

PHAR 7288
Hematology and Oncology
Spring Semester 2022

Course Description

This course integrates knowledge of pathophysiology, pharmacology, and pharmacotherapy to make appropriate treatment recommendations for specific hematological and oncological disease processes.

Additional information about the course

Additionally this course reviews the medicinal chemistry and pharmacology of the agents used to treat cancer and used in supportive care. An overview of the application of surgery and radiation therapies used to treat specific cancers is reviewed at a topical level. It is expected that students will be able to seamlessly integrate knowledge attained in previous courses when presented complex problems.

Course Credit

2 credit hours

Pre-requisites

PHAR 7582, 7585 & PHAR 7586

Co-requisites

None

Class meeting days, time, and location

Friday 2:00 pm – 3:50 pm or otherwise noted in the Course Schedule.

W.T. Brookshire Hall #133 (additional rooms TBD)

Course Coordinator

Bradley J. Brazill, BS Pharm, Pharm.D.

W.T. Brookshire Hall, Office # 232

Phone Number: 903-566-6100

E-mail: bbrazill@uttyler.edu (preferred method of contact)

Office hours: Mondays and Thursdays, 12:30 pm - 1:30 pm or by appointment.

Instructors

May Abdelaziz, BPharm, MS, Ph.D.

W.T. Brookshire Hall, Office #368

Phone Number: 903-566-6231

E-mail: mabdelaziz@uttyler.edu (preferred method of contact).

Office hours: Fridays Noon – 1:50 pm

or by appointment.

Grace A. Loredo, Ph.D., CCRP

Director, HOPE Center for Cancer Research

Phone Number: 903-566-6212

E-mail: glored@uttyler.edu (preferred method of contact).

Office hours: By appointment only.

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. DiPiro JT, Yee GC, Posey L, Haines ST, Nolin TD, Ellingrod V. eds. *Pharmacotherapy: A Pathophysiologic Approach*, 11th edition. McGraw-Hill, 2020.
2. Graham P. *An introduction to Medicinal Chemistry*, 6th edition. Oxford University Press, 2020.
3. Katzung BG, Vanderah TW. eds. *Basic & Clinical Pharmacology*, 15e. McGraw Hill; 2021
4. Bruton LL, Hilal-Dandan R, Knollmann BC. eds. *Goodman & Gillman's: The Pharmacological Basis of Therapeutics*, 13th edition. McGraw-Hill, 2018.
5. Jameson J, Fauci AS, Kasper DL, Hauser SL, Longo DL, Loscalzo J. eds. *Harrison's Principles of Internal Medicine*, 20e. McGraw-Hill, 2018.

Recommended materials

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

1. Oncologic Drugs. In: Pelletier-Dattu CE. eds. *Lange Smart Charts: Pharmacology*, 2e. McGraw-Hill; Accessed February 21, 2021. <https://accesspharmacy-mhmedical-com.ezproxy.uttyler.edu/content.aspx?bookid=1549§ionid=93439038>
- 2.

Course format

The delivery of the course material is determined by the content expert and may include, but not limited to, the following activities:

1. Lecture.
2. Independent study of selected readings.
3. Individual readiness assessment tests (iRATs).
4. 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. Select appropriate medication therapy for hematological and oncological conditions based on principles of physiology, pathophysiology, and pharmacology.	1,2	1.1 1.2	1,2	ES, RUB	1,2,3	4
2. Formulate patient-and disease-specific care plans for pharmacotherapeutic regimens in hematological and oncological disorders.	1,2,4	1.1 1.2 1.3 1.4 4.2	1,2	ES, RUB	1,2,3,4	4
3. Design monitoring plans for efficacy, toxicity and adverse effects for pharmacotherapeutic regimens in hematological and oncological disorders.	1,2,6	1.5 3.2	1,2	ES, RUB	3,4,5	4

Course assessment methods		
	Assessment	Description
1	Midsemester Examinations 1 and 2	Short answer, essay, standard MCQ, T/F, matching, and select all that apply, handwritten calculations.
2	Final Examination	Short answer, essay, standard MCQ, T/F, matching, and select all that apply, handwritten calculations.

Attendance

To **receive full credit** a student **must attend all class session**, each unapproved absence may result in a 5% reduction in a student's individual component of the course grade. Only those students that have prior approval for distance learning will be allowed to attend remotely. Students can request an excused absence, see the **Attendance and Make-up Policy** (beginning page 2) <https://www.utt Tyler.edu/pharmacy/academic-affairs/files/fcop-syllabus-policies.pdf>

Case Studies

Case Studies are a longitudinal supplement intended to reinforce and integrate concepts and skills from the didactic curriculum, P1-P3 inclusive. **Content and concepts from Case Studies will be integrated into team applications for the P3 spring courses.**

Case Studies Format

Case 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)

Case Studies Expectations

Attendance and full participation are a student obligation and expectation. Failure to attend each Case Studies session will result in an 2% deduction from the final course grade for the participating P3 courses. Failure to attend all Case Studies sessions would result in a 2% deduction from the final grade of each of the following courses: PHAR 7487, 7288, 7489, 7296, and 7220. At the discretion of the session’s assigned course coordinator, absences from a case session may be either approved or unapproved. Students are expected to notify the session’s assigned course coordinator *as soon as possible, and no later than 9 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.*

Example. Unapproved absences for sessions 2 and 3, would result in 2% final course grade deduction for the above listed courses. At the end of the semester if the student’s course grades for PHAR 7487, 7288, 7489, 7296, and 7220 were 91%, 89%, 85%, 90%, and 71% respectively, their final grade would be reduced to 89%, 87%, 83%, 88%, and 69% respectively because of their Case Studies’ absences.

Case Study Schedule

Case Studies will be held over three sessions on Fridays from 9AM-12PM. Each session’s attendance deduction is assigned to the participating P3 courses. Case content is not limited to the P3 courses and will be integrated into team applications for the P3 spring courses.

P3 Case Study Schedule				
Session	Date	Assigned Course Coordinator	Topic	Instructors
1	2/4	Newsome	TBA	P3 course coordinators
2	3/4	TBD	TBA	P3 course coordinators
3	4/8	Brazill	Management of a complex cancer patient with multiple comorbidities.	P3 course coordinators

Examinations

All students are required to take all examinations in WTB Hall or at the testing center. Students may request to take examinations remotely. A written request shall be submitted to the course coordinator, Dr. Brazill, **at least 14 days prior to the assessment/examination date.** A detailed justification for taking the assessment/examination remotely is required and needs to be submitted at the time of the request. Dr. Brazill reserves the right for final determination.

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), in-semester examinations, final 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 those previously mentioned. Examinations and quizzes (RATs) may consist of, but are not limited to, multiple choice, true/false, fill in the blank, short-answer,

essay, and problem-based questions. If Exam Soft is utilized, backwards navigation will not be available on summative assessments (e.g. midterms, final).

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, supplemental learning, 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 prior courses and it is the expectation that the student can apply prior knowledge in the context of information presented in this course. 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	95%
Readiness Assessment (iRAT), applications, and/or case day participation/case submission.	5%
Major Assessments	
Exam 1 (weeks 1-4)	20%
Exam 2 (weeks 6-10 may include topics from weeks 1-4)	30%
Comprehensive Final Exam	45%
Team component	5%
tRATs	2.5%
Team application(s)	2.5%
Total	100%

<i>The final course letter grade will be determined according to the following grading scheme:</i>	
A	90-100%
B	80-89.999%
C	70-79.999%
D	65-69.999%
F	<65%

Remediation: If needed, remediation for PHAR 7288 will occur over 6 consecutive weeks during the summer break, May - August. Students will be required to attend on-site scheduled sessions; a final comprehensive assessment is required, and the student must score $\geq 70\%$ to successfully complete the remediation. A separate schedule for the course remediation will be issued.

Week (date)	Meeting Times Total Hrs.	Topic	Instructor	CLO	Disease States
1 (1/14)	2-4 2	Course introduction Overview of Cancer	Brazill	1,2	S16.01 S16.06 S16.03 S16.04
2 (1/21)	3-4 1	Cancer Biology	Brazill	1,2	
3 (1/28)	1-4 3	Pharmacology of Antineoplastic Agents	Brazill	1,2	S16.01
4 (2/4)	2-4 2	Medicinal Chemistry of Antineoplastic Agents	Abdelaziz	1,2	S16.01
5 (2/11)	3-4 1	Chemotherapy Toxicities	Brazill	1,2,3	S16.05
6 (2/18)	1-2	Midsemester Exam-1 (50 minutes)	Brazill	1,2,3	S16.05
	2-4	Chemotherapy Toxicities/Supportive Care			
7 (2/25)	See Revised Schedule Below				S16.16
8 (3/4)	2-4 2	The Approach to The Cancer Patient, From Diagnosis to Clinical Trials	Loredo	2,3	S16.01 S16.05 S16.16
March 7 th – 11 th		Spring Break			
9 (3/18)	2-4 2	Leukemia; Chronic and Acute	Brazill	1,2,3	S16.03 S16.04
10 (3/25)	2-4 2	Lymphomas and Multiple Myeloma	Brazill	1,2,3	S16.06 S16.14
11 (4/1)	2-4 2	Midsemester Exam 2 (Weeks 6-10)			
12 (4/8)		Case Day 3; Management of a complex cancer patient with multiple comorbidities.	Brazill	1,2,3	S16.990
	2-4 2	Lung Cancer	Brazill	1,2,3	S16.18
13 (4/15)	2-4 2	Breast Cancer	Brazill	1,2,3	S16.06
14 (4/22)	2-4 2	TBD	Brazill		
15		Finals Week			
The course coordinator reserves the right to change the schedule within 48 hours of a scheduled class. Appropriate notice will be provided to the students					

Schedule

Effective March 8, 2022

Week (date)	Meeting Times Total Hrs.	Topic	Instructor	CLO	Disease States
1 (1/14)	2-4 2	Course introduction Overview of Cancer	Brazill	1,2	\$16.01, \$16.06 \$16.03, \$16.04
2 (1/21)	3-4 1	Cancer Biology	Brazill	1,2	
See Revised	1-4 3	Pharmacology of Antineoplastic Agents	Brazill	1,2	\$16.01
4 (2/4)	2-4 2	Medicinal Chemistry of Antineoplastic Agents	Abdelaziz	1,2	\$16.01
5 (2/11)	3-4 1	Chemotherapy Toxicities	Brazill	1,2,3	\$16.05
6 (2/18)	1-2	Midsemester Exam-1 (50 minutes)	Brazill	1,2,3	\$16.05
	2-4	Chemotherapy Toxicities/Supportive Care			
7 (2/25)	2-4 2	Chemotherapy Toxicities/Supportive Care	Brazill	1,2,3	\$16.05 \$16.16
8 (3/4)	2-4 2	The Approach to The Cancer Patient, From Diagnosis to Clinical Trials	Loredo	2,3	\$16.01, \$16.05 \$16.16
March 7 th – 11 th		Spring Break			
9 (3/18)	2-4 2	Chemotherapy Toxicities/Supportive Care	Brazill	1,2,3	\$16.05 \$16.16
10 (3/25)	2-4 2	Chemotherapy Toxicities/Supportive Care and Oncologic Emergencies	Brazill	1,2,3	\$16.05 \$16.16
11 (4/1)	2-4 2	Midsemester Exam 2 (Weeks 6-10)			
12 (4/8)	9 am - Noon	Case Day 3; Management of a complex cancer patient with multiple comorbidities.	Brazill	1,2,3	\$16.990
	2-4 2	Leukemias, Lymphomas and Multiple Myeloma	Brazill	1,2,3	\$16.06 \$16.14
13 (4/15)	2-4 2	Lung Cancer	Brazill	1,2,3	\$16.18
14 (4/22)	2-4 2	Breast Cancer	Brazill	1,2,3	\$16.06
Finals Examination Week					
The course coordinator reserves the right to change the schedule within 48 hours of a scheduled class. Appropriate notice will be provided to the students					

