PHAR 7481 Integrated Pharmacotherapy 1: Renal/Respiratory
Fall 2025

Course Description
This course focuses on the application of the knowledge and skills needed for pharmacists to care for patients with various renal and respiratory disorders.

Additional Course Information
This course incorporates advanced renal and respiratory pathophysiology and pharmacology in order to prepare students to focus on the pharmacotherapeutics of the renal and respiratory systems and common diseases affecting those systems. Development of patient-specific therapeutic plans using non-prescription, prescription and nonpharmacological modalities will be learned. Ultimately, students will be provided with the knowledge and skills necessary to provide care to patients with renal and respiratory disorders.

Course Credit: 4 credit hours

Pre-Requisites: PHAR 7301: Physiology and Pathophysiology with Pharmacotherapy Correlates , PHAR 7613: Integrated Pathophysiology and Pharmacology, PHAR 7203: Introduction to Medicinal Chemistry

Co-Requisites: None

Class Meeting Days, Time & Location: Thursday:9:30 am – 11:30 am, Fridays: 1:00pm – 3:00pm; W.T. Brookshire Hall room # 235

Course Coordinator:
Rachel A. Bratteli, PharmD, BCACP
W.T. Brookshire Hall - Room 250
Phone number: 903.566.6165
Email: rbratteli@uttyler.edu
Office hours: Tuesdays and Thursdays 1:00 – 12:00 pm via Zoom or by appointment
https://uttyler.zoom.us/j/87613568579?pwd=Q2R5NndDVzBFS0JGN3pReEpPVFFxdz09

- **Meeting ID:** 876 1356 8579
- **Passcode:** 181130

Preferred method of contact: Email (rbratteli@uttyler.edu)

Fisch College of Pharmacy (FCOP) and UT Tyler Policies
This is Part 1 of the syllabus. Part 2 contains UT Tyler and the FCOP policies and procedures. For experiential courses (i.e., IPPE and/or APPE), the Experiential Manual contains additional policies and instructions that supplement the Syllabus Part 1 and 2. Please note, the experiential manual may contain policies with different deadlines and/or instructions. The manual should be followed in these cases.

Required Materials
Most course required materials are available through the Robert R. Muntz Library. These materials are available either online* (http://library.uttyler.edu/) or on reserve.

1. Pharmacotherapy: A Pathophysiologic Approach, 10th Edition. DiPiro JT, Talbert RL, Yee GC, et al. McGraw-Hill Education. (©2017) ISBN 978-1-259-58748-1
2. Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy Fourth Edition, 4th Edition. Golan DE, Armstrong EJ, Armstrong AW. Wolters Kluwer. (©2017) ISBN 9781451191004

3. Renal Pathophysiology, 4th Edition. Rennke H, Bradley M, Denker BM. Lippincott Williams & Wilkins. ISBN-13: 978-1451173383
4. Other required materials will be posted on the classes' Canvas site. The site address is: uttyler.edu/canvas.

Recommended Materials

1. None

Course Format

The course may include, but is not limited to, the following activities:

1. Independent study of selected readings
2. Individual readiness assessment tests (iRATs)
3. Team-based learning, active learning strategies:
    a. Team readiness assessments (tRAT)
    b. Team application of content and concepts
    c. Team presentation of content and concepts
    d. Team project(s)
    e. SOAP note(s)
4. Lecture
5. Active learning
6. Case studies
7. Educational video clips (online and in class)

Course Learning Outcomes (CLOs)

CLOs	PLO(s) Assessed for this CLO (1-12)	EPAs (1-13) Only map for Lab, IPPE, APPE. Otherwise N/A	ACPE Appendix 1 (names)	ACCP Didactic Toolkit (names)	NAPLEX (1.A.1 – 5.D)	Assessment Methods (1-13)
1. Select appropriate medication therapy for renal and respiratory conditions based on principles of physiology, pathophysiology and pharmacology.	1, 5	N/A	Human Physiology, Clinical Laboratory Data	Sodium and water disorders Electrolyte disorders Acid–base disturbances Acute kidney injury Drug dosing in altered kidney function Drug dosing in dialysis	1.A.1, 2.A.1, 2.A.2, 2.A.3, 3.C.1, 3.C.2, 3.C.3	1
2. Formulate patient-and disease-specific care plans for pharmacotherapeutic regimens in renal and respiratory disorders.	1, 5	N/A	Clinical Laboratory Data, Pharmacotherapy		1.C, 1.C.1, 1.C.3, 2.C, 2.C.2, 3.A, 3.B, 3.C, 3.C.1, 3.C.2, 2.C.4,	1

				CKD, prevention of progression	3.E, 3.E.3, 3.G	
3. Design monitoring plans for efficacy, toxicity and adverse effects for pharmacotherapuetic regimens in renal and respiratory disorders.	1, 2	N/A	Clinical Laboratory Data, Pharmacotherapy	CKD, secondary complications Anemias Asthma COPD Cystic fibrosis Pediatric drug dosing	1.C, 1.C.1, 2.A.5, 2.C.5, 3.D, 3.D.1, 3.D.2, 3.D.3,	1

Course Summative Assessment Methods

	Assessment/Examination Method
1	Question-based examination (ExamSoft-based)

Grading Policy & Grade Calculation

Grades will be determined based on evaluation of assignments, formative assessments (for learning), and summative assessments (for mastery). For all intents and purposes, final examinations are synonymous with summative assessments. Assessments may consist of, but are not limited to, multiple-choice, true/false, fill in the blank, short-answer, essay, and problem-based questions. They may also include a variety of formats beyond the traditional question-based written examination, as each CLO may require different methods to determine student achievement.

Assignments, formative, and summative assessments may be **cumulative.** Students are responsible for material presented during prior courses. The grading scale for all graded material is below. The final course grade will be assigned according to the calculated percentage and the percentages will not be rounded upward or downward. For additional information, see Part 2 of the syllabus.

During the time the course is in progress, students who obtain less than 75% on any summative assessment or a total course grade of less than 75% during a particular semester will receive an academic alert from the course coordinator and the Office of Academic Affairs and be subject to weekly in-course remediation with the course instructor(s).

Standard Grade Calculation	
Individual Component	**95%**
iRATs/quizzes	5%
Midterm 1	25%
Midterm 2	25%
Final Exam	40%
Team Component	**5%**
tRATs	2.5%
Applications/Team Projects	2.5%

The final course letter grade will be as follows:

A	90 - 100 %
B	80 - 89.999 %
C	70 - 79.999 %
D	65.0 - 69.999 %
F	< 65.0 %

Total	**100%**

Appropriate Use of Artificial Intelligence

For this course, during some class assignments, we may leverage AI tools to support your learning, allow you to explore how AI tools can be used, and/or better understand their benefits and limitations. Learning how to use AI is an emerging skill, and we will work through the limitations of these evolving systems together. However, AI will be limited to assignments where AI is a critical component of the learning activity and ***should not be assumed*** an appropriate resource for all assignments. The faculty member will always indicate when and where the use of AI tools for this course is appropriate.

PHAR 7481 Course Schedule

Week	DAY	TOPIC	Instructor	CLO
1	Th: 8/28	*Course Overview (10 minutes)* Pathophysiology/Pharmacology: Respiratory Diseases*	Bratteli Abdullah	1,2
	Fr: 8/29	Pharmacotherapy: COPD (acute/chronic)*	Bratteli	1,2,3
2	Th: 9/4	Pharmacotherapy: COPD (acute/chronic)	Bratteli	1,2,3
	Fr: 9/5	Pharmacotherapy: Asthma (acute/chronic/action plans)*	Bratteli	1,2,3
3	Th: 9/11	Pharmacotherapy: Asthma (acute/chronic/action plans)	Bratteli	1,2,3
	Fr: 9/12	Pharmacotherapy: Cystic Fibrosis*	Bratteli	1,2,3
4	Th: 9/18	Comprehensive Case Day – Pulmonary Dysfunction	Bratteli	1,2,3
	Fr: 9/19	***Midterm Exam 1 - covers material through 9/18***		
5	Th: 9/25	Physiology/Pathophysiology / Pharmacology: Volume Regulation and Fluid Electrolyte Disorders*	Glavy	1,2
	Fr: 9/26	Pathophysiology/Pharmacology: Acid-Base Disorders and Renal Diseases (AKI, DIKI, CKD)*	Glavy	1,2
6	Th: 10/2	Clinical Chemistry: Introduction to Laboratory Values*	Go	1,2
	Fr: 10/3	Pharmacotherapy: Na and Water Disorders*	Smith	1,2,3
7	Th: 10/9	Pharmacotherapy: Na and Water Disorders	Smith	1,2,3
	Fr: 10/10	Pharmacotherapy: Ca, Mg, K and Phos Disorders*	Smith	1,2,3
8	Th: 10/16	Clinical Chemistry: Laboratory Values and Evaluation of Renal Function*	Cocchio	1,2,3
	Fr: 10/17	Comprehensive Case Day – Electrolyte Abnormalities	Go	
9	Th: 10/23	***Midterm Exam 2 - covers material through 10/17***		
	Fr: 10/24	Pharmacotherapy: Acute Kidney Injury*	Smith	1,2,3
10	Th: 10/30	Pharmacotherapy: Acute Kidney Injury	Smith	1,2,3
	Fr: 10/31	Pharmacotherapy: Drug-Induced Kidney Disease*	Smith	1,2,3
11	Th: 11/6	Pharmacotherapy: Chronic Kidney Disease*	Cocchio	1,2,3
	Fr: 11/7	Pharmacotherapy: Chronic Kidney Disease	Cocchio	1,2,3
12	Th: 11/13	Pharmacotherapy: Dialysis and Renal Replacement Therapies*	Bratteli	1,2,3
	Fr: 11/14	Comprehensive Case Day – Chronic Kidney Disease	Cocchio	1,2,3
13	Th: 11/20	Comprehensive Case Day –AKI/Drug-induced kidney disease	Smith	1,2,3
	Fr: 11/21	Comprehensive Case Day – Dialysis/Renal Replacement Therapies	Bratteli	1,2,3
14	Th: 11/27	**Thanksgiving Break**	--	--
	Fri: 11/28	**Thanksgiving Break**	--	--
15	Th: 12/4	Comprehensive Case Day – Complex Respiratory/Renal Patient	Bratteli	1,2,3
	Fri: 12/5	Comprehensive Case Day – Complex Respiratory/Renal Patient	Bratteli	1,2,3
16	**12/9 9AM-12PM**	***Final Exam (cumulative)***		
	– ** Indicates intended dates for RATs.* – *Please note that dates, topics, and assignments are subject to change. In the event of a change, you will be given ample notification of the change.*			