

**University of Florida**  
**College of Public Health & Health Professions Syllabus**

**PHT 6352. Pharmacology in Physical Therapy Practice (3 credits)**

Summer 2022

Delivery Format: Online

Course available in E-Learning

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Office Hours: On Zoom by appointment

Preferred Course Communications: email

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**Prerequisites:** Completed all course work in Year 1(Fall & Spring) of the Doctor of Physical Therapy Program

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## **Purpose and Outcome**

### **Course Overview**

This course will present the primary drug classes and the introduce Doctor of Physical Therapy students to 1) mechanisms of action for these drugs and 2) expected physiological responses to these drugs. Drugs will be grouped and discussed according to their general effects and the type of disorders they are routinely used to treat. This course will place special emphasis on drugs that are commonly used to treat people being managed by physical therapists and address how drug therapy impacts the development and maintenance of a patient management strategy by exerting beneficial effects on a patient's condition, as well as negative impacts of adverse side effects, polypharmacy and drug interactions with interventions provided by physical therapists.

### **Relation to Program Outcomes**

Recognizing the impact of medication regimens on the components of the human movement system will 1) allow for management plans to be individualized and 2) enhance shared-decision making. These interactions between medication and human movement occur across the lifespan.

## Course Objectives

1. Integrate pharmacokinetic principles with pharmacodynamics, and judge how drug effects are influenced by their administration, absorption, distribution, storage, and metabolism in the human body.
2. Compare and contrast general categories of drugs that are used therapeutically to treat specific problems in the body.
3. Compare and contrast the physiological mechanisms by which individual drugs affect the different organ systems in the body.
4. Evaluate drug side effects, and differentiate these side effects from the symptoms of the patient's disease(s).
5. Assess situations where drug levels are too high versus too low (i.e., increased drug toxicity versus decreased efficacy).
6. Judge the potential for harmful interactions between specific drugs and physical therapy interventions.
7. Choose physical therapy interventions in accordance with the patient's drug regimen.

## Instructional Methods

Pre-recorded voice-over slide presentations are available through the Rehab Essentials website. There will be synchronous case study discussions to apply principles learnt in this course to patient/client management decisions. Our class sessions may be audio-visually recorded for students in the class to refer back. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

## Blended Learning

### What is blended learning and why is it important?

A Blended Learning class uses a mixture of technology and face-to-face instruction to help you maximize your learning. Knowledge content that, as the instructor, I would have traditionally presented during a live class lecture is instead provided online before the live class takes place. This lets me focus my face-to-face teaching on course activities designed to help you strengthen higher order thinking skills such as critical thinking, problem-solving, and collaboration. Competency in these skills is critical for today's health professionals.

## What is expected of you?

You are expected to actively engage in the course throughout the semester. You must come to synchronous classes prepared by completing all out-of-class assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live class sessions. If you are not prepared for the face-to-face sessions, you may struggle to keep pace with the activities occurring in the live sessions, and it is unlikely that you will reach the higher learning goals of the course. Similarly, you are expected to actively participate in the live class. Your participation fosters a rich course experience for you and your peers that facilitates overall mastery of the course objectives.

## Description of Course Content

### Topical Outline/Course Schedule

Date	Part	Topic	Asynchronous Reading	Quiz	Assignment	In class (Discussion, Q & A)
5/13	1	Introduction, course preview, and the basics of pharmacology	Chapters 1.1-1.2	1: due 5/20		SA
5/20	<b>No class (competency exams)</b>					
5/27	5,6	Anesthetics and Seizure disorders	Chapters 5.1,5.2,6.1	2: due 5/27		SA
6/3	9	Cardiovascular drugs	Chapters 9.1-9.3	3: due 6/3	Case study 1 due 6/13	SA
6/10	3,4	Arthritis and Muscle relaxants	Chapters 3.1, 4.1-4.2	4: due 6/10		SA
6/17	2	Pain and inflammation	Chapters 2.1-2.3	5: due 6/17		MB
6/24	<b>Exam 1 (HPNP: G-101)</b>					
7/1	7,8	Parkinson's and CNS	Chapters 7.1,8.1-8.3	6: due 7/1	Case study 2 due 7/10	SA
7/8	14	Endocrine	Chapters 14.1 – 14.2	7: due 7/8		SA
7/15	10,11	Respiratory and Gastrointestinal drugs	Chapters 10.1-10.2, 11.1	8 & 9: due 7/15		SA
7/22	12,13	Antiviral/antibacterial, chemotherapy	Chapters 12.1-12.2,13.1	10: due 7/22	Case study 3 due 7/28	SA
7/29	<b>Exam 2 (HPNP: G-101)</b>					

\*Reflection assignment is due on 7/29

**NOTE: This is a tentative schedule**

## Course Materials and Technology

This course will be delivered online through the use of the Pharmacology in Rehabilitation course from Rehab Essentials. It is essential that you have internet access to be able to access the asynchronous presentation materials.

Recommended text: Pharmacology in Rehabilitation. Ciccone. 2016. Fifth edition. F.A. Davis, Philadelphia. ISBN: 978-0-8036-4029-0

For technical support for this class, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

## Academic Requirements and Grading

### Grading

Assessment type	Number	Points	Percentage of grade
Formative unit quizzes: Completed on Canvas	10	10/quiz	20%
Reflection assignment: Submit on Canvas	1	10 points	10%
Cases/case discussion: Submit on Canvas	3	10/case	15%
Examinations: Completed on Canvas	2	30/exam	50%
Professional behavior (including attendance)		10	5%

**Formative unit quizzes:** There will 10 quizzes (1 per unit). These weekly quizzes need to be taken after you have reviewed the assigned asynchronous content for that week. Quizzes will be available on canvas and will be due before class (by 8:00 AM every Friday).

**Reflection assignment:** The purpose of this assignment is to integrate the information that we are covering into your history taking and the development of a plan of care. This assignment includes interviewing a person (family member or otherwise who has a health condition and is willing to share that information with you). In this interview you are required to;

1. Take a history/subjective examination of the identified person  
Include suggested elements for history taking including medical history and current and past (within the previous year) medications
  - a) There will be no ‘reason for this visit’ or related follow up needed to explore the mechanism of injury or other questions related to PT interventions
  - b) Probe understanding of purpose, dosage, side effects, interactions
  - c) Probe history of use (eg: taking as recommended) and reasons for variations in use.
  
2. Review your interviewee’s understanding of his/her/their medications
  - a) Dosage
  - b) Purpose
  - c) Side effects
  - d) Interactions
  
3. Perform your own review of the medications identified (brand name, and generic (if available), and the pharmacological names) purpose, dosage, side effects, and interactions; e.g. using [pdr.net](http://pdr.net)
  
4. Submit a narrative report (maximum 3 pages) that considers the following items and meets the guidelines provided below
  - a) Brief history/case description including past and current medical history and medications
  - b) Describe the extent to which your interviewee understands the purpose of the medications they were taking and any potential side effects and/or interactions (What might you advise this person?)
  - c) Were there any barriers, either for you or your interviewee, to taking this history?
  
  - d) Based on your research, what might you need to consider as you develop a plan of care? (What elements would you need to modify, if any? Monitoring during interventions/exercise?)
  
5. Modifications to activities or to intensity during activity.

**NOTE:** Do **NOT** include any PHI (Name, age, DOB, address, relationship to you, etc.) of your interviewee.

**Cases/case discussion:** Case studies will be in the areas of cardiovascular/respiratory conditions, endocrine disorders and pain disorders and adults with neurological disorders. These simulated cases are based on complex patients with multiple comorbidities. The case studies will have information on the health condition, subjective and objective assessment, and a detailed pharmacological intervention profile. Using this information, you will be required to answer questions related to

- a) Pharmacokinetics of the drugs administered in the case
- b) How might the listed drugs help reverse/reduce/prevent patient's symptoms?
- c) Drug interactions that might influence the choice and timing of physical therapy interventions.
- d) Signs and symptoms of potential adverse effects.

**Examinations:** There will be two examinations administered in a multiple-choice format. These exams cover didactic content presented by Dr Ciccone via Rehab Essentials and lecture and class discussion content presented by the primary and guest instructors. The final exam is not comprehensive and will only include content covered after exam 1.

**Professional behavior (including attendance):** See policies related to attendance and professional behavior below.

**Point system used (i.e., how do course points translate into letter grades).**

**Grading Scale:**

93-100 = A	4.00 grade point
90-92 = A-	3.67 grade point
87-89 = B+	3.33 grade point
83-86 = B	3.00 grade point
80-82 = B-	2.67 grade point
79-70 = C	2.00 grade point
69-60 = D	1.00 grade point
Below 60 = E	0 grade point

Please be aware that a C- is not an acceptable grade for graduate students. The GPA for graduate students must be 3.0 based on 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if based on credits in courses numbered 5000 or higher that have been earned with a B+ or higher

More information on UF grading policy may be found at: <http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades>

**Exam Policy**

## Policy Related to Make up Exams or Other Work

**Exams:** Both exams will be held “in class”. In extraordinary circumstances, it may be possible to take an exam early or late. If for any reason you are unable to attend an exam at the last minute, you must notify the instructor as soon as possible. Personal issues with respect to exams will be handled on an individual basis.

**Quizzes, cases, and reflection assignment:** There is no opportunity to make up a quiz. *Late submissions (quizzes, reflection assignments, and case discussions) will receive a 0.*

**Please note:** Any requests for make-ups due to technical issues MUST be accompanied by the UF Computing help desk (<http://helpdesk.ufl.edu/>) correspondence. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

**Browser requirements for exams:** Exams will be administered via the lockdown browser (<https://download.respondus.com/lockdown/download.php?ID=364713981>).

## Policy Related to Required Class Attendance

Attendance is MANDATORY. Only excused absences will be allowed, and students will need to submit the necessary documentation for these absences. Please contact the instructors as soon as possible if you are unable to attend a class for any reason. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis. Unexcused absences will result in the loss of 1 professional behavior point/class.

Please note all faculty are bound by the UF policy for excused absences.

Excused absences must be consistent with university policies in the Graduate Catalog

(<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>). Additional information can be found here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

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## Student Expectations, Roles, and Opportunities for Input

### Expectations Regarding Course Behavior

The case studies and discussion for this course will only work for you if you are prepared and participate in discussions. Please come prepared. Be on time for class and stay until class is dismissed. Refrain from using your telephone or other electronic devices during group work and class discussions. Failure to abide by the above expectations may result in loss of professional behavior points.

### Communication Guidelines

The majority of work in this course is online. This does not mean that conventions for professional communication among peers and with faculty and teaching assistants is suspended when using discussion boards, chats, or email. Consider the use of discussion boards and chats to represent professional communication as outlined in the DPT student handbook. In addition, the following resource provides a guideline of acceptable online course communication etiquette: <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

### **Academic Integrity**

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

**“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”**

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

**“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”**

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

### **Online Faculty Course Evaluation Process**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/> .

Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at

<https://gatorevals.aa.ufl.edu/public-results/>.

## **SUPPORT SERVICES**

### **Accommodations for Students with Disabilities**

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### **Counseling and Student Health**

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their website for more information: <http://www.counseling.ufl.edu>. Online and in-person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the website at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:  
Alachua County Crisis Center:  
(352) 264-6789  
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

### **Inclusive Learning Environment**

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: [www.multicultural.ufl.edu](http://www.multicultural.ufl.edu)