPT students are responsible for following all policies and procedures documented in the current DPT Student Handbook. Course policies found in the DPT Student Handbook apply to all courses in the DPT curriculum. The current DPT Student Handbook may be found on the DPT Student Resources site on Blackboard.

Academic Integrity: The UTEP DPT Program has a “zero tolerance policy” for scholastic dishonesty. DPT students must demonstrate academic integrity at all times. The current DPT Student Handbook outlines specific definitions, expectations, details, and consequences related to academic integrity and scholastic dishonesty. Additional information related to academic integrity is available through the UTEP Division of Student Affairs at www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html

Course-Specific Policies:

1. **Attendance Policy - Absences:** Refer to current DPT Student Handbook “Attendance and Classroom Behavior” for the DPT Program policy.
2. **Attendance Policy - Tardiness & Early Departures:** Refer to current DPT Student Handbook “Attendance and Classroom Behavior” for DPT Program policy.
3. **Electronic Devices:** Refer to current DPT Student Handbook “Electronic Devices” for DPT Program policy.
4. **Professional Behavior Policy:** See DPT Student Handbook “Attendance and Classroom Behavior”, “Professional Behaviors” and “Unprofessional Behavior:” for general program policy.
5. **Late or Missed Assignments and Assessments Policy:** See current DPT Student Handbook “Written Examination Policy”.
6. **Skills Check Policy:**
 - NA
7. **Practical Exam Policy:**
 - NA

Course Content and Schedule: (Note: Students will be notified of changes via Blackboard or email.)

Unit 1: Theoretical Framework/ Physiology & Constraints to Motor Control

- Chapter 1: Motor Control: Issues and Theories
- Chapter 2: Motor Learning and Recovery of Function
- Chapter 3: Physiology of Motor Control
- Chapter 4: Physiological Basis of Motor Learning and Recovery
- Chapter 5: Constraints on Motor Control
- Chapter 6: Conceptual Framework for Clinical Practice (DPT)*

Unit 2: Postural Control

- Chapter 7: Normal Posture Control
- Chapter 8: Development of Postural Control
- Chapter 9: Aging and Postural Control
- Chapter 10: Abnormal Postural Control
- Chapter 11: Management of the Patient with a Postural Control Disorder (DPT)*

Unit 3: Mobility

- Chapter 12: Control of Normal Mobility
- Chapter 13: Development of Mobility
- Chapter 14: Aging and Mobility
- Chapter 15: Abnormal Mobility
- Chapter 16: Management of the Patient with a Mobility Disorder (DPT)*

Unit 4: Reach, Grasp & Manipulation

- Chapter 17: Normal Reach, Grasp and Manipulation
- Chapter 18: Reach, Grasp and Manipulation Changes Across the Lifespan
- Chapter 19: Abnormal Reach, Grasp and Manipulation
- Chapter 20: Management of the Patient with a Reach, Grasp and Manipulation Disorder (DPT)*

Spring 2021 Tentative ONLINE Schedule

Week 1	January 18 - January 24	<ul style="list-style-type: none"> - Chapter 1 Motor Control: Issues and Theories - Chapter 2 Motor Learning and Recovery of Function 	<ul style="list-style-type: none"> - Quiz 1 - Quiz 2
Week 2	January 25 - January 31	<ul style="list-style-type: none"> - Chapter 3 Physiology of Motor Control - Chapter 4 Physiological Basis of Motor Learning and Recovery 	<ul style="list-style-type: none"> - Quiz 3 - Quiz 4
Week 3	February 1 - February 7	<ul style="list-style-type: none"> - Chapter 5 Constraints on Motor Control - <i>Chapter 6 Conceptual Framework for Clinical Practice (DPT only)</i> 	<ul style="list-style-type: none"> - Quiz 5 - Quiz 6
Week 4	February 8 - February 14	<ul style="list-style-type: none"> - UNIT 1 EXAM (1-6) 	
Week 5	February 15 - February 21	<ul style="list-style-type: none"> - Chapter 7 Normal Posture Control 	<ul style="list-style-type: none"> - Quiz 7
Week 6	February 22 - February 28	<ul style="list-style-type: none"> - Chapter 8 Development of Postural Control - Chapter 9 Aging and Postural Control 	<ul style="list-style-type: none"> - Quiz 8 - Quiz 9

Week 7	March 1 - March 7	<ul style="list-style-type: none"> - Chapter 10 Abnormal Postural Control - <i>Chapter 11 Management of the Patient with a Postural Control Disorder (DPT Only)</i> 	<ul style="list-style-type: none"> - Quiz 10 - Quiz 11
Week 8	March 8 - March 14	- UNIT 2 EXAM (7-11)	
Week 9	March 15 - March 21	SPRING BREAK	
Week 10	March 22 - March 28	- Chapter 12 Control of Normal Mobility	- Quiz 12
Week 11	March 29 - April 4	<ul style="list-style-type: none"> - Chapter 13 Development of Mobility - Chapter 14 Aging and Mobility 	<ul style="list-style-type: none"> - Quiz 13 - Quiz 14
Week 12	April 5 - April 11	<ul style="list-style-type: none"> - Chapter 15 Abnormal Mobility - <i>Chapter 16 Management of the Patient with a Mobility Disorder (DPT)</i> 	<ul style="list-style-type: none"> - Quiz 15 - Quiz 16
Week 13	April 12 - April 18	- UNIT 3 EXAM (12-16)	

Week 14	April 19 - April 25	- Chapter 17 Normal Reach, Grasp and Manipulation - Chapter 18 Reach, Grasp and Manipulation Changes Across the Lifespan	- Quiz 17 - Quiz 18
Week 15	April 26 - May 2	- Chapter 19 - Chapter 20	- Quiz 19 - Quiz 20
Week 16	May 3 - May 9	- UNIT 4 EXAM (17-20)	
Finals	May 10 - May 14	- Final Exam (ch1-20)	

I know this is a pain, but I ask this favor only to be more efficient and productive for you. If you would please make sure the following 4 things are clearly listed when writing me emails it would make both of our lives work so much better! I knew you would understand ☺

1- First and Last name

2- Class you are in (prefer the name or number: motor behavior / KIN 3332)

3- Clear subject line/message (for example: Question on exam grades? Potential research topic?, etc.).