

# PHA5784C Patient Care IV: Gastrointestinal and Renal Disorders

Spring 2021

6 Credit Hours – [A-E Grading]

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*Fourth of an eight-course sequence that prepares the student to provide patient-centered care by serving as a collaborative interprofessional team-member who is an authority on pharmacotherapy. The course continues to prepare the student to be a collaborative team member since learning involves teamwork. This course focuses on providing patient-centered care to patients who have a gastrointestinal or renal disorder. Learners will develop, integrate, and apply knowledge from the foundational disciplines (i.e., **pharmaceutical, social/behavioral/administrative, and clinical sciences**) and apply the Pharmacists' Patient Care Process in solving case-based scenarios of patients with gastrointestinal and renal disorders.*

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## Teaching Partnership Leader

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See Appendix A. for Course Directory of Faculty and Staff Contact Information.

## Entrustable Professional Activities

This course will prepare you to perform the following activities which the public entrusts a Pharmacist to perform:

- Patient Care Provider Domain
  - 2. Analyze information to determine the effects of medication therapy, identify medication-related problems, and prioritize health-related needs.
    - ST2.1. Assess a patient's signs and symptoms to determine whether the patient can be treated within the scope of practice or requires a referral
    - ST2.3. Interpret laboratory test results
    - ST2.5. Assess a patient's health literacy using a validated screening tool
    - ST2.6. Compile a prioritized health-related problem list for a patient.

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- ST2.7. Evaluate an existing drug therapy regimen
  - 3. Establish patient-centered goals and create a care plan for a patient in collaboration with the patient, caregiver(s), and other health professionals that is evidence-based and cost-effective
    - ST3.2. Develop a treatment plan with a patient. (including recommend therapeutic alternatives and generic substitution)
    - ST3.3. Manage drug interactions.
    - ST3.4. Select monitoring parameters to determine the therapeutic and adverse effects related to the treatment plan.
    - ST3.6. Create a patient-specific education plan.
  - 4. Implement a care plan in collaboration with the patient, caregivers, and other health professionals.
    - ST4.1. Write a note that documents the findings, recommendations, and plan from a patient encounter.
    - ST4.2. Educate a patient regarding the appropriate use of a new medication, device to administer a medication, or self-monitoring test.
    - ST4.4. Assist a patient with behavior change (e.g., use shared decision making and motivational strategies).
  - 5. Follow-up and monitor a care plan.
    - ST5.2. Evaluate the selected monitoring parameters to determine the therapeutic and adverse effects related to the treatment plan.
    - ST5.3. Recommend modifications or adjustments to an existing medication therapy regimen based on patient response.
- Interprofessional Team Member Domain
  - 6. Collaborate as a member of an interprofessional team.
    - ST6.3. Communicate a patient's medication-related problem(s) to another health professional.
- Population Health Promoter Domain
  - 7. Identify patients at risk for prevalent diseases in a population.
    - ST7.1. Perform a screening assessment to identify patients at risk for prevalent diseases in a population (e.g., hypertension, diabetes, depression).
  - 8. Minimize adverse drug events and medication errors.
    - ST8.1. Assist in the identification of underlying system-associated causes of errors.
    - ST8.2. Report adverse drug events and medication errors to stakeholders.
- Information Master Domain
  - 12. Use evidence-based information to advance patient care.
    - ST12.1 Retrieve and analyze scientific literature to make a patient-specific recommendation.

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## Course-Level Objectives

Given a case of a patient with one or more of the above disorders/pharmacotherapy needs, Integrate knowledge and use clinical reasoning skills in accomplishing the following steps when managing a patient with the disease state:

- i. **Collect:** Gather subjective and objective information and analyze the data in order to understand the relevant medical/medication history and clinical status of the patient.
  1. Subjective and objective information is collected through comprehensive medication review with the patient, medical record review, pharmacy profile review, and communication with other members of the health care team.
  2. A holistic view is initiated during collection in order to consider physiological, psychological, and sociological variables of the patient and this view is maintained throughout the patient care process.
- ii. **Assess:** Assess the information collected and formulate a problem list consisting of the patient's active medical problems and medication therapy problems in order to prioritize medication therapy recommendations to achieve the patient's overall health goals.
  1. Assess the patient's active medical conditions taking into account clinical and patient goals of therapy.
  2. Assess the indication, effectiveness, safety, adherence and convenience (administration, access, affordability) of each medication the patient is taking.
  3. Include in the assessment an evaluation of risk factors, relevant psychosocial issues, and the need for preventative care or for referral to another healthcare practitioner for further evaluation
  4. Formulate a medication therapy problem list, classifying the patient's medication therapy problems based on indication, effectiveness, safety, and compliance.
  5. Prioritize the patient's medication therapy problems.
- iii. **Plan:** Develop an individualized patient-centered care plan in collaboration with other health care professionals and the patient/caregiver that is evidence-based and as affordable as possible.
  1. For each problem, create patient-centered goal(s) in collaboration with the patient/caregiver and other members of the healthcare team
  2. Develop a care plan to manage the patient's active medical conditions and resolve the identified medication therapy problems.
  3. Identify monitoring parameters to assess effectiveness, safety, adherence, and quality of life.
- iv. **Implement:** Implement the care plan in collaboration with other health care professionals and the patient/caregiver.
  1. For each condition and associated recommended strategy for resolving identified MTPs, provide the medication order in its entirety, including full drug name, dose, dosage form, route of administration, dosing interval, duration of therapy
    - a. Discuss the care plan with the patient.
    - b. Educate the patient on his/her medications (which may include explanations of medication action, the regimen or its proper discontinuation, proper medication use and storage, expected results and when to expect them, possible adverse effects, and when and how to follow-up or seek additional care.

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2. Where appropriate, contribute to coordination of care by providing documentation to other providers using an evidence-based method of communication, such as SBAR (Situation, Background, Assessment, Recommendation) or SOAP (Subjective, Objective, Assessment, Plan)
- v. **Follow-up with the Patient:** Monitor and evaluate the effectiveness of the care plan and modify the plan in collaboration with other health care professionals and the patient/caregiver.

## Course Pre-requisites

1. Completion of all Year 1 Pharm.D. program coursework including milestones.
2. PHA 5755 Principles of Medical Microbiology, Immunology, and Virology

## Course Co-requisites

1. PHA 5164L Professional Practice Skills Lab IV

## Course Outline

Please routinely check your campus calendar and the Canvas course site for any messages about changes in the schedule including meeting dates/times, deadlines, and room changes.

Date	Activity	Mod#	Unit Topic	Faculty	Contact
	Quiz: Self-Assessment	0	Online Pre-Quiz: Pathophysiology of the GI System		0.5
	Module	1	PUD and GERD	Erin St Onge	
1/18/21	Unit	1.1	Pharmacology of GI Drugs Part I	Adonice Khoury	1
	Lecture Video	1.1	Pharmacology of GI Drugs I	Adonice Khoury	
1/18/21	Unit	1.2	Medicinal Chemistry of GI Drugs	Chengguo Xing	1.25
	Lecture Video	1.2.1	Medicinal Chemistry of Gastrointestinal Drugs: Part 1	Chengguo Xing	
	Lecture Video	1.2.2	Medicinal Chemistry Proton Pump Inhibitors (PPIs)	Chengguo Xing	
1/19/21	Unit	1.3	Management of Peptic Ulcer Disease	Erin St Onge	1
	Lecture Video	1.3	Peptic Ulcer Disease (PUD)	Erin St Onge	
1/19/21	Unit	1.4	Management of GERD	Erin St Onge	1.25
	Lecture Video	1.4	Gastroesophageal Reflux Disease (GERD)	Erin St Onge	
1/20/21	Unit	1.5	Transcending Concept - Evidence-Based Practice	Karam Diaby	1
	Lecture Video	1.5	Interpreting the Results of a Meta-Analysis	Karam Diaby	
1/20/21	Unit	1.6	Transcending Concept - Self Care 2	Erin St Onge	0.75

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	Lecture Video	1.6	Self-Care for Heartburn and Dyspepsia	Erin St Onge	
1/20/21	Unit	1.7	Pharmacogenomics for Gastrointestinal Disorders	Emily Cicali	0.5
	Lecture Video	1.7	Pharmacogenomics for Gastrointestinal Disorders	Emily Cicali	
1/21/21 10:40 am - 12:35 pm	Active Learning Session-- Classroom VC	1	Active Learning Session 1a: Ulcers & GERD (2 hours) <b>QUIZ #1</b>	Adonice Khoury, Chengguo Xing, Erin St Onge*, Karam Diaby	1
1/21/21 1:55 - 3:50 pm	Active Learning Session-- Classroom VC	1	Active Learning Session 1b: Ulcers & GERD (2 hours)	Adonice Khoury, Chengguo Xing, Erin St Onge*, Karam Diaby, Emily Cicali	1
	Module	2	Common Gastrointestinal Complaints and Inflammatory Bowel Disease	Adonice Khoury	
1/22/21	Unit	2.1	Pharmacology of GI Drugs Part II: Drugs for Nausea & Vomiting, Constipation, Diarrhea, and IBS	Adonice Khoury	2
	Lecture Video	2.1.1	Pharmacology of GI Drugs Part II: Drugs for Nausea and Vomiting - Anti-Emetic Drugs I	Adonice Khoury	
	Lecture Video	2.1.2	Pharmacology of Anti-Emetic Drugs II	Adonice Khoury	
	Lecture Video	2.1.3	Anti-Diarrheal Agents	Adonice Khoury	
	Lecture Video	2.1.4	Pharmacology of Drugs for Constipation	Adonice Khoury	
	Lecture Video	2.1.5	Pharmacology of Drugs for Irritable Bowel Syndrome (IBS)	Adonice Khoury	
1/22/21	Unit	2.2	Medicinal Chemistry of GI Drugs II	Chengguo Xing	0.5
	Lecture Video	2.2.1	Medicinal Chemistry of GI Drug: Part II	Chengguo Xing	
1/22/21	Unit	2.3	Management of Nausea & Vomiting—including Self-care	Stacy Miller	1.5
	Lecture Video	2.3	Nausea and Vomiting	Stacy Miller	
	Reading	2.3	<u>Guidelines Reading</u> <a href="http://pmj.bmj.com/content/92/1083/34.full.pdf+html">http://pmj.bmj.com/content/92/1083/34.full.pdf+html</a>	Stacy Miller	
1/25	Active Learning	2 – 2.3	Active Learning Session 2a: Common GI Complaints (2 hours)	Adonice Khoury*,	1

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10:40 am - 12:35 pm	Session-- Classroom VC		<b>QUIZ #2</b>	Chengguo Xing, Stacy Miller	
1/26/21	Unit	2.4	Management of Diarrhea, Constipation, Irritable Bowel Syndrome	Stacy Miller	2
	Video Other	2.4	What Is IBS? A Gastroenterologist Explains <a href="https://www.healthination.com/health/what-is-irritable-bowel-syndrome?pl=irritable-bowel-syndrome">https://www.healthination.com/health/what-is-irritable-bowel-syndrome?pl=irritable-bowel-syndrome</a>	Stacy Miller	
	Video Other	2.4	Irritable Bowel Syndrome Overview   GI Society <a href="https://www.youtube.com/watch?v=Ve6eWR8nivU">https://www.youtube.com/watch?v=Ve6eWR8nivU</a>	Stacy Miller	
	Video Other	2.4	Irritable Bowel Syndrome Treatments   GI Society <a href="https://www.youtube.com/watch?v=dSSXOcGG_HE">https://www.youtube.com/watch?v=dSSXOcGG_HE</a>	Stacy Miller	
	Lecture Video	2.4.1	Management of Diarrhea	Stacy Miller	
	Lecture Video	2.4.2	Constipation	Stacy Miller	
	Lecture Video	2.4.3	IBS	Stacy Miller	
1/26/21	Unit	2.5	Transcending Concept - Behavioral: Stress	Teresa Cavanaugh	0.5
	Reading-- PDF	2.5	Konturek PC, Brzozowski T, Konturek SJ. Stress and the gut: pathophysiology, clinical consequences, diagnostic approach and treatment options. J Physiol Pharmacol. 2011;62(6):591–599. -- Pages 591-end of first paragraph on pg. 595	Teresa Cavanaugh	
	Video Other	2.5	How stress affects your body - Sharon Horesh Bergquist <a href="https://ed.ted.com/lessons/how-stress-affects-your-body-sharon-horesh-bergquist%20">https://ed.ted.com/lessons/how-stress-affects-your-body-sharon-horesh-bergquist%20</a>	Teresa Cavanaugh	
	Video	2.5	How to make Stress For Friend, Kelley McGonigal	Teresa Cavanaugh	
	Quiz (Online/Self-Assessment)	2.5	Self-Assess: Stress and the Gut Self-Assessment (Ungraded)	Teresa Cavanaugh	
1/26/21	Unit	2.6	Transcending Concept - Self-care 1: Herbals and supplements in digestive disorders	Oliver Grundmann	1.5
	Lecture Video	2.6	Self-care -- GI disorders supplement use	Oliver Grundmann	
1/27 8:30 - 10:25 am	Active Learning Session-- Classroom VC	2.4- 2.6	Active Learning Session 2b: Common GI Complaints (2 hours) <b>QUIZ #3</b>	Teresa Cavanaugh*, Oliver Grundmann, Stacy Miller	1
1/28/21	Unit	2.7	Pharmacology of Anti-inflammatory Agents: Aminosalicylates, Azathioprine, Biologicals	Guillaume de Lartigue	2.5

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	Lecture Video	2.7.1	Pharmacology of Anti-inflammatory Agents	Guillaume de Lartigue	
	Watch	2.7.2	Making the Switch: The use of biosimilars in IBD Management: <a href="https://www.youtube.com/watch?v=hK-EeKn0m6M">https://www.youtube.com/watch?v=hK-EeKn0m6M</a>	Guillaume de Lartigue	
1/28/21	Unit	2.8	Medicinal Chemistry of Anti-inflammatory Agents: Aminosalicylates, Azathioprine, Biologicals	Chengguo Xing	0.5
	Lecture Video	2.8	Medicinal Chemistry of Anti-inflammatory Agents	Chengguo Xing	
1/28/21	Unit	2.9	Management of Inflammatory Bowel Disease	Adonice Khoury	2.5
	Reading-- PDF	2.9	Scribano, et al. "Use of antibiotics in the treatment of Crohn's disease." World J Gastroenterol 19.5 (2013): 648-653.	Adonice Khoury	
	Lecture Video	2.9.1	Inflammatory Bowel Disease (IBD) Part 1: Disease Overview and Intro to Treatment	Adonice Khoury	
	Lecture Video	2.9.2	Inflammatory Bowel Disease (IBD) Part 2: Evidence-Based Patient Management	Adonice Khoury	
1/29 8:30 - 10:25 am	Active Learning Session-- Classroom VC	2-2.9.2	Active Learning Session 2c: Inflammatory Bowel Disease (2 hours) <b>QUIZ #4</b>	Adonice Khoury*, Chengguo Xing, Guillaume de Lartigue	1
2/1	Exam	1-2	Exam 1	Christina DeRemer	2.5
	Module	3	Hepatic Disease	Lindsey Childs-Kean	
2/2/21	Unit	3.1	Pharmacology of Hepatitis Antivirals	Lindsey Childs-Kean	1
	Lecture Video	3.1	Pharmacology of Hepatitis Antivirals	Lindsey Childs-Kean	
2/2/21	Unit	3.2	Management of Viral Hepatitis	Lindsey Childs-Kean	1
	Lecture Video	3.2	Management of Viral Hepatitis	Lindsey Childs-Kean	
2/3/21	Unit	3.3	Management of Portal Hypertension & Cirrhosis	Adonice Khoury	1.5
	Lecture Video	3.3.1	Cirrhosis and Portal Hypertension Part 1	Adonice Khoury	
	Lecture Video	3.3.2	Cirrhosis and Portal Hypertension Part 2	Adonice Khoury	
2/3/21	Unit	3.4	Transcending Concept - Pharmacokinetics: PKDosing in hepatic dysfunction	Lisa Vandervoort	0.5
	Lecture Video	3.4	Transcending Concept: PKDosing in hepatic dysfunction	Lisa Vandervoort	

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2/3/21	Unit	3.5	Transcending Concept - Drug Delivery Systems: Drug Administration in Patients with GI Disorders	Lisa M Vandervoort	0.5
	Lecture Video	3.5	Administering Medications Through Enteral Tubes	Lisa M Vandervoort	
2/3/21	Unit	3.6	Management of Drug Interactions	Lisa M Vandervoort	0.5
	Lecture Video	3.6	How to Assess Drug-Drug interactions	Lisa M Vandervoort	
2/3/21	Unit	3.7	Transcending Concept - Communications - Patients: Communicating with patients when an error occurs	Kristin Wiisanen	0.5
	Lecture Video	3.7	Communicating with patients when an error occurs	Kristin Wiisanen	
2/4 10:40 am - 12:35 pm	Active Learning Session-- Classroom VC	3-3.7	Active Learning Session 3a: Cirrhosis and Hepatitis (2 hours)  QUIZ #5	Lindsey Childs-Kean, Kristin Wiisanen, Lisa Vandervoort, Adonice Khoury	1
2/4 1:55 - 3:50 pm	Active Learning Session-- Classroom VC	3-3.7	Active Learning Session 3b: Cirrhosis and Hepatitis (2 hours)	Adonice Khoury, Lisa Vandervoort,	1
	Module	4	Gastrointestinal Infections	Lindsey Childs-Kean	
2/5/21	Unit	4.1	Management of Gastrointestinal Infections and C. Diff	Lindsey Childs-Kean	1
	Lecture Video	4.1	Management of GI Infections	Lindsey Childs-Kean	
2/5/21	Unit	4.2	Management of Intra-abdominal Infections	John Allen	1
	Lecture Video	4.2.1	Intra-abdominal Infections-Part I: Background and Clinical Presentation	John Allen	
	Lecture Video	4.2.2	Intra-Abdominal Infections-Part 2: Management	John Allen	
2/5/21	Unit	4.3	Transcending Concept - Interprofessional Communication: Present Oral/Written Plan Using Evidence	Katherine L Vogel Anderson	0.5
	Lecture Video	4.3	Transcending Concept - Interprofessional Communication: Present Oral/Written Plan Using Evidence	Katherine L Vogel Anderson	
2/5/21	Unit	4.4	Transcending Concept - Communications - Patients: MI	Teresa Roane	1.75



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	Lecture Video	4.4.1	Intro to comMIt modules	Teresa Roane	
	Other	4.4.2	comMIt elearning Module 4: Developing Rapport and the Synergy of MI	Teresa Roane	
2/8 10:40 am - 12:35 pm	Active Learning Session-- Classroom VC	4- 4.4.2	Active Learning Session 4a: Gastrointestinal Infections and Communications (2 hours)  <b>QUIZ #6</b>	John Allen, Katherine L Vogel Anderson, Lindsey Childs-Kean, Teresa Roane	1
2/8 1:55 - 3:50 pm	Active Learning Session-- Classroom VC	4- 4.4.2	Active Learning Session 4b: Gastrointestinal Infections and Communications (2 hours)  <b>Graded Assessment</b>	John Allen, Katherine L Vogel Anderson, Lindsey Childs-Kean, Teresa Roane	1
	Assignment (Graded)		ALS 4b Graded Assignment		
	Module	5	Nutrition & Weight Management	Carol Motycka	
2/9/21	Unit	5.1	Med Chem, Pharmacology and Intro to Pharmacotherapy of Vitamins	Robert W Huigens III	0.75
	Lecture Video	5.1	Medicinal Chemistry of Vitamins	Robert W Huigens III	
	Other	5.1	Self-Assess: Know your numbers!	Carol Motycka	
2/9/21	Unit	5.2	Effects of Vitamin Deficiencies	Carol Motycka	0.5
	Reading	5.2	OTC Handbook for Non Prescription Drugs--Chapter 22 (Pages 390-395)	Carol Motycka	
	Lecture Video	5.2	Thinking About Taking a Dietary Supplement?	Carol Motycka	
	Lecture Video	5.2	Dietary Supplements--What you need to know	Carol Motycka	
2/9/21	Unit	5.3	Introduction to Obesity	Carol Motycka	0.5
	Lecture Video	5.3	Introduction to Obesity	Carol Motycka	
2/10/21	Unit	5.4	Pharmacology of Weight Loss Agents/Stimulants	Joanna Peris	1
	Lecture Video	5.4	Pharmacology of Weight Loss Agents	Joanna Peris	

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2/10/21	Unit	5.5	Med Chem of Weight Loss Agents/Stimulants	Robert W Huigens III	0.25
	Lecture Video	5.5	Med Chem of Weight Loss Agents/Stimulants	Robert W Huigens III	
2/11 8:30 - 10:25 am	Active Learning Session-- Classroom VC	5.1-5.5	Active Learning Session 5a: Weight Loss (2 hours) QUIZ #7	Carol Motycka, Joanna Peris	1
2/11/21	Unit	5.6	Pharmacotherapy of Weight loss Agents	Carol Motycka	1
	Lecture Video	5.6	Pharmacotherapy of Weight Loss medications	Carol Motycka	
2/11/21	Unit	5.7	Pediatric Obesity	Carol Motycka	1
	Lecture Video	5.7.1	Pediatric Obesity	Carol Motycka	
2/11/21	Unit	5.8	Transcending Concept - Specialized Populations: Obesity and Bariatric Dosing	Carol Motycka	1
	Lecture Video	5.8.1	Obesity and Bariatric Surgery Dosing	Carol Motycka	
2/11/21	Unit	5.9	Transcending Concept - Self-care 1: herbals & Supplements used in weight loss; sports nutrition	Oliver Grundmann	1
	Lecture Video	5.9.1	Weight Management Supplements	Oliver Grundmann	
	Lecture Video	5.9.2	Sports Nutrition	Oliver Grundmann	
2/12 8:30 - 10:25 am	Active Learning Session-- Classroom VC	5.6-5.9	Active Learning Session 5b: Weight Loss and Vitamins (2 hours) QUIZ #8	Carol Motycka, Joanna Peris, Oliver Grundmann,	1
	Module	6	Colorectal Cancer	David DeRemer	
2/12/21	Unit	6.1	Management of Colorectal Cancer	David DeRemer	1.5
	Lecture Video	6.1	Management of Colorectal Cancer	David DeRemer	
2/12/21	Unit	6.2	Transcending Concept - Health and Wellness: Colorectal Screening	David DeRemer	1
	Lecture Video	6.2	Colorectal Screening	David DeRemer	
2/12/21	Unit	6.3	Transcending Concept: Pharmacoeconomics	Karam Diaby	1
	Lecture Video	6.3	Transcending Concept: Pharmacoeconomics	Karam Diaby	

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2/15 8:30 - 10:25 am	Active Learning Session-- Classroom VC	6-6.3	Active Learning Session 6: Colorectal Cancer (2 hours) <b>QUIZ #9</b>	David DeRemer, Karam Diaby	1
2/17	Exam	3-6	Exam 2	Christina DeRemer	2.5
	Module	7	Module 07: Introduction to the Renal System	Christina DeRemer	
2/18/21	Unit	7.1	Unit 7.1 Pathophysiology of the Renal System	Jenny Wilkerson	1
	Lecture Video	7.1	Pathophysiology of the Renal System	Jenny Wilkerson	
2/18/21	Unit	7.2	Unit 7.2 Fluids and Electrolytes	Carinda Feild	1.5
	Lecture Video	7.2.1	IV Fluids	Carinda Feild	
	Lecture Video	7.2.2	Electrolytes Disorder	Carinda Feild	
2/19/21	Unit	7.3	Unit 7.3 Acid-Base Balance	Carinda Feild	1
	Lecture Video	7.3	Acid-Base Disorder	Carinda Feild	
2/19/21	Unit	7.4	Unit 7.4 Estimating Renal Function	Christina DeRemer	1
	Lecture Video	7.4.1	Estimating Renal Function - Clinical Examples	Christina DeRemer	
2/19/21	Lecture Video	7.5	Transcending Concept - Pharmacokinetic: Dosing in Renal Dysfunction	Vandervoort	0.5
	Lecture Video	7.5.1	Transcending Concept - Pharmacokinetic: Dosing in Renal Dysfunction	Vandervoort	
2/22 10:40 am - 12:35 pm	Active Learning Session-- Classroom VC	7-7.4	Active Learning Session 7a: Renal Impairment (2 hours) <b>QUIZ #10</b>	Christina DeRemer, Jenny Wilkerson, Adonice Khoury, Carinda Feild	1
2/22 1:55 - 3:50 pm	Active Learning Session-- Classroom VC	7-7.4	Active Learning Session 7b: Renal Impairment (2 hours) <b>Graded assessment</b>	Christina DeRemer, Jenny Wilkerson, Adonice Khoury, Carinda Feild	1
			Graded assignment -NEW		

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	Module	8	Renal Failure & Disease	Christina DeRemer	
2/23/21	Unit	8.1	Acute Kidney Injury	Christina DeRemer	1.5
	Lecture Video	8.1.1	Acute Kidney Injury-Part 1	Christina DeRemer	
	Lecture Video	8.1.2	Acute Kidney Injury-Part 2	Christina DeRemer	
2/23/21	Unit	8.2	Drug-Induced Kidney Disease	Christina DeRemer	1.5
	Lecture Video	8.2.1	Drug-Induced Kidney Disease	Christina DeRemer	
	Lecture Video	8.2.2	<u>Video of Drugs Effects on Renal Hemodynamics (2:35)</u> <a href="https://youtu.be/dXegerFJgCs">https://youtu.be/dXegerFJgCs</a>	Christina DeRemer	
2/24 10:40 am - 12:35 pm	Active Learning Session-- Classroom VC	8- 8.2.2	Active Learning Session 8a: Acute Renal Failure (2 hours)  QUIZ #11	Christina DeRemer	1
2/24/21	Unit	8.3	Chronic Kidney Disease	Christina DeRemer	3
	Lecture Video	8.3.1	Introduction to Chronic Kidney Disease	Christina DeRemer	
	Lecture Video	8.3.2	Chronic Kidney Disease: Anemia	Christina DeRemer	
	Lecture Video	8.3.3	Chronic Kidney Disease: Mineral & Bone Disorders	Christina DeRemer	
	Lecture Video	8.3.4	Chronic Kidney Disease: Complications Wrap-up	Christina DeRemer	
	Lecture Video	8.3.5	Chronic Kidney Disease: ESRD & Patient Case	Christina DeRemer	
	Video Other	8.3	Living Well with Kidney Failure, Part 5: Hemodialysis	Christina DeRemer	
	Video Other	8.3	Living Well with Kidney Failure, Part 4: Peritoneal Dialysis	Christina DeRemer	
2/25/21	Unit	8.4	Transcending Concept - Informatics: Foundation Informatics – Data Quality in CDSS	Khoa Nguyen	0.5
	Lecture Video	8.4	Transcending Concept: Health Information & Informatics—Foundation Informatics – Data Quality in CDSS	Khoa Nguyen	
2/25/21	Unit	8.5	Transcending Concept - Pharmacokinetics: Drug Individualization—Dialysis; Hemodialysis and Peritoneal Dialysis	Christina DeRemer	2

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	Reading	8.5	Heintz et al. article, p. 562-577: "Antimicrobial Dosing Concepts and Recommendations for Critically Ill Adult Patients Receiving Continuous Renal Replacement Therapy or Intermittent Hemodialysis"	Christina DeRemer,	
	Reading	8.5	p. 1129-1134, beginning at "Drug Dosing Considerations for HD Patients," of Accessibility score: Low Click to improve Matzke et al. article: "Drug Dosing Consideration in Patients with Acute and Chronic Kidney Disease – A Clinical Update from Kidney Disease: Improving Global Outcomes (KDIGO)"	Christina DeRemer,	
2/25/21	Unit	8.6	Transcending Concept: Medication Safety (HIT – New Problems-New Solutions)	Christina DeRemer	0.5
	Lecture Video	8.6	Transcending Concept - Patient Safety/Med Errors; Root Cause Analysis: Medication Safety (HIT – New Problems-New Solutions)	Christina DeRemer	
2/25/21	Unit	8.7	Transcending Concept: Health Disparities; Health Literacy—Renal Patients	Christina DeRemer	1
	Reading--PDF	8.7.1	Read (time estimate: 35-40 minutes): Accessibility score: High Click to improve National Institute of Diabetes and Digestive and Kidney Diseases. National Kidney Disease Education Program (NKDEP): reducing disparities, improving care—a summary report. Published January 2014.	Christina DeRemer	
	Reading--Web		Read all of the summary report. Then, on p.8, click on the following link, Chronic Kidney Disease and Medicines: What You Need to Know and read about ten ways to manage kidney disease. (Links to an external site.)Links to an external site.	Christina DeRemer	
	Video Other		Living Well with Kidney Failure, Part 6: Living Well (Links to an external site.)Links to an external site.	Christina DeRemer	
2/25/21	Unit	8.8	Transcending Concept - Law & Ethics: Professionalism	Bill Allen	0.5
	Lecture Video	8.8	Distributive Justice in Allocation of Dialysis & Kidney Transplants	Bill Allen	
2/26 10:40 am - 12:35 pm	Active Learning Session-- Classroom VC	10	Active Learning Session 8b: Chronic Renal Failure (2 hours)  QUIZ #12	Christina DeRemer, Khoa Nguyen	1
2/26 1:55 - 3:50 pm	Active Learning Session-- Classroom VC	10	Active Learning Session 8c: Chronic Renal Failure (2 hours)	Christina DeRemer, Khoa Nguyen	1
	Module	9	Infectious Diseases of the Kidney		

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2/26/21	Unit	9.1	Management of Pyelonephritis	Barbara Santevecchi	0.5
	Lecture Video	9.1	Management of Pyelonephritis	Barbara Santevecchi	
3/1/21	Unit	9.2	Management of Complicated UTIs	Barbara Santevecchi	0.75
	Lecture Video	9.2	Management of Complicated UTIs	Barbara Santevecchi	
3/1/21	Unit	9.3	Catheter associated UTI	Barbara Santevecchi	0.5
	Lecture Video	9.3	Catheter associated UTI	Barbara Santevecchi	
3/1/21	Unit	9.4	Candiduria	Barbara Santevecchi	0.5
	Lecture Video	9.4	Candiduria	Barbara Santevecchi	
3/1/21	Unit	9.5	Prostatitis	Barbara Santevecchi	0.5
	Lecture Video	9.5	Acute Bacterial Prostatitis	Barbara Santevecchi	
3/1 1:55 - 3:50 pm	Active Learning Session-- Classroom VC	11	Active Learning Session 9: Complicated UTIs (2 hours) <b>QUIZ #13</b>	Barbara Santevecchi	1
3/3 8:30 am - 12:35 pm	Active Learning Session-- Classroom VC	12	PC4 Capstone (4 hours)	Adonice Khoury, Barbara Santevecchi, Carol Motycka, Christina DeRemer, David DeRemer, Erin St Onge, Lindsey Childs-Kean, Field, C	2
	Assignment (Graded)		Graded Assignment		
3/4	Exam	1-9	Final Exam: Modules 1-9 (2.5 hours)	Christina DeRemer	
			Total Contact Hours		87.75

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## Required Textbooks/Readings

1. Foye WO, Lemke T, Williams DA. Foye's Principles of Medicinal Chemistry, Wolters Kluwer Health/Lippincott Williams & Wilkins, Philadelphia, PA, 7<sup>th</sup> Edition, 2013. ISBN-13:978-1609133450; ISBN-10:1609133455
  - Not available via HSC Library
  - Previously purchased for PHA5782C Patient Care II
2. Brunton L. Goodman and Gilman's The Pharmacological Basis of Therapeutics, McGraw-Hill Professional, New York, NY, 13<sup>th</sup> Edition, 2018. ISBN-13: 978-1259584732; ISBN-10: 1259584739
  - Available via HSC Library – Access Pharmacy
3. Dipiro, J, Talbert R, Yee G, Matzke G, Wells B, Posey L. Pharmacotherapy – A pathophysiologic approach. McGraw-Hill Professional, New York, NY, 10<sup>th</sup> Edition, 2017. ISBN-13: 978-1259587481; ISBN-10: 1259587487
  - Available via HSC Library – Access Pharmacy
4. Krinsky DL, Ferreri SP, Hemstreet B, et al. Handbook of nonprescription drugs: An interactive approach to self-care.
  - Not available via HSC Library
  - Previously purchased for PHA5781 Patient Care I

Use [UF VPN to access UF Libraries Resources](#) when off-campus. The UF HSC library staff can assist you with questions or issues related to accessing online library materials. For assistance contact your College of Pharmacy librarian or visit the [HSC Library Website](#) at this URL: <http://www.library.health.ufl.edu/>

## Suggested Textbooks/Readings

Suggested readings may be posted in Canvas.

## Other Required Learning Resources

Non-programmable calculators are required for this course.

## Materials & Supplies Fees

None

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## Student Evaluation & Grading

Evaluation Methods and How Grades are calculated.

Assessment Item	Grade Percentage
iRATs [N=13]	15%
tRATs [N=13]	5%
Exam 1	20%
Exam 2	20%
Exam 3 (Final Exam)	28%
SOAP note submission	4%
Medication List Assessment	4%
Capstone Submission	4%
Total	100%

Description of graded assessments:

Medication List Assessment: this will be introduced during the ALS 4. The intent is to outline working through patients with a patient care approach starting with medications and extrapolating information to theorize disease states. Exploration of medication indications, education and monitoring along with adjustments will be a core learning factor. All students will complete 2 case evaluations, one with instruction that participation will be graded, but content will be coached and a second completion that will be individually graded. A rubric and additional details will be shared during the ALS 4 intro to case evaluations.

SOAP note submission: this will be completed in module 7 outside the ALS and use a template format to guide the completion of a full SOAP note with focus on medication adjustment in patients with renal changes. Rubric will be supplied at time of note assignment

Capstone: this graded assignment will be completed within the class session and vary from short answer to multiple choice type activities.



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Table 1. Grading Scale

**Rounding of grades:**

Final grades in Canvas will be rounded to the 2<sup>nd</sup> decimal place. If the decimal is X.495 or higher, Canvas will round the grade to X.50. The above scale depicts this policy and grades are determined accordingly. Grade assignment is made using this policy and **NO EXCEPTIONS** will be made in situations where a student's grade is "close."

**Educational Technology Use**

The following technology below will be used during the course and the student must have the appropriate technology and software.

1. ExamSoft™ Testing Platform
2. Canvas™ Learning Management System

For technical support, navigate to [Educational Technology and IT Support Contact Information](#) at this URL:

<http://curriculum.pharmacy.ufl.edu/current-students/technical-help/>

**Pharm.D. Course Policies**

The Policies in the following link apply to this course. Review the [Pharm.D. Course Policies](#) carefully, at this URL: <http://curriculum.pharmacy.ufl.edu/current-students/course-policies/>

Percentage Range	Letter Grade
92.50-100%	A
89.50-92.49%	A-
86.50-89.49%	B+
82.50-86.49%	B
79.50-82.49%	B-
76.50-79.49%	C+
72.50-76.49%	C
69.50-72.49%	C-
66.50-69.49%	D+
62.50-66.49%	D
59.50-62.49%	D-
< 59.50%	E

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# Appendix A. Course Directory

## Teaching Partnership Leader/Course Director:

Christina DeRemer, PharmD

- Email: [cderemer@ufl.edu](mailto:cderemer@ufl.edu)
- Office: GNV
- Phone: 352-273-6224
- Office Hours: Posted on canvas

### Questions to Ask:

- Questions about grades
- Concerns about performance
- Guidance when there are performance problems (failing grades)
- General questions about content

## Academic Coordinator:

Name: Mistie Merrill

Email: [mmerrill@cop.ufl.edu](mailto:mmerrill@cop.ufl.edu)

Office: HPNP 4312

Phone: (352)-273-5617

Office Hours: By appointment ONLY

## Instructional Designer:

Name: Julie Thomas, M.Ed.

Email: [julie.thomas@ufl.edu](mailto:julie.thomas@ufl.edu)

Office: HPNP 4309

## Educational Coordinators:

McKenzie Wallen

Email: [mwallen@cop.ufl.edu](mailto:mwallen@cop.ufl.edu)

Office: Jacksonville Campus

Iverta Allen, M.P.A.

Email: [iallen1@cop.ufl.edu](mailto:iallen1@cop.ufl.edu)

Office: Orlando Campus

### Questions to Ask:

- Issues related to course policies (absences, make up exams, missed attendance)
- Absence requests (Only the Academic Coordinator handles absence requests)
- Questions about dates, deadlines, meeting place
- Availability of handouts and other course materials
- Assignment directions
- Questions about grade entries gradebook (missing grades, wrong grade)

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- Assistance with ExamSoft® (Distant campus students may contact Education Coordinator for use of SofTest and assistance during exams. The Academic Coordinator is the contact person for issues related to grading and posting of ExamSoft grades)

## **Other Teaching Partnership Faculty Members:**

1. John Allen, PharmD
2. William Allen, JD, MDiv
3. Teresa Cavanaugh, PharmD
4. Lindsey Childs-Kean, PharmD
5. Guillame de Lartigue, PhD
6. David DeRemer, PharmD
7. Karam Diaby, PhD, MSc
8. Carinda Field, PharmD
9. Oliver Grundmann, PhD
10. Robert W. Huigens, III, PhD
11. Adonice Khoury, PharmD
12. Khoa Nguyen, PharmD
13. Carol Motycka, PharmD
14. Joanna Peris, PhD
15. Erin St. Onge, PharmD
16. Barbara Santevecchi, PharmD
17. Lisa Vandervoort, PharmD
18. Katherine Vogel-Anderson, PharmD
19. Kristin Wiisanen, PharmD
20. Jenny Wilkerson
21. Chengguo (Chris) Xing, PhD