PHAR 7483 Integrated Pharmacotherapy 3 (PTX-3): Cardiology
Spring 2025

Course Description

This integrated pharmacy course focuses on pathophysiology, medicinal chemistry, and pharmacology to develop therapeutic plans for patients with cardiovascular disorders.

Additional Course Information
Upon successful completion of PTX-3, students will have developed skills regarding the pathophysiology, medicinal chemistry, pharmacology, and pharmacotherapy related cardiovascular disorders. Ultimately, this will allow the student to develop individualized patient care plans incorporating evidence-based principles and patient-specific factors.

Course Credit
4 credit hours

Class Meeting Days, Time & Location
Tuesdays: 10a-12p and
Fridays: 2p-4p
W.T. Brookshire Hall Room 235

Course Coordinator
Rachel A. Bratteli, PharmD, BCACP
Clinical Associate Professor
W.T. Brookshire Hall Room 250
Phone number: 903.566.5156
Email: rbratteli@uttyler.edu
Office hours: Tuesday and Thursday 12-2pm via open Zoom Room or by appointment.
Preferred method of contact: Email

Fisch College of Pharmacy (FCOP) and UT Tyler Policies
This is part 1 of the syllabus. Part 2 contains UT Tyler and the FCOP course policies and procedures. UT Tyler Department of Pharmacy Office of Academic Affairs
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 at the library.
1. *Pathophysiology of Disease: An Introduction to Clinical Medicine (8th Edition). Hammer GD and McPhee SJ. Lange-McGraw Hill. ISBN: ISBN 978-1-260-02650-4.
2. *Patrick GL. An Introduction to Medicinal Chemistry. 6th edition. Oxford: Oxford University Press; 2017.
3. *Basic and Clinical Pharmacology (12th Edition). Katzung BG, Masters SB, Trevor AJ. Lange-McGraw Hill. ISBN: 978-0-07-176401-8, 2012.
4. *Pharmacotherapy: A Pathophysiologic Approach, 9th Edition. DiPiro JT, Talbert RL, Tee GV, et al. McGraw-Hill Education. (©2014) ISBN: 978-0-07-180053-2.

5. Other required materials will be posted on the classes' Canvas site. The site address is uttyler.edu/canvas.

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 and active learning strategies:
    a. Team readiness assessment tests (tRATs)
    b. Team applications of content and concepts
    c. Team presentation of content and concepts
    d. SOAP note(s)
4. Independent preparation of reflection papers or other assignments.

Course Learning Outcomes (CLOs)

CLOs	PLO(s) Assessed for this CLO (1-12)	ACPE Appendix 1	ACCP Didactic Toolkit	NAPLEX (1.1-6.5)	Assessment Methods (1-13)
1. Integrate the principles of physiology, pathophysiology, and pharmacology into selection of appropriate medication therapy for cardiovascular disease states.	1,2	Human Anatomy Human Physiology Pathology/Pathophysiology	Arrhythmias, atrial Chronic coronary disease (formerly stable ischemic heart disease) Dyslipidemia Heart failure, chronic Hypertension Venous thromboembolism, prevention, and treatment Acute coronary syndromes Advanced cardiac life support Arrhythmias, ventricular Heart failure, acute decompensated Hypertensive crises Peripheral artery disease Stroke (ischemic, hemorrhagic, and transient ischemic attack)		1,2
2. Predict the biochemical and cellular consequences from the pharmacology of cardiovascular drugs.	1	Pharmacology			1,2

3. Predict the biochemical and cellular consequences from the medicinal chemistry of cardiovascular drugs.	1	Medicinal Chemistry			1,2
4. Develop and recommend individualized, evidence-based therapeutic and monitoring plans based upon patient-specific factors for cardiovascular disease states.	1,2,4,7, 9	Pharmaceutical Calculations Cultural Awareness Patient Safety Pharmacotherapy Self-Care Pharmacotherapy	Arrhythmias, atrial Chronic coronary disease (formerly stable ischemic heart disease) Dyslipidemia Heart failure, chronic Hypertension Venous thromboembolism, prevention, and treatment Acute coronary syndromes Advanced cardiac life support Arrhythmias, ventricular Heart failure, acute decompensated Hypertensive crises Peripheral artery disease Stroke (ischemic, hemorrhagic, and transient ischemic attack) Vavular Heart Disease	1.1; 1.4-4.4; 5.6	1,2

Course Assessment Methods

	Assessment Method	Description
1	Final Exam Multiple Choice or Multiple Selection Question(s)	*Standard MCQ, open-ended, FITB, matching, and select all that apply questions.*
2	Final Exam Open Ended Questions	*Handwritten calculations, FITB, short answer*

Grading Policy & Grade Calculation
Grades will be determined based on evaluation of individual and team readiness assessment tests (iRATs, tRATs), midterm examinations, final written examinations, skills assessments, graded application assignments, participation in team-based projects, peer evaluations and other assessment methods that may include Objective Structured Clinical Examinations (OSCE). Examinations and RATs may consist of multiple-choice, true/false, short-answer, essay, and problem-based questions.

During the time the course is in progress, students whose cumulative course percentage falls below 70.0% may receive an academic alert and be subject to periodic course content review in special sessions with the course instructor(s). The student's faculty advisor may receive an academic alert to act upon on the student's behalf.

All examinations, tests, and assignments, including the final examination, may be **cumulative.** Students are responsible for material presented during the 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**.

Standard Grade Calculation*			Total
Individual Component	iRATs/Individual applications	15%	**95%**
	Assessment 1	25%	
	Assessment 2	25%	
	Final Exam	30%	
Team Component	tRATs/Team applications	5%	**5%**
Individual + Team Component			**100%**

*The final course letter grade will be determined according to the following grading scheme:

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

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 7483 Course Schedule

DAY	TOPIC	Instructor	CLO	Disease States
T: 1/14	Introduction to course + concept map & Pathophysiology: Normal structure and function; Hypertension; Atherosclerosis → CAD/Cerebrovascular Disease	Brazill	1	S01.01, S01.08 S01.12A
F: 1/17	Pharmacology: Antihypertensives	Brazill	1,3	S01.01
T:1/21	Medicinal Chemistry: Antihypertensives*	Abdelaziz	1	S01.01
F: 1/24	Pharmacology: Vasoactive agents	Brazill	2	S01.07
T: 1/28	Pharmacology: Antihyperlipidemics (1 hr) + Medicinal Chemistry: Antihyperlipidemics (1 hr)	Brazill / Abdelaziz	1,2,3	S01.01 S01.08 S01.07
F: 1/31	Pharmacology: Antiplatelets, Anticoagulants, Thombolytics, Anti-arrhythmics, Anti-thrombotics	Brazill	1,3	S01.05A S01.06 S01.09
T: 2/4	Medicinal Chemistry: Antiplatelets, Anticoagulants, Thombolytics, Anti-arrhythmics, Anti-thrombotics	Abdelaziz	2	S01.03 S01.04 S01.06 S01.05A S01.05B
F: 2/9	***Exam 1: Material through 2/4***			
T: 2/11	Pharmacotherapy: Hypertension*	Newsome	1,4	S01.01
F: 2/14	Pharmacotherapy: Hypertension continued + Hypertensive Crises	Newsome	1,4	S01.01 S01.15
T: 2/18	Pharmacotherapy: Dyslipidemia and intro to ASCVD/CAD*	Gutierrez	1,4	S01.08 S01.1A
F: 2/21	Pharmacotherapy: Dyslipidemia and intro to ASCVD/CAD*	Gutierrez	1,4	S01.08 S01.12A
T: 2/25	Pathophysiology/Pharmacotherapy: PAH*	Gutierrez	1,4	S01.17
F: 2/28	Pathophysiology/Pharmacotherapy: PAD + Content Review	Newsome	1,4	S01.16
T: 3/4	Pathophysiology: Ischemic heart disease → SIHD, ACS; Heart Failure*	Brazill	1	S01.03 S01.04 S01.02A
F: 3/7	Medicinal Chemistry: Inotropes + CCBs + Vasodilators*	Abdelaziz	1,3	S01.03 S01.04 S01.07
T: 3/11	**Exam 2 Review**			
F: 3/14	***Exam 2: Material through 3/8***			
	SPRING BREAK (3/17-3/21)			
T: 3/25	Pharmacotherapy: Stable Ischemic Heart Disease (stable angina, silent ischemia, CAD) *	Newsome	1,4	S01.03 S01.1A S01.12B
F: 3/28	Pharmacotherapy: Acute Coronary Syndrome - unstable angina/NSTEMI, STEMI*	Smith	1,4	S01.04
T: 4/1	Pharmacotherapy: Chronic Heart Failure – HFrEF	Hooper	1,4	S01.02A
F: 4/4	Pharmacotherapy: Chronic Heart Failure - HFrEF continued + HFpEF	Hooper	1,4	S01.02A
T: 4/8	Pharmacotherapy: Acute Decompensated Heart Failure*	Smith	1,4	S01.02B
F: 4/11	Pharmacotherapy: Venous thromboembolism (Acute Management)*	Smith	1,4	S01.06 S14.06
T: 4/15	Pharmacotherapy: Treatment of Atrial Arrhythmia (AFib + Aflutter) &	Bratteli	1,4	S01.05A

	Ventricular arrythmia*			S01.05B
F: 4/18	Pharmacotherapy: Anticoagulation - Atrial Fibrillation + Chronic VTE*	Bratteli	1,4	S01.05A S01.12B
T: 4/22	Pharmacotherapy: Cerebrovascular Disease – Stroke (ischemic + hemorrhagic + TIA)*	Newsome	1,4	S01.09
F:4/25	*Final Exam Review*	All		
T: 4/29	*1-4pm Final Exam (cumulative + new material through 4/24)*			
	*Indicates intended RAT date			