PHAR 7483 Integrated Pharmacotherapy 3 (PTX-3): Cardiology
Spring 2022

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
Monday and Thursday
2:00 - 4:00 pm
W.T. Brookshire Hall Room 137

Course Coordinator
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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. These are available as a PDF at https://www.uttyler.edu/pharmacy/academic-affairs/files/fcop-syllabus-policies-part2-2021.pdf. 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	Related PLO(s)	Assessment Methods	Grading Method	EPA's	AACP Std. 11 & 12
1. Integrate the principles of physiology, pathophysiology, and pharmacology into selection of appropriate medication therapy for cardiovascular disease states.	1,2	1,2	ES	1.1, 1.2. 1.3, 1.4, 1.5, 2.1, 3.1, 3.2, 3.4, 4.1, 4.2	-
2. Predict the biochemical and cellular consequences from the pharmacology of cardiovascular drugs.	1	1,2	ES	1.2, 3.2	-
3. Predict the biochemical and cellular consequences from the medicinal chemistry of cardiovascular drugs.	1	1,2	ES	1.2, 3.2	-
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	1,2	ES	1.1, 1.2. 1.3, 1.4, 1.5, 2.1, 3.1, 3.2, 3.4, 4.1, 4.2	-

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 - 89.999̄ %
C	70 - 79.999̄ %
D	65.0 - 69.999̄ %
F	< 65.0 %

Case Studies

Case Studies is a longitudinal supplement intended to reinforce and integrate concepts and skills from the P2 spring curriculum. **Content and concepts from Case Studies will reinforce past and current course content and aim to enhance understanding of content through critical thinking and clinical reasoning that will better prepare you for summative exams for the P2 spring courses**.

Case Studies Format

Case studies days may include, but are not limited to, the following activities:

1. Guided discussions
2. Individual and team active learning strategies
    a. Individual and team case application of content and concepts
    b. Individual and team case presentation of content and concepts
    c. Individual and team SOAP note(s)
    d. Individual and team drug information and clinical literature applications

Case Studies Expectations

Attendance and full participation are a student obligation and expectation. Each Case Study session will be assigned to a course for 2% of the course grade. At the discretion of the session's assigned course coordinator, absences from a case session may be either excused or unexcused. Students are expected to notify the session's assigned course coordinator *as soon as possible, and no later than 8 AM the morning of the requested absence, with supporting documentation of the absence provided within 3 days of the absence per the College of Pharmacy Policies available in Part 2 of the Syllabus.*

- Unexcused absences will result in a grade of zero for that day.
- Students who arrive to class later than 8 AM will be considered tardy and will receive a 50% reduction in their grade for that case study's session.
- Off cycle students (i.e., not enrolled in all Spring P2 courses) are expected to attend and participate in **all case study sessions** regardless of current course enrollment. Off-cycle student absences to case study sessions will be handled on an individual basis.

Case Study Schedule

Case Studies will be held over four sessions on Fridays from 8:00 AM to 11:00 AM. Although each session's attendance deduction is assigned to a specific course, case content is not limited to that course and content from current and previous courses will be integrated into case study day activities.

P2 Spring 2022 Case Study Schedule			
Session	**Date**	**Assigned Course Grade**	**Assigned Course Coordinator**
1	3/18	PHAR 7484	Rice
2	4/1	PHAR 7294	Weller

PHAR 7483 Course Schedule

DAY	TOPIC	Instructor	CLO	Disease States
M: 1/10	Introduction to course + concept map & Pathophysiology: Normal structure and function; Hypertension; Atherosclerosis → CAD/Cerebrovascular Disease	Yett	1	S01.01 S01.08 S01.12A
Th: 1/13	Medicinal Chemistry: Antihypertensives*	Abdelaziz	1,3	S01.01
M: 1/17	**OFF – MLK DAY**			
Th: 1/20	Medicinal Chemistry: Antihyperlipidemics (1 hr) + Pharmacology: Anti-hypertensives, vasopressors, vasodilators, PDE inhibitors, prostacyclins & antihyperlipidemics (1 hr)	Abdelaziz / Glavy	1,2,3	S01.01 S01.08 S01.07
M: 1/24	Pharmacotherapy: Hypertension*	Yett	1,4	S01.01
Th: 1/27	Pharmacotherapy: Hypertension continued + Hypertensive Crises	Yett	1,4	S01.01 S01.15
M: 1/31	Pharmacotherapy: Dyslipidemia and intro to ASCVD/CAD*	Yett	1,4	S01.08 S01.12A
Th: 2/3	Pathophysiology/Pharmacotherapy: PAH*	Yett	1,4	S01.17
M: 2/7	Pathophysiology/Pharmacotherapy: PAD + Content Review	Yett	1,4	S01.16
Th: 2/10	***Exam 1 - covers material through 2/7***			
M: 2/14	Pharmacology: Antiplatelets/thrombolytics*	Glavy	1,2	S01.03 S01.04
Th: 2/17	Pathophysiology: Ischemic heart disease → SIHD, ACS; Heart Failure*	Yett	1	S01.03 S01.04 S01.02A
M: 2/21	Medicinal Chemistry: Inotropes + CCBs + Vasodilators*	Abdelaziz	1,3	S01.03 S01.04 S01.07
Th: 2/24	Pharmacotherapy: Stable Ischemic Heart Disease (stable angina, silent ischemia, CAD) *	Wallace-Gay	1,4	S01.03 S01.12A S01.12B
M: 2/28	Pharmacotherapy: Acute Coronary Syndrome - unstable angina/NSTEMI, STEMI*	Rice	1,4	S01.04
Th: 3/3	Pharmacotherapy: Acute Coronary Syndrome - unstable angina/NSTEMI, STEMI*	Rice	1,4	S01.04
3/7+3/10	**OFF – SPRING BREAK**			
M: 3/14	Applied Therapeutics Review + revisit concept map	Yett, Rice	1,4	S01.99
Th: 3/17	Pharmacotherapy: Chronic Heart Failure – HFrEF*	Wallace-Gay	1,4	S01.02A
M: 3/21	Pharmacotherapy: Chronic Heart Failure - HFrEF continued + HFpEF	Wallace-Gay	1,4	S01.02A
Th: 3/24	Pharmacotherapy: Acute Decompensated Heart Failure*	Smith	1,4	S01.02B
M: 3/28	Content Review (1 hr) + Medicinal Chemistry: Anti-arrhythmics + Anti-thrombotics* (1 hr)	Yett / Abdelaziz	1,3	S01.05A S01.06
Th: 3/31	***Exam 2 - covers material through 3/24***			
M: 4/4	Pharmacotherapy: Introduction to anti-arrhythmic medications + treatment of Ventricular Arrhythmias (PVC, VT, VFib)	Yang	1,4	S01.05A S01.05B
Th: 4/7	Pharmacotherapy: Treatment of Atrial Arrhythmias (AFib + Aflutter, PSVT, WPW) *	Wooster	1,4	S01.05A
M: 4/11	Pharmacotherapy: Atrial Fibrillation – Anticoagulation*	Wallace-Gay	1,4	S01.05A S01.12B

Th: 4/14	Pharmacotherapy: Cerebrovascular Disease – Stroke (ischemic + hemorrhagic + TIA)*	Wilder	1,4	S01.09
M: 4/18	Pharmacotherapy: Venous thromboembolism (Acute Management)*	Smith	1,4	S01.06 S14.06
Th: 4/21	Pharmacotherapy: Venous thromboembolism (Prevention + Chronic Management)*	Wallace-Gay	1,4	S01.06
Tu: 4/26	***1-4pm Final Exam (cumulative + new material through 4/21)***			
***Indicates intended RAT date**				