

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

DRSC 6388_CRN14611

Pathophysiology

Fall 2024

COURSE SYLLABUS

Credit Hours: 3

Contact Hours: Total: 45 hours – Lecture: 45 hours; Lab: 0 hours; Clinic 0 hours

Schedule:

Monday 10:30 am - 12:00 pm Mesa Rm 120
Wednesday 10:30 am - 12:00 pm Mesa Rm 120

Coordinator/Instructor(s):

Faculty	Balachandar Kathirvelu , MBBS, PhD (Primary)	Alvaro Gurovich , PT, PhD, FACSM
Office location	3333 N. Mesa, Rm 115 lobby	3333 N. Mesa, Rm 115 lobby
Phone	747 7260	747 7248
Email	bkathirvelu@utep.edu	agurovich@utep.edu
Office hours	by email request	by email request

Teaching Assistant: N/A

Course Description: An in-depth evaluation of disease and injury processes across the lifespan and their relevance to therapeutic rehabilitation are presented. Attention is given to all major physiological systems.

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:

1. Identify the mechanisms of cellular injury and responses and adaptations of cells, tissues and organ systems to injury and disease. (7A Physiology; 7A Histology; 7C cardiovascular; 7C endocrine and metabolic; 7C gastrointestinal; 7C genital and reproductive; 7C hematologic; 7C hepatic and biliary, immune; 7C integumentary; 7C lymphatic; 7C musculoskeletal; 7C nervous; 7C respiratory; 7C renal and urologic) [Comprehension]
2. Recognize the various types of infectious, neoplastic, and metabolic diseases. (7C metabolic; 7C medical conditions) [Comprehension]

3. Identify the characteristics of the immune response in relation to select pathophysiologic processes. (7C immune) [Comprehension]
4. Recognize the role that stress plays in the body's response to injury, infection, and disease. (7C system interactions) [Comprehension]
5. Identify the basic pathophysiology and stages of healing for the musculoskeletal and integumentary systems. (7A pathology; 7A physiology; 7A Histology; 7C musculoskeletal; 7C integumentary) [Comprehension]
6. Recognize the implications of genetic diseases on rehabilitation. (7A genetics) [Comprehension]
7. Identify evidence-based intervention(s) for select pathophysiologic disorders (including diabetes mellitus). (7D9) [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: Lecture, 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.

<u>Item</u>	<u>Grade Composition</u>
Quizzes	20 %
Examination 1	15 %
Examination 2	15 %
Examination 3	15 %
Examination 4	15 %
Finals	20%
Total	100%
Course Evaluation Assignment (Extracredit)	1%

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

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	70-79
F	Below 70

Required Textbooks and Other Learning Resources:

- 1) Pathophysiology of Disease: An Introduction to Clinical Medicine, 8e
Gary D. Hammer, Stephen J. McPhee (Available online)
<https://accessphysiotherapy.mhmedical.com/Book.aspx?bookid=2468>

Recommended Textbooks and Other Learning Resources:

- 1) Understanding Pathophysiology, 7th Edition, Mosby Inc., Elsevier ISBN:
9780323639088 Authors: Huether, McCance

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>.

Additional Resources:

- DPT Library Research Guide: <http://libguides.utep.edu/pt>
- UTEP provides a variety of student services and support. Please refer to the QR code below for a listing of campus resources or visit https://www.utep.edu/advising/student_resources/student-success-resource-hub.html.



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

Technology Requirements: Refer to the DPT Student Handbook “Student computer requirements” for details.

- **IMPORTANT:** If you encounter technical difficulties beyond your scope of troubleshooting, please contact the UTEP Help Desk as they are trained specifically in assisting with technology needs of students. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you! <https://www.utep.edu/technologysupport/> Phone: 915-747-4357

Student Course Evaluation:

- The expectation is that each student will complete the online course evaluations distributed by UTEP at the end of the semester.
- Your professional and constructive feedback is used by instructors to enhance their teaching, improve students’ learning, and is an important part of the Department’s DPT curriculum assessment plan. Completing course evaluations is a professional expectation as a clinician. For example, when you attend a continuing competency (CC) education, you will be asked to complete a course evaluation to be eligible for CC units (CCUs).
- To demonstrate compliance;
 - 1) Go to your ‘My UTEP’ course evaluations confirmation page.
 - 2) Take a screenshot of your completed course evaluation.
 - 3) Upload this screenshot which includes your name to the “Course Evaluation” assignment on blackboard by assignment due date (commonly the week prior to the course final exam).
 - 4) See the example below.
 - Note: This screenshot is proof that you submitted your course evaluation and, in part, serves as evidence of your professionalism and commitment to the success of the DPT curriculum.
- 1% extra credit will be added to your final grade if you complete the course evaluation and upload screenshot to assignments by due date.

The screenshot shows the 'MY UTEP' interface. The main heading is 'Classes'. Below it, there is a table titled 'COURSE EVALUATIONS' with the following data:

Course	Instructor	Start Date	End Date	Status
PT 6313	Boyea, Bryan	4/24/2023	5/7/2023	Evaluation Complete
PT xxxx	xxxx, xxxx	4/24/2023	5/7/2023	Evaluation Complete

On the right side of the page, there are buttons for 'Register', 'Degree Evaluation', and 'Registration Information'.

Copyright Statement for Course Materials

- All materials used in this course are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. They may not be further disseminated.

Course-Specific Policies:

1. Professional Behavior Policy: See DPT Student Handbook “Attendance and Classroom Behavior”, “Professional Behaviors” and “Unprofessional Behavior:” for program policies. Additional course-specific is as follows:

Attendance Policy - Absences: Refer to current DPT Student Handbook “Attendance and Classroom Behavior” for the DPT Program policy. Additional course-specific policy are as follows:

- 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** within 24 hours of the missed class.
- If you miss a class, you are responsible for the material that was covered in 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 in the case of an unforeseen emergency situation.
- Missed exams will be entered as a zero grade unless the student has made prior arrangements with the instructor.
- The instructor will endeavor 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. Academic Integrity and Scholastic Dishonesty (continued): In addition to UTEP Policies and DPT Student Handbook, course specific details follow.

- **Junior Cohorts:** NO COURSE CONTENT will be shared with junior cohorts to include but not limited to assignments, tests, notes, powerpoints, study guides created by individuals or classes, videos, etc. Creating and developing in-depth and retained knowledge,

comprehension, and competence is derived from doing your own work. Sharing of such content is considered academic dishonesty by both the giver and receiver.

- **Plagiarism Detecting Software:** Some of your course work and assignments may be submitted to SafeAssign, a plagiarism-detecting software. SafeAssign is used to review assignment submissions for originality and will help you learn how to properly attribute sources rather than paraphrase.
3. **Electronic Devices:** Refer to the current DPT Student Handbook “Electronic Devices” for DPT Program policy. Additional course-specific policy is as follows:
 - All cell phones must be turned off, or placed on vibrate, 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.
 - Cell phones may **not be used to photograph quizzes or exams**. Online exams can be reviewed if needed after setting an appointment with the instructor.
 4. **Late or Missed Assignments and Assessments Policy:** See current DPT Student Handbook “Written Examination Policy”. Additional course-specific policy is as follows:
 - Your evaluation will be based on your performance on exams and quizzes conducted in the class
 - Quizzes will consist of questions given at the beginning of class covering the material from the previous class(es) as an online quiz.
 - In-class quizzes will be given at the start of class (first 10-15 minutes).
 - If you are late to class you will only have the remaining time (of the test time) to complete the quiz.
 - If you miss the quiz entirely you will receive a zero.
 - In the case of an excused absence from class, the student and instructor will coordinate a make-up time convenient to both our schedules AND within a short window of time.
 - An unexcused absence resulting in a missed exam will result in a grade of zero on that exam and no make-up will be given.
 5. **Skills Check Policy:** No skill checks
 6. **Practical Exam Policy:** No practical examination
 7. **Artificial Intelligence Policy:**
 - Refer to the DPT Student Handbook.

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).

Special Note: The Lectures follow your textbook but will be the highlights of the material. You will need to memorize much material, and study groups are very helpful. Chapter readings before the lecture will be helpful to familiarize yourself with the material and any unfamiliar terms. I will be emphasizing the material that is most important.

- The PowerPoint slides presented in lecture will be available on Blackboard.
- As a pre-professional enrolled in a professional graduate degree program, it is expected that every student show respect to each other, in the same way that we would show our respect to patients, clients, and peers and other professionals in our field or in any interdisciplinary field with whom we interact.
- Employ and practice your soft skills in this course: showing commitment, time management, positive attitude, motivation, flexibility, persistence and perseverance, empathy, punctuality, strong work ethic, self-awareness, staying calm in a difficult situation, and accepting responsibility, to list a few.
- This course **contains a large quantity of material that must be committed to memory**. Students should endeavor to study to keep current with the schedule of topics.
- It is a very helpful tool to study in small groups and quiz each other on the material.
- The quizzes and examinations are created to measure your knowledge of the important topics presented during lecture or assigned as reading in the textbook.
- Experiment with your personal learning style.
- Please contact me with any concerns, complaints, questions, gripes, and requests as soon as possible so that I may address it/them immediately.

Classes begin: **August 26, 2024**

The last day of class in this course is **Wednesday, December 4, 2024**

The Final exam will be on Monday, **Dec 9, 2023 (9-12pm) Rm 120**

Schedule Pathophysiology

26-Aug	Introduction
28-Aug	Altered cellular and tissue biology
2-Sep	No Class
4-Sep	Immunity 1_Inflammation
9-Sep	Immunity 2_Infection and defects in defense mech.
11-Sep	Disorders of Hematologic system
16-Sep	Exam 1 (15%)
18-Sep	Disorders of Hematologic system & Integ.sys.
23-Sep	Disorders of Integumentary system (repair)
25-Sep	Heredity/ Genetics
30-Sep	Disorders of Pulmonary System 1
2-Oct	Disorders of Pulmonary System 2
7-Oct	Exam 2 (15%)
9-Oct	Disorders of Reproductive system
14-Oct	Disorders of Renal system 1
16-Oct	Disorders of Renal system 2
21-Oct	Disorders of Digestive System
23-Oct	Disorders of hepatic, panc. & bili. organs
28-Oct	Exam 3 (15%)
30-Oct	Disorders of Endocrine system
4-Nov	Disorders of Musculoskeletal system 1 (Dr. Gurovich)
6-Nov	Disorders of Musculoskeletal system 2 (Dr. Gurovich)
11-Nov	Disorders of Cardiovascular System 1 (Dr. Gurovich)
13-Nov	Disorders of Cardiovascular System 2 (Dr. Gurovich)
18-Nov	Exam 4 (15%)
20-Nov	Disorders of Endocrine system
25-Nov	Disorders of CNS 1
27-Nov	Disorders of CNS 2
2-Dec	Disorders of CNS_Spinal
4-Dec	CNS contd. Pain & Others
9-Dec	FINALS (20%) 9am

NOTE: The course schedule is subject to change as needed. You will be notified via BB or email of any changes to the course schedule and content.