PHAR 7488
Integrated Pharmacotherapy 8:
Hematology, Oncology, and Critical Care
Spring Semester 2020

Course Description
This course integrates knowledge of pathophysiology, pharmacology, and pharmacotherapy to make appropriate treatment recommendations for cancer, critical care, and palliative care patients.

Additional information about the course
This course introduces the pharmacy student to a variety of malignant disorders, including both solid tumor and hematological malignancies and strategies to manage them. In addition, this course includes a comprehensive introduction to critical care and critical care pharmacy services.

Course Credit
4 credit hours

Pre-requisites
PHAR7511 & PHAR 7251

Co-requisites
None

Class meeting days, time, and location
Thursday's and Friday's; 2:00pm – 4:00pm
W.T. Brookshire Hall #133

Course Coordinator
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Instructors
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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.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.

1. Pharmacotherapy: A pathophysiologic approach (10th edition). Joseph T. DiPiro, Robert L. Talbert, Gary C. Yee, Gary R. Matzke, Barbara G. Wells, L. Michael Posey. McGraw-Hill Education, ISBN 978-1-259-58748-1, 2017.
2. Applied Therapeutics, The Clinical Use of Drugs (11th edition). Caroline S. Zeind and Michael G. Carvalho. Wolters Kluwer, ISBN 978-1-4963-1829-9, 2018.
3. An introduction to Medicinal Chemistry (6th edition). Graham Patrick. Oxford University Press, ISBN 978-0-19-874969-1, 2017.
4. Principles of Pharmacology, The Pathophysiologic Basis of Drug Therapy (4th edition). David E. Golan, Ehrin J. Armstrong, April W. Armstrong. Wolters Kluwer, ISBN 978-1-4511-9100-4, 2017
5. Other required materials will be posted on the class's Canvas site. The site address is www.uttyler.edu/canvas.

Recommended materials
The course recommended materials are on reserve at the Robert R. Muntz Library.

1. Basic skills in interpreting laboratory data (6th edition). Lee M. American Society of Health-System Pharmacists. ISBN: 978-1-58528-548-8, 2017. *The 5th edition of this text may also be used and is on reserve at the Muntz Library.*

Course format
The course may include, but are 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 assessment tests (tRATs)
    b. Team application of content and concepts

Course Learning Outcomes (CLOs)						
CLOs	**Related PLO(s)**	**EPAs**	**Assessment Methods**	**Grading Method**	**PPCP Skill(s) Assessed (1-5)**	**AACP Std 11 & 12 (1-4)**
1. Explain the pathophysiology of malignancy.	1	N/A	1,2	ES	-	-
2. Evaluate and select appropriate non-pharmacologic and pharmacologic treatment options for cancer, transplant, and palliative care patients.	1,2	N/A	1,2,3	ES, RUB	1,2,3	4
3. Evaluate and select appropriate non-pharmacologic and pharmacologic options for supportive care and toxicity management of cancer patients.	1,2,6	N/A	1,2	ES	1,2,3	-
4. Demonstrate understanding of shock state management in critical illness utilizing pathophysiology, pharmacology, and therapeutic knowledge.	1,2,3,5,7,8	N/A	1,2,3,4	ES, RUB	1,2	1,2
5. Demonstrate understanding of fluid and electrolyte management and renal replacement therapies in critical illness by utilizing pathophysiology, pharmacology, and therapeutic knowledge.	1,2,3,5,7,8	N/A	1,2	ES, RUB	1,2	1,2
6. Develop plans for supportive care of critically ill patients, including sedation, analgesia and pain management, stress ulcer and DVT prophylaxis, nutrition support, and glucose control.	1,2,3,5,7,8	N/A	1,2	ES, RUB	1,2,3,5	1,2
7. Identify the mechanism of action of anticancer medications.	1	N/A	1,2	ES	-	-

Course assessment methods		
	Assessment method	**Description** *Please provide a brief description of each summative assessment that you plan to use in this course to allow us to identify which ACPE standards are being assessed*
1	Final exam multiple choice or multiple selection question(s)	Standard MCQ, T/F, matching, and select all that apply
2	Final exam open-ended questions	Handwritten calculations, fill in the blank, essay questions
3	Comprehensive case	Written comprehensive case
4	Team project	Written comprehensive case

Grading policy & grade calculation

Grades will be determined based on evaluation of individual and team readiness assessment tests (iRATs, tRATs), individual and team cumulative assessment tests (iCATs, tCATs), midterm examination, final written examinations, skills assessments, graded application assignments, participation in team-based projects, peer evaluations, and other assessment methods that may include, but are not limited to, objective structured clinical examinations (OSCEs). Examinations, RATs and CATs may consist of, but are not limited to, multiple choice, true/false, fill in the blank, short-answer, essay, and problem-based questions.

During the time the course 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 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. For additional information, see the examination/assessment policy below.

Standard Grade Calculation*	
Individual component	85%
iRATs/Other individual activities	10%
Major assessments (Midterms/Final exams) Oncology CATs = 20% CAT-1 = 5% CAT-2 = 10% CAT-3 = 5% Critical Care CATs = 20% CAT-1 = 10% Cat-2 = 10% Final Comprehensive Case (individual submission) = 15% Final Exam = 20%	75%
Team component	15%
tRATs	5%
Team application(s)	5%
Comprehensive Case (team submission)	5%
Total	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	65-69.999%
F	<65%

Remediation: If needed, remediation for PHAR 7488 will occur over 6 consecutive weeks starting in May (most likely to coincide with APPE block-1). Students will be required to attend on-site scheduled sessions.

PHAR7488 (IP12) Course Schedule – FALL 2020

Note all dates below are subject to instructor availability and may be rescheduled at the discretion for the course coordinator. Students will be given at least 24 hours-notice of any changes.

Week	Day	Topic	Instructor	CLO	Disease States	Top 200 Rx/ 100 OTC
1	Thursday, January 16th	Pharmacotherapy: FAST-HUG BID	Reinert	6	S18.16	Instructor provided list
	Friday, January 17th	Pharmacology-I	Brazill	1,7	S16.17	
2	Thursday, January 23rd	Pharmacotherapy: Pain, Agitation, and Sedation	Reinert	5	S18.11	
	Friday, January 24th	Pharmacology-II	Brazill	1,7	S16.01	
3	Thursday, January 30th	Pharmacotherapy: ICU Delirium	Reinert	5,6	S18.11	
	Friday, January 31st	Medicinal Chemistry of Chemotherapeutic Agents	Brazill	1,7	S16.01	
4	Thursday, February 6th	Pharmacotherapy: Fluid Management	Reinert	5,6	S01.10; S18.13	
	Friday, February 7th	Cancer Biology	Abdelaziz	1,7	S16.01	
5	Thursday, February 13th	Pharmacotherapy: Electrolyte Management	Reinert	5,6	S04.05; S18.13	
	Friday, February 14th	**Oncology CAT-1 (weeks 1-3)** Dosing Calculations	Brazill	2	S16.01; S16.05	
6	Thursday, February 20th	Pharmacotherapy: Management of Chemotherapeutic Toxicities and Oncologic Emergencies	Brazill	3	S16.16	
	Friday, February 21st	Pharmacotherapy: Clinical Staging, Treatment Guidelines, and the Role of Clinical Trials	Loredo	2	S16.05	

7	**Thursday, February 27th**	**CAT-1 (Critical Care)**	Reinert	N/A		
	Friday, February 28th	Pharmacotherapy: Hematologic Malignancy	Brazill	3	S16.16	
8	Thursday, March 5th	Pharmacotherapy: Intro to Burn Management (Comprehensive Case)	Reinert	4-6	S18.17	
	Friday, March 6th	**Oncology CAT-2 (weeks 4-7)**	Brazill			
March 9th -13th Spring Break – No Class						
9	Thursday, March 19th	Pharmacotherapy: Categorization of Shock and Vasopressors	Reinert	4	S18.13	
	Friday, March 20th	Pharmacotherapy: Hematologic Malignancy	Brazill	1-3	S16.03; S16. 04; S16.15	
10	Thursday, March 26th	Pharmacotherapy: Septic Shock	Reinert	4,5	S18.13; S15.12	
	Friday, March 27th	Pharmacotherapy: Emergent Anticoagulant Reversal	Reinert	6	S19.06	
11	**Thursday, April 2nd**	**CAT 2 (Critical Care)**	Reinert	N/A		
	Friday, April 3rd	Pharmacotherapy: Lung Cancer	Brazill	1-3	S16.12	
12	Thursday, April 9th	Pharmacotherapy: Emergent Antiplatelet Reversal	Reinert	6	S19.06	
	Friday, April 10th	**Oncology CAT-3 (weeks 8-11)** Pharmacotherapy: Breast Cancer	Brazill	1-3	S16.17	
13	Thursday, April 16th	Pharmacotherapy: Traumatic Brain Injury and Central Fever	Reinert	4-6	S18.12; S18.14	
	Friday, April 17th	Pharmacotherapy: Breast Cancer	Brazill	1-3	S16.17	
14	Thursday, April 23rd	Comprehensive Case Team Submission	Brazill/Reinert	1-7		
	Friday, April 24th	Comprehensive Case Individual Submission	Brazill/Reinert	1-7		
15	**FINAL EXAM WEEK**					