

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

**PT 6205\_CRN 34620**

**Pharmacology in PT  
COURSE SYLLABUS**

**Summer 2023**

**Credit Hours: 2**

**Contact Hours: 30** (lecture hours) plus final exam  
Lecture: 30 hrs; Lab: 0 hrs; Clinic: 0 hrs

**Schedule:**

Monday 10:30 am - 12:00 pm (Room 126)  
Wednesday 10:30 am – 12:00 pm (Room 126)

**Coordinator/Instructor(s):**

Faculty: Dr. Bala Kathirvelu, MBBS, Ph.D.  
Office location: 3333 N. Mesa, Rm 115T  
Phone #: 747-7260  
E-mail: bkathirvelu@utep.edu  
Office hours: Fridays ( by email requests)

Teaching Assistant: N/A

**Course Description:** Foundational information concerning pharmacologic interventions and how drugs can be used as part of a comprehensive healthcare and rehabilitation regimen are the focus of this course.

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

1. Identify how pharmacology is utilized to manage major cardiovascular, endocrine, gastrointestinal, musculoskeletal, nervous, and respiratory system diseases. (7A: pharmacology; 7C: cardiovascular, endocrine, gastrointestinal, musculoskeletal, nervous, and respiratory systems) [Comprehension]
2. Identify major pharmacokinetics, pharmacodynamics, and toxicology factors associated with drug administration. (7A: pharmacology) [Comprehension]
3. Explain the receptor theory of drug mechanism and the difference between agonist and antagonist drugs. (7A: pharmacology) [Comprehension]
4. Identify the primary indications for, and adverse reactions associated with, the major classifications of drugs. (7A: pharmacology) [Comprehension]
5. Assess patient/client risk for altered autonomic responses with medication. (7A: physiology, pharmacology) [Evaluation]

6. Identify the presence of increased fall risk related to medications (eg, polypharmacy and Fall-Risk Inducing Drugs). (7A: pharmacology) [Comprehension]
7. Describe how medications taken for pain and inflammation may affect the healing process. (7A: pharmacology) [Comprehension]
8. Identify the current evidence-based prescription guidelines for Opioids in the management of pain. (7A: pharmacology) [Comprehension]
9. Analyze patient cases to predict a patient/client's side effects based on the classes of medications prescribed (with major emphasis on drugs used to address pain, inflammation, and infections). (7A: pharmacology) [Analysis]
10. Identify risk factors contributing to noncompliance with drug therapy and methods for improving compliance. (7A: pharmacology) [Comprehension]
11. Recognize the rehabilitation implications of common complementary and alternative medicine practices. (7A: pharmacology) [Comprehension]

- **Cultural / Linguistic Engagement and Competence:** n/a

• **Evidence-Based Practice and Research:** n/a

• **Clinical Reasoning:** Clinical reasoning is woven across the course during teaching.

• **Interprofessional Collaborative Practice:** n/a

**Methods of Instruction:** Lectures (asynchronous/ synchronous), Blackboard handouts, and textbook readings.

**Methods of Evaluation:** Student competence and attainment of course objectives are assessed using a variety of methods. These methods and their contribution to the final grade are listed in the table below. Evaluation of course performance will consist of examinations (2), Final Exam, and quizzes. There will be no grades associated with the live sessions. Exam 1 is worth 25% of the final grade and will be based on lecture material until Chapter 17. Exam 2 (worth 25% of final grade) will be based on material from Chapter 18 - 26. The **final examination** (worth 30% of final grade) will be **comprehensive** for the course with the majority of the content based on lectures from Chapter 27 -38. However, some of the questions may be drawn from material and/or concepts covered on Exams 1 and 2. Quizzes will be worth 20% of the final grade. The total quiz grade for the course will be calculated from the sum of points earned from quizzes given during the semester. (E. g. 5 quiz, 20p/ 5qz = 4p/ quiz)

<u>Item</u>	<u>Grade Composition</u>
Exam 1 (MCQ/ written)	25%
Exam 2 (MCQ/ written)	25%
Quizzes (MCQ/ written) `5q	20%
Final Exam (MCQ/ written)	30%
Total	100%

**Grading Scale:** The following letter grade scale is used for the UTEP Doctor of Physical Therapy Program.

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

\*If you are consistently performing below 80% you are required to arrange a meeting with the instructor to develop study strategies for performance improvement.

**Required Textbooks and Other Learning Resources:**

- 1) Ciccone CD. *Pharmacology in Rehabilitation*, 5th edition. F.A. Davis: Philadelphia, PA; 2015. 9780803642089 (available online for free through the UTEP Library  
<https://fadavispt-mhmedical-com.utep.idm.oclc.org/book.aspx?bookId=1877>

**Recommended Textbooks and Other Learning Resources:**

- 1) none

**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](mailto: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](http://www.utep.edu/chs/shc)
- **The UTEP Counseling and Psychological Services:** 202 Union West, 915.747.5302; [www.utep.edu/student-affairs/counsel](http://www.utep.edu/student-affairs/counsel)

**Additional Resources:**

- Division of Student Affairs. 915.747.5076, [www.utep.edu/student-affairs](http://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), 1<sup>st</sup> floor Campbell Building
- Military Student Success Center: 915.747.5342, [www.utep.edu/student-affairs/mssc](http://www.utep.edu/student-affairs/mssc)
- Student Wellness Program. 915.747.6738, [www.utep.edu/chs/wellness](http://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](http://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](http://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.  
[https://www.utep.edu/chs/pt/Files/docs/Student%20Handbook\\_2026a.pdf](https://www.utep.edu/chs/pt/Files/docs/Student%20Handbook_2026a.pdf)

Additional course-specific policies are as follows:

- **It is essential that you attend every class.** As a student enrolled in a professional program, it is also expected that every student will be seated and attentive as soon as class begins. Tardiness is unprofessional and impacts your fellow peers by interrupting the classroom dynamics.
  - If you miss a class, you must contact your instructor via email: [bkathirvelu@utep.edu](mailto:bkathirvelu@utep.edu) within 24 hours of the missed class. If you miss a class, **you are responsible** for the material that was covered in the lecture, and any announcements that were made in class that you missed.
  - There will be no make-up exams unless arrangements are made **prior** to the scheduled date, or under extraordinary circumstances.
  - Missed exams will be entered as a zero grade unless the student has made prior arrangements with the instructor. The instructor will try to arrange a convenient make-up date for both of our schedules. Make-up quizzes and exams will cover the same content but the format of the test may be different.
  - It will not be the policy of this instructor to routinely allow students to take advantage of missing quizzes and exams with the expectation that they will be able to make up the work later.
  - I consider extraordinary circumstances worthy of an excused absence to include: military duty, jury duty, documented hospitalization, documented illness, funerals, and/or religious observations.
2. **Attendance Policy - Tardiness & Early Departures:** Refer to current DPT Student Handbook “Attendance and Classroom Behavior” for DPT Program policy. Additional course-specific policy is as follows:
  3. **Electronic Devices:** Refer to current DPT Student Handbook “Electronic Devices” for DPT Program policy. Additional course-specific policy is as follows:

- All cell phones should have the ring tone muted before the beginning of class. Cell phones can be disruptive and a distraction during valuable lecture time which can negatively impact all the students in the class.
4. **Professional Behavior Policy:** See DPT Student Handbook “Attendance and Classroom Behavior”, “Professional Behaviors” and “Unprofessional Behavior:” for general program policy. Additional course-specific is as follows:
  5. **Late or Missed Assignments and Assessments Policy:** See current DPT Student Handbook “Written Examination Policy”. Additional course-specific policy is as follows:
    - *No late quizzes will be accepted for grading. It is the responsibility of the student to ensure that all quizzes are completed by the assigned due date and time which will be clearly posted on the quiz in addition to the topic outline. If a student does not submit a quiz by the designated due date, the student will be assessed a grade of zero (0) for that particular quiz. Technical issues are not uncommon in an online course, and in order to keep them to a minimum, please plan ahead and make sure you have the time, space, and equipment available to successfully complete your assessments. Do not leave things to the last moment. If you have technical problems with the online quizzes, please contact the UTEP Helpdesk during: M - F: 8AM - 5PM. UTEP: 915-747-4357.*
  6. **Exam procedures:** Students must arrive on time for examinations. Students arriving after any students have completed the exam and have left the ILC/ Respondus online may not be allowed to sit for the exam and may receive a score of zero. No allowances will be made for an exam being missed, other than documented illness or emergency. The student must contact the course coordinator for confirmation prior to the exam. If permission is granted to delay the exam; it is the student’s responsibility to contact the course coordinator to arrange for an alternative exam time. In this event, the nature of the make-up will be at the discretion of the course coordinator (oral, written, increased weighting on the final, etc.). An unexcused absence from an exam may result in a grade of "zero" for that exam and may result in an extra 5% deduction of the total overall course grade per the PT Program Student Handbook.
  7. **Skills Check Policy:** Not applicable
  8. **Practical Exam Policy:** Not applicable

**Course Content and Schedule:** (Note: Students will be notified of changes via Blackboard or email. Additional details may be available in supporting course documents provided by the course instructor).

PLEASE NOTE THESE IMPORTANT DATES:

Classes begin: **May 31, 2023**

The last day of class in this course is Wednesday, **Aug 2, 2023**.

The final exam will be on Monday, **August 7, 2023 (9am-Noon)**

**Course Schedule**

<b>Lec. Dt</b>	<b>Topics/Examinations</b>	<b>Chapter</b>
31-May	General Principles of Pharmacology	1 to 4
5-Jun	Gen. Prin. & CNS Pharm I_Sleep & anxiety med.	5, 6
7-Jun	CNS Pharm II_Mood disorders med.	7, 8
12-Jun	CNS Pharm III_Epilepsy & Parkinsons med.	9, 10
14-Jun	CNS Anesthesia /Skeletal Muscle Relaxants	11 to 13
<b>19-Jun</b>	No Classes/ Pain medic.	14, 15
21-Jun	Pain, RA & OA medications	16, 17
26-Jun	<b>EXAM I (25%)</b>	
28-Jun	ANS Cholinergic/Adrenergic	18-20
3-Jul	CV/ ANS_1 medications & HT/ CHF med.	21-24
5-Jul	CV/ ANS_2 medications & Ang & Arrhy med.	21-24
<b>10-Jul</b>	Clotting disorders & medications	25
<b>12-Jul</b>	Respiratory system medications	26
17-Jul	Gastrointestinal medications	27
19-Jul	<b>EXAM II (25%)</b>	
24-Jul	Endo I- Intro/Corticosteroids	28-32
26-Jul	Endo II- Thyroid/ Parathyroid/ Osteoporosis	28-32
31-Jul	Infectious disease_Ab/AV/Af	33-35
2-Aug	Antifungals/Chemotherapy/others	36-38
7-Aug	<b>Finals (30%)_9am Rm126</b>	

**IMPORTANT:** The course schedule is subject to change. You will be notified via BB or email for any changes to the course schedule and content.