

PHAR 7484 Integrated Pharmacotherapy: GI, Nutrition, Musculoskeletal Pharmacotherapy

Spring 2025

Course Description

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

Additional Course Information

This course introduces basic science and clinical concepts of pharmacy practice. The focus of this course surrounds scientific and therapeutic aspects of the gastrointestinal and musculoskeletal systems and common diseases affecting those systems. In addition, this course will focus on how to appropriately address nutritional disorders. Development of patient-specific therapeutic plans using non-prescription, non-pharmacological, complementary and prescription modalities will be learned. Ultimately, students will be provided with the knowledge-base and clinical skills necessary to provide pharmaceutical care to patients with gastrointestinal, nutritional, and musculoskeletal disorders.

Course Credit: 4 credit hours

Pre-Requisites: P2 Standing

Co-Requisites: None

Class Meeting Days, Time & Location

Tuesday 2:00 – 4:00PM, W.T. Brookshire Hall Room 234

Thursday 2:00 – 4:00PM, W.T. Brookshire Hall Room 234

Course Coordinator

Erika Gutierrez, PharmD

W.T. Brookshire Hall Room 241

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Office hours:

- Tuesdays and Thursdays, 1-2PM
(in person and/or via Zoom; all other times 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. These are available at [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.utt Tyler.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. Other required materials will be posted on the classes' Canvas site: utt Tyler.edu/canvas.

Recommended Materials: 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)

* Course Learning Outcomes (CLOs)

CLOs	PLO(s) Assessed for this CLO (1-12)	ACPE Appendix 1	ACCP Didactic Toolkit	Assessment Methods (1-13)
1. Students will describe the physiology and pathophysiology of gastrointestinal and musculoskeletal conditions.	1	Human Anatomy & Human Physiology, Pathology/pathophysiology	Constipation, Diarrhea, Drug dosing in hepatic dysfunction, Gastroesophageal reflux disease (including heartburn), Nausea and vomiting (simple and complex), Cirrhosis, End-stage-liver disease and complications, Inflammatory bowel disease, Irritable bowel syndrome, Pancreatitis, Peptic ulcer disease, Gout and hyperuricemia, Osteoarthritis, Rheumatoid	1,2,3
2. Students will formulate patient- and disease-specific care plans for pharmacotherapeutic regimens in gastrointestinal, nutritional, and musculoskeletal disorders.	1,5,7	Pharmacology, Pharmacotherapy, Self-care Pharmacotherapy		1,2,3,8

3. Students will formulate parenteral and enteral nutrition regimens provided a unique patient scenario.	1	Pharmaceutical Calculations	arthritis, Nutrient deficiency and excess, Overweight and obesity, Malabsorptive syndrome, Malnutrition prevention and treatment (e.g enteral and parenteral nutrition), Dehydration and oral replacement therapy (pediatrics),	1,2,3
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Course Assessment Methods

	Assessment Method	Description <i>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</i>
1	Midterms and Final Exam - Multiple Choice or - Multiple Selection Question(s)	<i>Standard MCQ and Select All that apply questions</i>
2	Midterms and Final Exam - Open Ended Question(s)	<i>Handwritten calculations, FITB, short answer</i>
3	SOAP Note	<i>Students will be assessed on their ability to collect and assess information in order to create an individualized plan for a patient.</i>

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 examinations, final written examinations, skills assessments, graded application assignments, participation in team-based projects, peer evaluations and other assessment methods that may include, but not limited to, Objective Structured Clinical Examinations (OSCEs). Examinations, RATs and CATs may consist of, but not limited to, multiple-choice, true/false, fill in the blank, short-answer, essay, and problem-based questions.

All examinations, tests, and assignments, including the final examination, 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 ([UT Tyler Department of Pharmacy Office of Academic Affairs](#)).

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	10%
Midterm 1	25%
Midterm 2	25%
Final Exam	35%
Team Component	5%
tRATS/Team Application(s)/Team Projects	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	65.0 - 69.999 %
F	< 65.0 %

Appropriate Use of Artificial Intelligence

For this course, AI is permitted only for specific assignments or situations, and appropriate acknowledgment is required. This course has specific assignments where artificial intelligence (AI) tools (such as ChatGPT or Copilot) are permitted and encouraged. When AI use is permissible, it will be clearly stated in the assignment directions, and all use of AI must be appropriately acknowledged and cited. Otherwise, the default is that AI is not allowed during any stage of an assignment.

PHAR 7484 Course Schedule

Day	Topic	Instructor	CLO
1/13-1/17	Clinical Evaluation of the Gastrointestinal Tract *	Gutierrez - Online	1
1/14	Pathophysiology & Pharmacology: Nausea & Vomiting *	Brazill	1
1/16	Pharmacotherapy: Nausea and Vomiting *	Gutierrez	1, 5, 7
1/21	Pathophysiology & Pharmacology: Diarrhea, Constipation, IBS (i.e. disorders of gastrointestinal motility and water flux)*	Newsome	1, 2
1/23	Pharmacotherapy: Diarrhea & Constipation *	Gutierrez	1, 5, 7
1/28	Pharmacotherapy: Irritable Bowel Syndrome *	Gutierrez	1, 5, 7
1/30	Pharmacotherapy: GERD, Dyspepsia, Heartburn *	Gutierrez	1, 5, 7
2/4	Pharmacotherapy: Peptic Ulcer Disease*	Gutierrez	1, 5, 7
2/6	Pharmacotherapy: Gastrointestinal Bleeding*	Go	1, 5, 7
2/11	Midterm Exam 1 - Covers material 1/13 through 2/6		
2/13	Pharmacotherapy: Pancreatitis *	Schwartz	1, 5, 7
2/18	Pharmacotherapy: Malabsorptive Syndrome *	Lee	1, 5, 7
2/20	Pharmacotherapy: Parenteral Nutrition *	Lee	1, 5, 7
2/25	Pharmacotherapy: Parenteral Nutrition	Lee	1, 5, 7
2/27	Pharmacotherapy: Enteral Nutrition *	Lee	1, 5, 7
3/4	Pathophysiology/Pharmacotherapy: Hepatitis	Newsome	1, 5, 7
3/6	Pharmacotherapy: Hepatitis	Newsome	1, 5, 7
3/11	Pharmacotherapy: Cirrhosis*	Go	1, 5, 7
3/13	Pharmacotherapy: Cirrhosis	Go	1, 5, 7
3/25	CYP Enzymes & Hepatic Dosing Considerations *	Schwartz	1
3/27	Midterm Exam 2 - Covers material 2/13 through 3/25		
4/1	Pathophysiology & Pharmacology: Inflammation, Autoimmunity, Immunosuppression	Newsome	1
4/3	Pharmacotherapy: Inflammatory Bowel Disease *	Newsome	1, 5, 7
4/8	Pharmacotherapy: Inflammatory Bowel Disease	Newsome	1, 5, 7
4/10	Pharmacotherapy: Systemic Lupus Erythematosus *	Newsome	1, 5, 7
4/15	Pharmacotherapy: Rheumatoid Arthritis *	Newsome	1, 5, 7
4/17	Pharmacotherapy: Gout *	Gutierrez	1, 5, 7
4/22	Pharmacotherapy: Osteoarthritis *	Newsome	1, 5, 7
4/24	Final Exam Review Day	All available instructors	1, 5, 7
4/30	Cumulative Final Exam (+ new material 4/1 through 4/24)		
*Indicates intended dates of iRATs			