



School of Pharmacy
Required Course Syllabus
Fall – P3
PHAR 6474 / ISBP Track
Integrated Systems-Based Pharmacotherapy IIIA1
August 26 – October 18, 2024
CABL 214

Course Coordinator
Natalie Gordon, PharmD, BCACP
Clinical Assistant Professor
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Office Hours: Wednesdays 8:30-10:30am; and by appointment (email to schedule)

Additional Course Faculty:

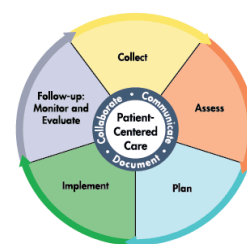
Name	Position	Email	Office
Emily Christenberry, PharmD, BCPS, BCGP	Clinical Associate Professor	Via Blackboard Messages	514
Sebastian Perez, PharmD, BCPS	Clinical Assistant Professor	sebperez@utep.edu	712
Harleen Singh, PharmD, BCPS-AQ Cardiology, BCACP, FOSHP	Clinical Professor	hsingh3@utep.edu	515
Scott Weston, RPh, MBA, PhD	Professor	gsweston@utep.edu	110K

Office Hours

The course coordinator will host office hours on Wednesday mornings. In general, you are welcome to drop by anytime my office door is open, however, appointments will take priority. All appointments must be made *at least 6 hours* in advance. Additional course faculty will notify students of their preferred contact method and available office hours at the start of their scheduled teaching.

Course Description

The Integrated Systems-Based Pharmacotherapy (ISBP) course series begins in the P2 year (primary care focus) and continues through the P3 year (advanced pharmacotherapy/acute care/specialty focus), providing the essentials for integrating foundational knowledge with practice and care. Faculty from Pharmaceutical Sciences and Clinical Sciences will work together to design a comprehensive, integrated approach to pharmacotherapy, which includes a practical application lab and an integrated lab. The topics in this course include: advanced nephrology, gastroenterology, endocrinology, cardiology, and vascular disease.



Source: <https://doi.org/10.21019/9781582122564.ch6>

Pharmacists' Patient Care Process: This course will help students utilize the concepts of pathophysiology, medicinal chemistry, pharmacology, and therapeutics in the evaluation and treatment of various disease states.

Course Objectives mapped to National Pharmacy Education Outcomes

At the conclusion of this course, students shall be expected to:

Course Objectives	COEPA Outcomes	NAPLEX	Level of Assessment	Outcome Measures
Objective 1: Apply the basic anatomy and physiology concepts to understand the cellular and molecular organization of the system	1.1, 2.1		R	Exams, Quizzes, Case Activities
Objective 2: Describe the pathophysiology responsible for all disease states covered.	1.1		R	
Objective 3: Classify the structure-activity relationships (SARs) to drug receptor/target interactions	1.1	2.1	R	
Objective 4: Identify SARs with regard to characteristic pharmacophores and drug-receptor interactions for specific drugs and drug classes.	1.1	2.1	R	
Objective 5: Illustrate the mechanism of pharmacological action (including toxicology, adverse effects, and drug-drug interactions) of specific drugs and drug classes in affecting/treating a targeted disease state.	1.1	2.1, 2.3, 2.4	R, A	
Objective 6: Apply the general principles of drug pharmacokinetics/pharmacodynamics and pharmacogenomics into the drug therapy plan.	1.1, 2.4	3.10, 4.9	R, A	
Objective 7: Integrate pathophysiology concepts and basic principles of pharmaceutical sciences into the therapeutic decision-making process	1.1, 2.4	1.5	R, A	
Objective 8: Describe the etiology, incidence, and prognosis associated with disease states covered, including toxicological conditions.	1.1, 2.4	1.5, 1.6	R	
Objective 9: Recognize the major signs, symptoms, and clinical findings associated with each disease state, including toxicological conditions	1.1, 2.4	1.1, 1.5	R	
Objective 10: Identify usual medication doses, dosage forms, adverse drug reactions, and monitoring parameters of drug classes	1.1	2.2, 2.3, 2.4, 3.4, 3.5, 3.9	R	
Objective 11: Formulate a comprehensive drug therapy plan that incorporates non-pharmacologic and pharmacologic approaches including first-line therapy, alternative therapies, monitoring parameters and diagnostic interpretations, desired therapeutic goals/outcomes, and considerations for special populations (e.g. pediatrics, geriatrics, multiple disease states).	2.1, 2.4	3.1, 3.2, 3.9, 3.11, 3.12, 4.7	R, A	

I = Introduce, R = Reinforce, A = Apply

Additional / Detailed Course Meetings & Location

ISBP IIIA1 will be meet Monday-Thursday from 1-2:50 pm in Campbell 115. Please reference the course calendar (updated calendar will be maintained in Blackboard) for specifics of each class meeting.

In a major disruption (e.g., Covid-19 pandemic, subzero weather), be prepared to maintain course progress via virtual learning.

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Please check your course Blackboard shell regularly (minimum three times per week) and your email (minimum once daily) to keep updated with course announcements, assignments, and any alterations to the schedule.

Exams will be held during class times as noted on the course calendar.

Online Platform/Blackboard:

Accessing Course Content on Blackboard: All lectures, handouts, and course material will be located in Blackboard. Log into My UTEP.edu and click on the Blackboard link to access the online course for PHAR 6474. The course is individualized and students may access lectures/handouts as they are made available by course instructors. Except in cases of a UTEP network being “down” or “offline” you are ultimately responsible to ensure that your computer is connected to the internet and that any issues are addressed prior to class and/or assessments.

EHR Go®

EHR GO®: provides an online, comprehensive, customizable, and realistic simulated electronic medical record (EMR). Some course activities and assignments will utilize EHR Go®. Reference the most updated version of the course calendar on Blackboard to identify which assignments will require the use of EHR Go®.

- You will receive an activation code at the beginning of the school year (from Mr. Adrian Enriquez) to re-activate your account. You will be able to use the same email/password as last year.
- No additional account purchase required.
- To Log on: <https://web21.ehrgo.com/auth/login>

iClicker

If you have not already, go to <https://www.iclicker.com/> to create a FREE iClicker account. Search for UTEP in the institution dropdown, enter your FIRST and LAST name and miners.utep.edu email address. If you already have an iClicker account, you will be able to add PHAR 6474 ISBP IIIA1 to your course list.

Methods of Instruction/Learning

UTEP or SoP may change to primarily online course if major disruption (e.g., pandemic, weather). For tips on succeeding in an online environment, see:

<https://www.utep.edu/extendeduniversity/utepconnect/blog/february-2017/tips-for-online-learning-success.html>

The learning outcomes in this course will be achieved via:

1. Outside Preparation (e.g. pre-recorded videos, readings)
2. In-class Lectures – *The availability of lecture recordings after class will not be guaranteed and is up to instructor preference.*
3. Quizzes
4. Case Applications (e.g. EHR Go®, data collection sheet, consult notes, discussion boards)
5. Exams

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mlc

Required Course Technology/Tools/Needs

Required Textbooks:

- Bauer LA. *Applied Clinical Pharmacokinetics*. 3rd ed. ISBN 978-1260116816. Available in AccessPharmacy.
- Brunton LL. *Goodman & Gilman's The Pharmacologic Basis of Therapeutics*. 13th ed. ISBN 978-0071624428. Available in AccessPharmacy.
- DiPiro JT. *Pharmacotherapy: A Pathophysiologic Approach*. 11th ed. ISBN 978-1260116816. Available in AccessPharmacy.
- Hammer GD. *Pathophysiology of Disease: An Introduction to Clinical Medicine*. 7th ed. ISBN 978-0071806008. Available in AccessPharmacy.
- Johnson JA. *Pharmacogenomics: Applications to Patient Care*. 3rd ed. ISBN 978-1939862099.
- Krinsky DL. *Handbook of Nonprescription Drugs: An Interactive Approach to Self-Care*. 19th ed. ISBN 978-1582122656. Available in PharmacyLibrary.
- Nelson LS, et al. *Goldfrank's Toxicologic Emergencies*. 11th ed. ISBN 978-1259859618. Available in AccessPharmacy.
- Roche V, et al. *Foye's Principles of Medicinal Chemistry*. 8^h ed. ISBN 978-1496385024.

Recommended Textbooks:

- Beale JM. *Wilson and Gisvold's Textbook of Organic Medicinal and Pharmaceutical Chemistry*. 12th ed. ISBN 978-0781779296.
- Bertino JS. *Pharmacogenomics: An Introduction and Clinical Perspective*. 1st ed. ISBN 978-0071741699. Available in AccessPharmacy.
- Golan DE. *Principles of Pharmacology: The Pathophysiologic Basis of Therapeutics*. 4th ed. ISBN 978-1451191004.
- Jameson JL. *Harrison's Principles of Internal Medicine*. 20th ed. ISBN 978-1-259-64403-0. Available in AccessPharmacy.
- Katzung BG. *Basic and Clinical Pharmacology*. 14th ed. ISBN 978-1259641152. Available in AccessPharmacy.
- LeFever Kee J. *Handbook of Fluids, Electrolytes, and Acid-Base Imbalances*. 3rd ed. ISBN 14353689. Available in Pharmacy E-Books.
- Morton DA. *The Big Picture: Gross Anatomy*. 1st ed. ISBN 978-0071476720. Available in AccessPharmacy.
- Murphy JE. *Clinical Pharmacokinetics*. 6th ed. ISBN 978-1585285365.
- Zdanowicz M. *Concepts in Pharmacogenomics*. 2nd ed. ISBN 978-1585285167.

Laptop

- Students are expected to bring laptop computers to the class each day for participation in on-line exercises or assessments. It is the responsibility of the students to make sure that the laptops are in working condition and meets the University and School of Pharmacy IT requirements. (See SOP Student Handbook). Materials, including a computer, brought into a class or exam room are subject to inspection and permission of the assigned or guest faculty. Computers used for exam purposes should be free of any writing, stickers, etc. that could be deemed as supporting potential academic dishonesty.

- **Audio (speaker & microphone) and video (camera) MUST be checked to be functional for classes and online exams.**
- Students should be ready at any time to share their screen, camera, audio with classmates/faculty for online course learning situations

Calculator

- Students are expected to bring a non-programmable calculator (e.g., TI-30XIIS, Casio fx-300ES Plus) to class. Calculators should not be used during an examination without instructor permission or instruction. Some exams (e.g., ExamSoft®) may use the software calculator.

Software/Technology must be tested in orientation/first week of courses to ensure functionality.

- ExamSoft® Exemplify
- Blackboard® Ultra
- Microsoft® Teams
- UTEP Zoom®
- iClicker REEF mobile app or website

Attendance

The attendance policy for the School of Pharmacy is outlined in the Student Handbook. It is expected that students should demonstrate their commitment to the profession and respect for faculty, guest speakers, and colleagues by attending all classes and arriving to class on time prepared for the day's lesson(s).

If a student has an excused absence (e.g., personal illness, family emergency), they must notify the course coordinator(s) and instructor(s) teaching that day **at least 2 hours** prior to the start of class.

If a student is seeking an excused absence, they should **immediately**:

1. Notify the course coordinator(s) and instructor(s) for any affected course day(s)
2. Submit the Student Absence Form online via <https://www.utep.edu/pharmacy/current-students/online-forms.html> (include supporting documentation to justify absence excusal)

Refer to the Handbook for more information regarding required documentation for submission to the Office of Student Affairs. If this process is not followed, absences will be unexcused, *and course faculty have no obligation to accommodate unexcused absences*. Additionally, absences will be considered unexcused until officially excused after approval from the Office of Student Affairs.

Classroom Etiquette

Students are expected to be professionals and will be treated as such unless circumstances deem otherwise. Any behavior that impairs student ability to learn will not be tolerated (e.g., side conversation, cell phone use, electronic device use for activities not related to coursework). Laptops may be used during class for taking notes. Using laptops for other activities than taking notes causes a disruption to the class around you.

Expectations of Students During Course

It is the responsibility of the **student** to monitor his/her progress during the course and see that they are maintaining the required competency level. Students should seek advice and assistance from the course facilitator as soon as he/she encounters any difficulty in the course.

Assignment submissions should be in a native file format as requested by the instructor (e.g., .docx, .ppt, .pdf, .mp4). The accessibility of embedded attachments or hyperlinks cannot be guaranteed by instructors. It is your responsibility to make sure these are uploaded appropriately and to reach out to the proper channel (e.g., Blackboard Support, UTEP Help Desk) if any technological issues are encountered.

Students are asked to log-in to Blackboard a minimum of three (3) times a week to check for updates and course progress. Students are highly encouraged to keep track of assignments and due dates using the “Calendar” function in Blackboard.

COVID Precautions

This course meets on campus during the semester, all CURRENT public health precautions/measures (e.g. CDC guidance) should be taken. For up-to-date UTEP polices, please see:

<https://www.utep.edu/resuming-campus-operations/guidance/index.html>

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let the course coordinator and Ms. Carmen Ramos, Director of Student Affairs (using Student Absence Form) know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to covidaction@utep.edu, so that the UTEP Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Center for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get the vaccine. If you still need the vaccine, it is widely available in the El Paso area, and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit epstrong.org

Evaluation and Grading Policy

Type of Assessment	% Course Grade
Learning Activities (e.g., Assignments, Quizzes, iClicker)	10
Exam 1 (~32 points)	13
Exam 2 (~32 pts)	13
Exam 3 (~52 pts)	20
Exam 4 (~48 pts)	18
Final Exam (~65 pts)	26
In order to pass ISBP IIIA2, average exam scores (excluding learning activities) must average a 70%	
Total	100

Assignment of grades:

- A = 90 – 100%**
- B = 80 – 89%**
- C = 70 – 79%**
- D = 60-69%**
- F = < 60%**

It is the policy of the course coordinator to round grades to the nearest whole number when submitting final grades (e.g., 69.5 → C, 79.5 → B). It is the responsibility of the **student** to monitor his/her progress during the course and see that he/she is maintaining the required competency level. Students should seek advice and assistance from the course facilitator as soon as he/she encounters any difficulty in the course.

Quizzes: Faculty may assign quizzes to supplement learning. All quizzes & assignments will be weighted for 10% of your total grade.

Assignments: In-class activities may consist of iClicker quizzes, case application activities, and team-based learning (iRAT, tRAT). All in-class activities and assignments will be weighted for 10% of your total grade (along with quizzes). iClicker points will be assigned as follows: 1 attendance point per day for responding to > 75% of quiz questions + 1 point per question for responses. Students must be in-person in order to receive iClicker credit. Completing iClicker questions while not being present will be viewed as academic dishonesty and reported to the Office of Student Conduct and Conflict Resolution (OSCCR).

Exams: There will be a total of five exams including the final exam. All exams (with the exception of the final) will be 110 minutes in duration. The exams will consist of true/false, matching, multiple choice, multiple answer (e.g. select all that apply), fill-in-the-blank, and free response/short essay questions. All exams will be administered via ExamSoft®. **Partial credit will NOT be given for select-all-that-apply questions. No back-tracking will be permitted.** (Like the NAPLEX). **Students must earn a minimum average of 70% across all 5 exams (70% average on combined exam score, excluding Learning Activities) in order to pass the class.**

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Late Assignments: Late assignments will receive a 1 letter grade (10%) grade deduction for each day the assignment is late, up to 5 days. **After 5 days, late assignments will receive a zero.** Exceptions to the late assignment policy include individual readiness assessment tests (iRATs) which must be completed prior to the start of class on team-based learning class in order to be accountable to your team members.

Questions Related to the Course and Grading/Exams

In general, questions related to the overall course should be directed to the coordinator. **Content/topic-specific questions** should be directed to the content instructor within **five (5) business days** of the material being presented.

Any questions concerning **assignments/exam grades** must be made to the **applicable instructor and course coordinator IN WRITING within five (5) business days** after the grades have been posted. Any grade challenges/re-grade requests must be submitted to the appropriate instructor in writing with appropriate rationale/evidence to support the re-grade request.

Missed Quizzes/Exams/Assignments – Excused/Unexcused Absences

Only students who miss an exam or class as a result of an **excused absence** will be allowed to make-up the assessment/assignment. Due to the nature of collaboration, team readiness assessment tests (tRATs) cannot be made up, but students will have the grade dropped from their score in the event of an excused absence.

Students should consult the UTEP School of Pharmacy **Student Handbook** for definitions and examples of excused absences.

- The course coordinator and faculty instructor **MUST** be notified **at least 2 hours** prior to the start of class or exam for the student to be excused.
- Students must follow the procedures in the Student Handbook to submit documentation using the Student Absence Form in order to procure an excused absence for missed exams.
- In the case of **religious holidays or professional conference attendance**, the student **MUST** notify the course coordinator **10 business days** prior to the exam or assignment. In the event the student will miss a final exam, they must notify the course coordinator at least six (6) weeks beforehand. Students should not assume that they can miss an exam or assignment for vacation or other personal conflicts.
- Any unexcused absence from an exam will result in a grade of zero for that exam.

The course coordinator will determine the time and date for a make-up exam, which will occur before the final exam period. If the student is unable to attend either the original exam or the make-up exam, the course coordinator is not required to provide additional opportunities for the student to make up the exam. The format of the make-up examination is at the discretion of the course coordinator, and may include any question type including, but not limited to, open-ended questions, an essay examination, or oral examinations.

Early Alert

Students who receive less than a 70% on an exam or have evidence of other factors associated with poor course performance (e.g., missing assignments, low class attendance) will receive an early alert notification via email. Students with an early alert will be required to meet with their faculty advisor and submit a plan for their self-directed learning/academic improvement to the course coordinator.

Remediation Policy

Please refer to the Student Handbook for end-of-course remediation policies and timelines. Students who earn less than a 70% in the course would be given the opportunity for end-of-course remediation provided they meet all eligibility requirements as stipulated in the Student Handbook.

Exam-Related Technology and Guidance

Online Assessment Requirements:

This course requires the use of ExamSoft®. Students are responsible for ensuring they have access to the online assessment system. Assessments will be disseminated before the due date. This requires students to download the assessment using an internet connection. It is the student's responsibility to maintain access to a reliable internet connection (with the rare exception of when UTEP's systems are down. Please refer to the Student Handbook for minimum operating system requirements. **Please note that the use of iPads for testing is NOT supported.** Students are responsible for having a back-up computer in the event Examplify is not working on their iPad. Students will not be given a paper exam as an alternative to an iPad device.

If students cannot access their online account, please contact **Adrian Enriquez** (aealonso@utep.edu) to resolve this issue **within five (5) business days of the first day of class**. Students are responsible for ensuring they have access to the online assessment system. Mr. Enriquez is **NOT available** for questions or laptop failures/requests **after business hours or on weekends**.

General Statement about Course Policy

The syllabus is subject to change to meet course needs, especially if there are unexpected disruptions or changes in class size, resources, etc. The most updated syllabus can be found on the course Blackboard shell. It is the student's responsibility to review the syllabus periodically for updates.

Additional Course Policies:

Refer to the Common Syllabus for additional course policies that apply to all School of Pharmacy courses.

UTEP and SOP Policy for Special Accommodations (ADA)

"If you have or suspect a disability and need classroom accommodations, you should contact the Center for Accommodations and Support Services (CASS) at 747-5148." You can also e-mail the office at cass@utep.edu or go by their office in Union Building East (Room 106). For additional information, visit the CASS website at <http://sa.utep.edu/cass/>.

Students must notify the course coordinator by Thursday, August 29th, 2024, if they will be using their accommodations. This is to allow sufficient time for the course coordinator to accommodate alternate exam-taking locations/times or any other accommodations approved by CASS.

School of Pharmacy
Fall – P3
Course # PHAR 6474 (4 Credit Hours) / Track Integrated Systems Based Pharmacotherapy (ISBP)
Integrated Systems Based Pharmacotherapy
Course Dates (August 26 – October 18, 2024)
Campbell Building Room 214
MTWTh: 1-2:50 pm
IPPE: 0 hrs/IPE: 0 hrs

PHAR6475: Course Calendar and Topic Outline

Date	Time (pm)	Lecture Number	Topics	Quizzes & Assignments	Instructor
Week 1 Module 1: Endocrine (Lectures 1-8)					
Mon 08/26	1-1:50	Lecture 1	Pathophysiology: Diabetic Ketoacidosis (DKA) and Hyperglycemic Hyperosmolar Syndrome (HHS)	WATCH: Course Overview DUE 08/28: Syllabus Quiz	Gordon/ Perez
	2-2:50	Lecture 2	Pathophysiology: Hyperglycemia in the Non-Critically Ill		Perez
Tues 08/27	1-1:50	Lecture 3	Pharmacology: Insulin		Perez
	2-2:50	Lecture 4	Pharmacology: Fluids and Electrolytes		Perez
Wed 08/28	1-1:50	Lecture 5	Pharmacotherapy: DKA and HHS		Perez
	2-2:50	Lecture 6	Pharmacotherapy: Hyperglycemia in the Non-Critically Ill		Perez
Thu 08/29	1-1:50	Lecture 7	Case-Based Learning	Quiz: DKA, HHS, Hyperglycemia Non-Critically Ill (08/31/2024)	Perez
	2-2:50	Lecture 8			Perez
Week 2 Module 2: Cardiology I (Lectures 9-16)					
Mon 09/02	NO CLASS: Labor Day				
Tue 09/03	1-1:50	Lecture 9	Hypertensive Crises <i>Pharmacology, Pharmacotherapy</i> READ: DiPiro Chapter 30: Hypertension (Section on Treatment of Hypertensive Urgencies and Emergencies) and 2017 ACC/AHA Guidelines (Only Section 11.2)		Singh
	2-2:50	Lecture 10	Hypertensive Crises <i>Pharmacotherapy</i>		Singh
Wed 09/04	1-2:50	Exam 1 (Module 1)			
Thu	1-1:50	Lecture 11	Acute ASCVD <i>Pathophysiology</i>		Singh

Date	Time (pm)	Lecture Number	Topics	Quizzes & Assignments	Instructor
09/05			READ: DiPiro Chapter 33: Acute Coronary Syndrome (Sections from Introduction to Pathophysiology)		
	2-2:50	Lecture 12	Acute ASCVD <i>Pharmacology</i> READ: Goodman & Gilman's Chapter 32: Blood Coagulation and Anticoagulant, Fibrinolytic, and Antiplatelet Drugs		Singh
Week 3					
Mon 09/09	1-1:50	Lecture 13	Acute ASCVD <i>Pharmacology</i>		Singh
	2-2:50	Lecture 14	Acute Coronary Syndromes <i>Pharmacotherapy</i> READ: 2014 AHA/ACC NSTEMI Guidelines		Singh
Tue 09/10	1-1:50	Lecture 15	Acute Coronary Syndromes <i>Pharmacotherapy</i>		Singh
	2-2:50	Lecture 16	Acute Coronary Syndromes <i>Pharmacotherapy</i>		Singh
Wed 09/11	Module 3: Cardiology II (Lectures 17-28 & 32)				
	1-1:50	Lecture 17	Ischemic Stroke <i>Pathophysiology</i>		Singh
	2-2:50	Lecture 18	Ischemic Stroke <i>Pharmacotherapy</i>		Singh
Thu 09/12	1-1:50	Lecture 19	Ischemic Stroke <i>Pharmacotherapy</i>		Singh
	2-2:50	Lecture 20	Antiarrhythmics <i>Pharmacology</i> READ: Goodman & Gilman's Chapter 30- Antiarrhythmic Drugs		Singh
Week 4					
Mon 09/16	1-2:50	Exam 2 (Module 2)			
Tue 09/17	1-1:50	Lecture 21	Antiarrhythmics <i>Medicinal Chemistry</i>		Weston
	2-2:50	Lecture 22	Atrial Fibrillation <i>Pharmacotherapy</i> READ: 2014 and 2019 Focused Update ACC/AHA/HRS Guidelines		Singh
Wed 09/18	1-1:50	Lecture 23	Atrial Fibrillation and Ventricular Arrhythmias <i>Pharmacotherapy</i>		Singh
	2-2:50	Lecture 24	Digoxin & Amiodarone <i>Clinical Kinetics/Toxicology</i>		Singh
Thu 09/19	1-1:50	Lecture 25	Acute Decompensated Heart Failure (ADHF) <i>Pathophysiology</i>		Singh
	2-2:50	Lecture 26	ADHF <i>Pharmacology</i>		Singh
Week 5					
Mon 09/23	1-1:50	Lecture 27	ADHF <i>Pharmacotherapy</i>		Singh
	2-2:50	Lecture 28	ADHF <i>Pharmacotherapy</i>		Singh
Tues 09/24	1-1:50	Lecture 29	Cardiology <i>Review/Case Application</i>		Singh
	2-2:50	Lecture 30	Cardiology <i>Review/Case Application</i>		Singh
Wed	1-1:50	Lecture 31	Cardiology <i>Review/Case Application</i>		Singh

Date	Time (pm)	Lecture Number	Topics	Quizzes & Assignments	Instructor
09/25	2-2:50	Lecture 32	PAH <i>Medicinal Chemistry</i>		Weston
Thu 09/26	Module 4: Gastroenterology (GI) (Lectures 33-44)				
	1-1:50	Lecture 33	Enteral Nutrition <i>Pharmacotherapy</i>		Christenberry
	2-2:50	Lecture 34	Enteral Nutrition <i>Pharmacotherapy</i>		Christenberry
Week 6					
Mon 09/30	1-2:50	Exam 3 (Module 3)			
Tue 10/01	1-1:50	Lecture 35	Parenteral Nutrition <i>Pharmacotherapy</i>	DUE 9/30: PN Pre-Assessment	Christenberry
	2-2:50	Lecture 36	Parenteral Nutrition <i>Pharmacotherapy</i>		Christenberry
Wed 10/02	1-1:50	Lecture 37	Parenteral Nutrition <i>Pharmacotherapy</i>		Christenberry
	2-2:50	Lecture 38	Acute & Chronic Pancreatitis <i>Pharmacotherapy</i>		Christenberry
Thu 10/03	1-1:50	Lecture 39	Liver Disease <i>Pathophysiology</i>	WATCH: Cirrhosis	Christenberry
	2-2:50	Lecture 40	Drug Dosing in Hepatic Impairment <i>Clinical Kinetics</i>	DUE 10/06: Hepatic Dose Adjustments (In-Class)	Christenberry
Week 7					
Mon 10/07	1-1:50	Lecture 41	Drug-Induced Liver Disease <i>Pharmacotherapy</i>		Christenberry
	2-2:50	Lecture 42	Cirrhosis & Metabolic dysfunction-Associated Steatotic Liver Disease (MASLD) <i>Pharmacotherapy</i>		Christenberry
Tue 10/08	1-1:50	Lecture 43	Cirrhosis & MASLD <i>Pharmacotherapy</i>		Christenberry
	2-2:50	Lecture 44	Cirrhosis & MASLD <i>Pharmacotherapy</i>		Christenberry
Wed 10/09	Module 5: Nephrology (Lectures 45-50)				
		Lecture 45* (asynchronous)	Renal Replacement Therapies <i>Pathophysiology/Pharmacokinetics</i> WATCH: RRT	DUE 10/09: RRT Quiz	Christenberry
	1-2:15	Lecture 46	Drug Dosing in AKI and CRRT <i>Clinical Kinetics</i>		Christenberry
Thu 10/10	1-1:50	Lecture 47	Acute Kidney Injury <i>Pathophysiology/Pharmacotherapy</i>		Christenberry
	2-2:50	Lecture 48	Acute Kidney Injury <i>Pharmacotherapy</i>		Christenberry
Week 8					
Mon 10/14	1-2:50	Exam 4 (Module 4)			
Tue		Lecture 49*	AKI/Drug-Induced Kidney Disease <i>Pharmacotherapy</i>		Christenberry

Date	Time (pm)	Lecture Number	Topics	Quizzes & Assignments	Instructor
10/15	Lecture 50*		Drug-Induced Kidney Disease <i>Pharmacotherapy</i>	DUE 10/16: DIKD Quiz	Christenberry
Wed 10/16	1-1:50	Cardiology Review			Singh
	2-2:50	Endocrine & GI/Nephro Review			Perez/ Christenberry
Final Exam – Thurs 10/17 1-3:45 PM – Tentative Comprehensive (Lectures 1-44) + Module 5 (Lectures 45-50)					

**indicates asynchronous class session*

Please note, other sessions may be moved asynchronous if needed. That information will be announced via Blackboard.