

PHA5878C: Patient Care 3

Introduction to Cardiovascular and Pulmonary Disease

Fall 2023
6 Credit Hours – [A-E Grading]

This is the third 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. This course focuses on providing patient-centered care to patients who have cardiovascular and pulmonary disorders. 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 cardiovascular and pulmonary diseases.

Teaching Partnership Leaders

Katie Vogel Anderson, Pharm.D., BCACP, FCCP

- Email: kvanderson@cop.ufl.edu
- Office: Room 3313, HPNP
- Phone: 352-294-5420

Office Hours: Please see the Canvas course site for posted office hours

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:

Collect information to identify a patient's medication-related problems and health-related needs.

ST1.4. Use health records to determine a patient's health-related needs relevant to setting of care and purpose of the encounter.

2. Analyze information to determine the effects of medication therapy, identify medication-related problems, and prioritize health-related needs.

ST2.3. Interpret laboratory test results

ST 2.3b. Interpret data related to personalized medicine.

ST2.4. Perform a comprehensive medication review (CMR) for a patient

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
 - ST3.1. Follow an evidence-based disease management protocol.
 - ST3.2. Develop a treatment plan with a patient (including recommend therapeutic alternatives and generic substitution)
 - ST3.4. Select monitoring parameters to determine the therapeutic and adverse effects related to the treatment 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.
 - ST4.4. Assist a patient with behavior change (e.g., use shared decision making and motivational strategies).

5. Follow-up and monitor a care plan.
 - ST5.3. Recommend modifications or adjustments to an existing medication therapy regimen based on patient response.

6. Collaborate as a member of an interprofessional team.
 - ST6.4. Use setting appropriate communication skills when interacting with others.

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).

9. Maximize the appropriate use of medications in a population.
 - ST9.2. Apply cost-benefit, formulary, and/or epidemiology principles to medication-related decisions.

12. Use evidence-based information to advance patient care.
 - ST12.1. Retrieve and analyze scientific literature to make a patient-specific recommendation.

Course-Level Objectives

Upon completion of this course, the student will be able to:

Given a case of a patient with one or more of the above disorders/pharmacotherapy needs, integrate knowledge and use clinical reasoning skills to accomplish the following steps:

1. **Collect:** Gather subjective and objective information and analyze the data to understand the relevant medical/medication history and clinical status of the patient.
 - a. 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.

- b. 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.
2. **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.
 - a. Assess the patient's active medical conditions, taking into account clinical and patient goals of therapy.
 - b. Assess the indication, effectiveness, safety, adherence and convenience (administration, access, affordability) of each medication the patient is taking.
 - c. 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
 - d. Formulate a medication therapy problem list, classifying the patient's medication therapy problems based on indication, effectiveness, safety, and compliance.
 - e. Prioritize the patient's medication therapy problems.
3. **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.
 - a. For each problem, create patient-centered goal(s) in collaboration with the patient/caregiver and other members of the healthcare team
 - b. Develop a care plan to manage the patient's active medical conditions and resolve the identified medication therapy problems.
 - c. Identify monitoring parameters to assess effectiveness, safety, adherence, and quality of life.
4. **Implement:** Implement the care plan in collaboration with other health care professionals and the patient/caregiver.
 - a. 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
 - i. Discuss the care plan with the patient.
 - ii. 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.
 - b. 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)
5. **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.

Course Co-requisites

1. PHA5163L Professional Practice Skills Laboratory 3

Course Outline

See Appendix. 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.

Required Textbooks/Readings

1. DiPiro, J, Talbert R, Yee G, Matzke G, Wells B, Posey L. Pharmacotherapy – A Pathophysiologic Approach. McGraw-Hill Professional, New York, NY, 12th Edition, 2021.
 - Previously used for PHA5782C
 - Available via HSC Library – Access Pharmacy
2. Other required readings will be posted in Canvas.

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

Foye WO, Lemke T, Williams DA. Foye's Principles of Medicinal Chemistry, Wolters Kluwer Health/Lippincott Williams & Wilkins, Philadelphia, PA, 8th Edition, 2019. ISBN-13: 978-1496385024; ISBN-10: 1496385020

- Previously purchased for PHA5782C
- Not available via HSC Library

Other suggested readings will be posted on Canvas.

Other Required Learning Resources

EHR Go

EHR Go is an educational EHR used throughout the PharmD curriculum, including in skills lab, patient care courses and capstones. Students will be expected to purchase a subscription to this program.

- Create your EHR Go account by going to: <http://ehrgo.com>.
- Select Subscribe in the upper, right corner and enter the following Pharmacy Student Program Key: S96Y29
- Follow the on-screen instructions to create your account and apply your subscription. Refer to Canvas for more detailed information
 - 2PDs are encouraged to purchase a 2 year Student Subscription
 - 3PDs are encouraged to purchase an Academic Year Student Subscription

Materials & Supplies Fees

None

Student Evaluation & Grading

Evaluation Methods and How Grades are calculated.

[The Canvas© gradebook will be set-up using the percentages below to compute the grade.]

Table 1.1 Evaluation and Grading

Assessment Item	Grade Percentage
iRAT (n=10; 1.11% each) Lowest score will be dropped (i.e., 9 are graded)	10%
tRAT (n=10; 1% each)	10%
ALS Assignment 1: Hyperlipidemia	4%
ALS Assignment 2: Asthma Action Plan	4%
Capstone	5%
Facilitated Case Discussion	2%
Exam 1	20%
Exam 2	20%
Exam 3	25%
Total	100%

Table 1.2 Grading Scale

Percentage	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

Rounding of grades:

Final grades in Canvas will be rounded to the 2nd 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."

ALS Assignment 1: Hyperlipidemia

At the conclusion of the Active Learning Session for Hyperlipidemia (10/18/23) students will complete a Graded Written Assignment. In this Assignment students will review a patient case and then answer Hyperlipidemia-related questions about the case in the areas of the Pharmacist-Patient Care Process. The questions will be a mix of multiple choice and write-in.

ALS Assignment 2: Asthma Action Plan

During the Active Learning Session 7 (11/13/23), students will be responsible for creating an asthma action plan for a patient. The purpose of the activity is to provide experience transcribing a complex medication regimen used in asthma into a digestible plan for a patient to use at home, school, or work. Students will be given details of the patient's asthma regimen and a fillable template of an asthma action plan to complete during class.

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/>

Artificial Intelligence Policy

The use of artificial intelligence (AI) text generators such as ChatGPT on assignments, projects, quizzes, and exams is prohibited in this course. Use of AI text generators is considered evidence of academic dishonesty. If a student is uncertain about the use of AI technology, it is the student's responsibility to ask the instructor prior to beginning the assignment or assessment.

Pharm.D. Course Policies

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

Attendance Policy

Attendance is mandatory for active learning sessions such as team-based learning sessions, case discussions, laboratory sessions, and other activities that the instructor designates as required. This course has 13 required sessions. A student who misses greater than 3 sessions (25% of the required active learning sessions/activities) or laboratory sessions for this course will receive an incomplete in the course and will retake the course during the next offering, resulting in delayed graduation.

Makeup Assignments

Makeup assignments may be required for excused absences from all Active Learning Sessions. Students will be required to complete the makeup assignment within one week of the missed session.

Late Assignments

Late assignments will be discussed on a case-by-case basis.

Accessibility and Belonging Statement

The University of Florida College of Pharmacy strives to stimulate a culture that promotes diversity and inclusion within an exceptional community of students, faculty, and staff. It is our intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength, and benefit.

We intend to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let us know ways to improve the course's effectiveness for you personally or for other students or student groups.

If any of our class meetings conflict with any of your religious events, an excused absence will be provided when requested using the standard UF COP process as detailed in the [UF COP Course policies](#).

If you feel that you have experienced or witnessed any bias/treatment that falls short of these expectations, you may submit a report through the UF [COP Student Mistreatment Report](#).

Land Acknowledgement:

A Land Acknowledgement is a formal statement that recognizes and respects Indigenous Peoples as traditional stewards of this land and the enduring relationship that exists between Indigenous Peoples and their traditional territories. The University of Florida resides on the land of the Timucua people and Seminole Tribe of Florida. Additionally, we acknowledge that Indigenous land was expropriated from over 120+ tribal nations as part of the Morrill Act, in order to establish the University of Florida. Land acknowledgements do not exist in a past tense or historical context. For more information, visit:

<http://www.lspirg.org/knowtheland>.

Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Appendix A. Course Directory

Teaching Partnership Leader/Course Director(s):

Katie Vogel Anderson, Pharm.D., BCACP, FCCP

- Email: kvanderson@cop.ufl.edu
- Office: HPNP Building, Room 3313
- Phone: 352-294-5420

Office Hours: Please see Canvas course site for posted office hours.

Questions to Ask:

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

Other Teaching Partnership Faculty Members:

Jane Aldrich, Ph.D.

- Email: janealdrich@ufl.edu
- Office: GNV
- Phone: 352-273-8708

Kaitlin Alexander, Pharm.D.

- Email: kaitlin.alexander@cop.ufl.edu
- Office: GNV
- Phone: 352-294-5276

Larisa Cavallari, Pharm.D.

- Email: lcavallari@ufl.edu
- Office: GNV
- Phone: 352-273-8245

Lina Cui, Ph.D.

- Email: linacui@ufl.edu
- Office: GNV
- Phone: 352-273-7090

David DeRemer, Pharm.D., BCOP, FCCP

- Email: dderemer@ufl.edu
- Office: GNV
- Phone: 352-294-8891

Eric Dietrich, PharmD, BCPS

- Email: dietrich@cop.ufl.edu
- Office: GNV
- Phone: 352-294-5648

Julio Duarte, Pharm.D., Ph.D., FAHA

- Email: juliod@ufl.edu
- Office: GNV
- Phone: 352-273-8132

Michelle Farland, Pharm.D., BCPS, CDE

- Email: mfarland@ufl.edu
- Office: GNV
- Phone: 352-273-6293

Charles Frazier, Ph.D.

- Email: cjfraz@ufl.edu
- Office: GNV
- Phone: 352-273-7686

Serena Guo, M.D., Ph.D.

- Email: guoj1@ufl.edu
- Office: GNV
- Phone: 352-273-6533

Scott Harden, D.M.D, Ph.D.

- Email: swharden@ufl.edu
- Office: GNV
- Phone: 352 – 273 – 7704

Mei He, Ph.D.

- Email: mhe@ufl.edu
- Office: GNV
- Phone: 352-273-9847

Guenther Hochhaus, Ph.D.

- Email: hochhaus@ufl.edu
- Office: GNV
- Phone: 352-273-7861

Maureen Keller-Wood, Ph.D.

- Email: mkeller@ufl.edu
- Office: GNV
- Phone: 352-273-7687

Caitrin McDonough, Ph.D., M.S.

- Email: caitrimcdonough@ufl.edu
- Office: GNV
- Phone: 352-273-6435

Carol Motycka, Pharm.D., BCACP

- Email: motycka@cop.ufl.edu
- Office: JAX
- Phone: 904-244-9590

Khoa Nguyen, PharmD

- Email: Nguyen.khoa@ufl.edu
- Office: GNV
- Phone: 352-273-9418

Bradley Phillips, PharmD, BCACP

- Email: bradnp@ufl.edu
- Office: GNV
- Phone: 352-273-6236

Teresa Roane, PharmD, MBA, BCACP

- Email: teroane@ufl.edu

Mikael Svensson, PhD

- Email: svensson.kmikael@ufl.edu
- Phone: 352 – 273 - 9867

Guangrong Zheng, PhD

- Email: zhengg@ufl.edu
- Office: GNV
- Phone: 352-294-8953

Instructional Designer:

Skylar Johnson, M.A.

- Email: skylarjohnson@cop.ufl.edu
- Phone: 352-273-5719

Academic Coordinator Gainesville Campus:

Hanna Stallard

- Email: hstallard@ufl.edu
- Office: HPNP 4312
- Phone: 352 – 273 - 6312

[2PD Absent Request Ticket](#)

(Visit the course policy site for further instructions)

Educational Coordinators

Katie Orben

- Email: korben06@ufl.edu
- Office: Jacksonville Campus

Jessica Linares

- Email: jnoriegalinares@ufl.edu
- Office: Orlando Campus
- Phone: (407) 313 - 7007

Questions to Ask:

- Issues related to course policies (absences, make up exams, missed attendance)
- Absence/tardy 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 in gradebook (missing grades, incorrect grade)
- Assistance with ExamSoft® (Distance campus students may contact the Educational Coordinator for use of Exemplify and assistance during exams. The Academic Coordinator is the contact person for issues related to grading and posting of ExamSoft grades.)

Appendix B: Course Outline

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
		Video Other	Introduction to Patient Care 3		Katherine L Vogel Anderson
	1	Module	Introduction to CV Modules		Katherine L Vogel Anderson
	1.1	Unit	Introduction to CV Disease and Overview of Module		Eric A Dietrich
10/09/23	1.1	Lecture Video	Introduction to CV Disease and Overview of Module	0.75	Eric A Dietrich
	1.2	Unit	General Cardiovascular Pathophysiology (Highlight of relevant material from 1PD year)		
10/09/23	1.2	Lecture Video	Introduction Review of CV Pathophysiology	0.5	Lihui Yuan
	1.3	Unit	ASCVD Risk Assessment		Katherine L Vogel Anderson
10/09/23	1.3	Lecture Video	ASCVD Risk Assessment	0.5	Katherine L Vogel Anderson
	2	Module	Hypertension		Katherine L Vogel Anderson
	2.1	Unit	Pathophysiology of Hypertension		
10/09/23	2.1	Lecture Video	Pathophysiology of Hypertension	1	Lihui Yuan
	2.2	Unit	Pharmacology: Autonomic Function, Sympathetic System Drug Classes: Beta Blockers and Calcium Channel Blockers		Charles Jason Frazier
10/10/23	2.2.1	Lecture Video	CCBs- Introduction	0.44	Charles Jason Frazier
10/10/23	2.2.2	Lecture Video	Calcium Channel Blockers - MOA	0.54	Charles Jason Frazier
10/10/23	2.2.3	Lecture Video	Calcium Channel Blockers - Specifics	0.74	Charles Jason Frazier
10/10/23	2.2.4	Lecture Video	Beta Blockers - Introduction and MOA	0.34	Charles Jason Frazier
10/10/23	2.2.5	Lecture Video	Beta Blockers - Specifics	0.64	Charles Jason Frazier
	2.3	Unit	Pharmacology: Renin Angiotensin System and volume Drug Classes: ACE inhibitors, ARBs, thiazide diuretics		Charles Jason Frazier
10/11/23	2.3.1	Lecture Video	Targeting the RAAS to Alleviate Hypertension	0.75	Charles Jason Frazier
10/11/23	2.3.2	Lecture Video	Diuretics and Hypertension: Interactions with ACEi and ARB	0.9	Charles Jason Frazier
	2.4	Unit	Medicinal Chemistry--Drug Classes: beta blockers, calcium channel blockers, ACE inhibitors, ARBS, thiazide diuretics		Jane V Aldrich
10/11/23	2.4.1	Lecture Video	Medicinal Chemistry of beta blockers	0.5	Jane V Aldrich

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
10/11/23	2.4.2	Lecture Video	Medicinal Chemistry of the renin-angiotensin system	0.5	Jane V Aldrich
10/11/23	2.4.3	Lecture Video	Medicinal Chemistry of calcium channel blockers	0.3	Jane V Aldrich
10/11/23	2.4.4	Lecture Video	Medicinal Chemistry of diuretics and other drugs for hypertension	0.3	Jane V Aldrich
	2.5	Unit	Pharmacotherapy and Management of Hypertension		Katherine L Vogel Anderson
10/12/23	2.5.1	Lecture Video	Pharmacotherapy and Management of Hypertension Part 1: General Management	0.67	Katherine L Vogel Anderson
10/12/23	2.5.2	Lecture Video	Pharmacotherapy and Management of Hypertension Part 2: Pharmacotherapy Options	0.67	Katherine L Vogel Anderson
10/12/23	2.5.3	Lecture Video	Pharmacotherapy and Management of Hypertension Part 3: Special Populations	0.66	Katherine L Vogel Anderson
	2.6	Unit	Transcending Concept - Social: Fighting Obesity; Health Disparities; Hypertension		Monika Trejos Kweyete
10/12/23	2.6.1	Lecture Video	Cardiovascular Health Disparities: Part 1	0.3	Monika Trejos Kweyete
10/12/23	2.6.2	Lecture Video	Cardiovascular Health Disparities: Part 2	0.4	Monika Trejos Kweyete
10/12/23	2.6.3	Lecture Video	Cardiovascular Health Disparities: Part 3	0.3	Monika Trejos Kweyete
	2.7	Unit	Transcending Concept - Health & Wellness: Hypertension		Katherine L Vogel Anderson
10/12/23	2.7	Lecture Video	Promoting Health and Wellness for Cardiovascular Health	0.5	Katherine L Vogel Anderson
10/12/23	2.7	Reading	How Can I Make My Lifestyle Healthier? (PDF)	0.1	Katherine L Vogel Anderson
10/13/23 @ 10am-11:50am	2.0-2.7	Active Learning Session	ALS 1 Part 1: Hypertension (2hr)	1	Charles Jason Frazier, Jane V Aldrich, Katherine L Vogel Anderson, Lihui Yuan
10/13/23	2.0-2.7	Quiz (iRAT/tRAT)	ALS 1 iRAT/tRAT		Katherine L Vogel Anderson
10/13/23 @ 1pm-2:50pm	2.0-2.7	Active Learning Session	ALS 1 Part 2: Hypertension (2hr)	1	Charles Jason Frazier, Jane V Aldrich, Katherine L Vogel Anderson, Lihui Yuan, Monika Trejos Kweyete
	3	Module	Dyslipidemia		Eric A Dietrich
	3.1	Unit	Dyslipidemia – Lipid Metabolism		Bradley Phillips
10/13/23	3.1	Lecture Video	Lipid Metabolism	0.15	Bradley Phillips

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
10/13/23	3.1	Video Other	Physiology of Lipoproteins Cholesterol https://www.youtube.com/watch?v=PkkH8ITxvzA	0.15	Bradley Phillips
	3.2	Unit	Dyslipidemia - Pharmacology		Bradley Phillips
10/13/23	3.2	Lecture Video	Pharmacology of Antihyperlipidemic Agents	1.00	Bradley Phillips
	3.3	Unit	Medicinal Chemistry of Antihyperlipidemics		Guangrong Zheng
10/13/23	3.3.1	Lecture Video	Medicinal Chemistry of Antihyperlipidemics Part 1	0.5	Guangrong Zheng
10/13/23	3.3.2	Lecture Video	Medicinal Chemistry of Antihyperlipidemics Part 2	0.5	Guangrong Zheng
	3.4	Unit	Management of Dyslipidemia		Eric A Dietrich
10/13/23	3.4	Lecture Video	Treatment of Dyslipidemia	1.5	Eric A Dietrich
10/16/23 @ 9am-10:30am		Facilitated Case Discussion	Facilitated Case Discussion: Hypertension	1.5	Bradley Phillips, Eric A Dietrich, Jason Powell, Karen Whalen, Katherine L Vogel Anderson, Tracy Leonard
	3.5	Unit	Transcending Concept - Informatics: HIT Supporting Outpatient Drug Use		
10/17/23	3.5	Lecture Video	Health IT and Informatics	0.5	Khoa Nguyen
	3.6	Unit	Transcending Concept - Interprofessional Communications & Collaboration: Shared Decision Making		Eric A Dietrich
10/17/23	3.6	Lecture Video	Shared Decision Making	0.5	Eric A Dietrich
10/18/23 @ 10am-11:50am	3	Active Learning Session	ALS 2: Part 1 Hyperlipidemia	1	Eric A Dietrich, Guangrong Zheng
10/18/23	3	Quiz (iRAT/tRAT)	ALS 2 iRAT/tRAT		Eric A Dietrich
10/18/23 @ 1pm-2:50pm	3	Active Learning Session	ALS 2: Part 2 Hyperlipidemia	1	Eric A Dietrich, Guangrong Zheng
10/18/23 - submit in class	3	Assignment Graded	Individual In-Class Assignment: Hyperlipidemia		Eric A Dietrich
	4	Module	Ischemic Heart Disease		Julio Duarte
	4.1	Unit	Pathophysiology of Ischemic Heart Disease		
10/18/23	4.1	Lecture Video	Pathophysiology of Ischemic Heart Disease	0.7	Scott Harden
	4.2	Unit	Pharmacology and Medicinal Chemistry of Nitrodilators		Lina Cui
10/18/23	4.2	Lecture Video	Pharmacology and Medicinal Chemistry of Nitrodilators	0.54	Lina Cui
	4.3	Unit	Management of Ischemic Heart Disease		Julio Duarte
10/18/23	4.3	Lecture Video	Management of Ischemic Heart Disease (aka. Chronic Coronary Disease)	1	Julio Duarte

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
	4.4	Unit	Transcending Concept - Evidence-based Practice: Cardiovascular Clinical Trials		Julio Duarte
10/19/23	4.4	Lecture Video	Cardiovascular Clinical Trials	0.5	Julio Duarte
10/19/23	4.4	Reading	Hong 2023 - Treat-to-Target or High-Intensity Statin in Patients With Coronary Artery Disease	0.5	Julio Duarte
10/20/23 @ 10am-11:50am	4	Active Learning Session	ALS 3: Case Studies Part 1– Ischemic Heart Disease	1	Julio Duarte, Lina Cui, Scott Harden
10/20/23	4	Quiz (iRAT/tRAT)	ALS 3 iRAT/tRAT		Julio Duarte
10/20/23 @ 1pm-2:50pm	4	Active Learning Session	ALS 3: Case Studies Part 2– Ischemic Heart Disease	1	Julio Duarte, Lina Cui, Scott Harden
10/23/23 @ 10am-12pm	1 - 4	Exam	Exam 1	2	Katherine L Vogel Anderson
	5	Module	Anticoagulation and Acute Coronary Syndrome		Katherine L Vogel Anderson
	5.1	Unit	Pathophysiology of Blood Clotting		Katherine L Vogel Anderson
10/23/23	5.1	Lecture Video	Pathophysiology of Blood Clotting	0.5	Katherine L Vogel Anderson
10/23/23	5.1	Reading	Plaque Rupture and Clot Formation	0.1	Katherine L Vogel Anderson
10/23/23	5.1	Reading	Ch. 38 Venous Thromboembolism - Pathophysiology section (DiPiro)	0.25	Katherine L Vogel Anderson
	5.2	Unit	Pharmacology of Anticoagulants, Fibrinolytic Agents, and Antiplatelet Therapy		Katherine L Vogel Anderson
10/23/23	5.2	Lecture Video	Pharmacology of Anticoagulants, Fibrinolytic Agents, and Antiplatelet Therapy	1.5	Katherine L Vogel Anderson
	5.3	Unit	Transcending Concept - Personalized Medicine: Cardiovascular Diseases		Larisa Humma Cavallari
10/24/23	5.3	Lecture Video	Personalized Medicine—Cardiovascular Diseases	0.5	Larisa Humma Cavallari
	5.4	Unit	Medicinal Chemistry of Anticoagulants, Fibrinolytic Agents, and Antiplatelet Therapy		Lina Cui
10/24/23	5.4	Lecture Video	Medicinal Chemistry of Anticoagulants, Fibrinolytic Agents, and Antiplatelet Therapy	1.2	Lina Cui
	5.5	Unit	Management of Acute Coronary Syndrome		Katherine L Vogel Anderson
10/25/23	5.5	Lecture Video	Management of Acute Coronary Syndrome	0.75	Katherine L Vogel Anderson
10/26/23 @ 1pm-4pm	5	Active Learning Session	ALS 4: Case Studies – ACS (3 Hours)	1	Katherine L Vogel Anderson, Larisa Humma Cavallari, Lina Cui

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
10/26/23	5	Quiz (iRAT/tRAT)	ALS 4 iRAT/tRAT		Katherine L Vogel Anderson
10/30/23 @ 9am- 10:30am	5	Facilitated Case Discussion	Zoom - Facilitated Case Discussion - ACS Case Studies	1.5	Bradley Phillips, Eric A Dietrich, Erin Lyn St Onge, Jason Powell, Julio Duarte, Katherine L Vogel Anderson
	6	Module	Heart Failure		Julio Duarte
	6.1	Unit	Pathophysiology of Heart Failure		
10/27/23	6.1.1	Lecture Video	Pathophysiology of Heart Failure Part 1: Definitions, Etiology and Progression	0.8	Julio Duarte
10/27/23	6.1.2	Lecture Video	Pathophysiology of Heart Failure Part 2: Signs, Symptoms, and Assessment	0.5	Julio Duarte
	6.2	Unit	Pharmacology of Inotropic Agents, Glycosides, Nepriylsin Inhibitors, Aldosterone Antagonists		
10/27/23	6.2	Lecture Video	Pharmacology of Treatment of Heart Failure	0.7	Julio Duarte
10/30/23 @ 1pm- 2:50pm	6.1- 6.2	Active Learning Session	ALS 5: Case Studies Part 1– Heart Failure	1	Julio Duarte
10/30/23	6.1- 6.2	Quiz (iRAT/tRAT)	ALS 5.1 iRAT/tRAT		
10/30/23 @ 3pm- 3:30pm	1-4	Exam Review	Exam 1 Review		
	6.3	Unit	Medicinal Chemistry of Inotropic Agents, Glycosides, Aldosterone Antagonists		Lina Cui
10/30/23	6.3	Lecture Video	Medicinal Chemistry of Inotropic Agents, Glycosides, Aldosterone Antagonists	0.8	Lina Cui
	6.4	Unit	Management of Chronic Heart Failure (HFrEF & HFpEF)		Julio Duarte
10/30/23	6.4.1	Lecture Video	Heart Failure Part 1: HFrEF	0.75	Julio Duarte
10/31/23	6.4.2	Lecture Video	Heart Failure Part 2: HFpEF	0.75	Julio Duarte
	6.5	Unit	Transcending Concept - Patient Safety/Med Errors; Root Cause Analysis: Medication Reconciliation		Katherine L Vogel Anderson
10/31/23	6.5	Video Other	Medication Reconciliation: A Learning Guide (eLearning Module) https://meds.queensu.ca/central/assets/modules/mr/introduction.html	0.5	Katherine L Vogel Anderson
11/1/23 @ 10am- 11:50am	6.3- 6.5	Active Learning Session	ALS 5: Case Studies Part 2– Heart Failure	1	Katherine L Vogel Anderson, Lina Cui, Julio Duarte

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
11/01/23	6.3- 6.5	Quiz (iRAT/tRAT)	ALS 5.2: iRAT/tRAT		Julio Duarte
11/1/23 @ 1pm- 2:50pm	6.3- 6.5	Active Learning Session	ALS 5: Case Studies Part 3 – Heart Failure	1	Katherine L Vogel Anderson, Lina Cui, Julio Duarte
	7	Module	Anticoagulation & Arrhythmias		Katherine L Vogel Anderson
	7.1	Unit	VTE		Katherine L Vogel Anderson
11/01/23	7.1	Lecture Video	Venous Thromboembolism (VTE)	1	Katherine L Vogel Anderson
	7.2	Unit	Warfarin and Heparin Dosing (AKA. Individualized Anticoagulant Dosing)		Katherine L Vogel Anderson
11/01/23	7.2	Lecture Video	Warfarin and Heparin Dosing (AKA. Individualized Anticoagulant Dosing)	1	Katherine L Vogel Anderson
	7.3	Unit	Personalized Medicine CV: Warfarin Pharmacogenetics		Larisa Humma Cavallari
11/01/23	7.3	Lecture Video	Personalized Medicine CV: Warfarin Pharmacogenetics	0.82	Larisa Humma Cavallari
	7.4	Unit	Pathophysiology of Arrhythmias		Katherine L Vogel Anderson
11/01/23	7.4.1	Lecture Video	Pathophysiology of Arrhythmias Part 1: Reviews of Normal ECG, Definitions, Mechanisms of Bradycardia	0.5	Katherine L Vogel Anderson
11/01/23	7.4.2	Lecture Video	Pathophysiology of Arrhythmias Part 2: Mechanisms of Tachycardias	1	Katherine L Vogel Anderson
	7.5	Unit	Introduction to Electrocardiology		Katherine L Vogel Anderson
11/02/23	7.5	Lecture Video	Introduction to Electrocardiology	0.5	Katherine L Vogel Anderson
11/02/23	7.5	Reading	DiPiro Chapter 1 - ECG section ONLY (Access Pharmacy)	0.25	Katherine L Vogel Anderson
	7.6	Unit	Pharmacology of Antiarrhythmics & Pharmacokinetics of Digoxin and Antiarrhythmics		Katherine L Vogel Anderson
11/02/23	7.6	Lecture Video	Pharmacology of Antiarrhythmics & Pharmacokinetics of Digoxin and Antiarrhythmics	1	Katherine L Vogel Anderson
	7.7	Unit	Medicinal Chemistry of Antiarrhythmics		Lina Cui
11/02/23	7.7	Lecture Video	Medicinal Chemistry of Antiarrhythmics	0.72	Lina Cui
	7.8	Unit	Management of Arrhythmias		Katherine L Vogel Anderson
11/02/23	7.8	Lecture Video	Management of Arrhythmias	1	Katherine L Vogel Anderson
11/3/23 @ 1pm- 4pm	7	Active Learning Session	ALS 6: Case Studies – Atrial Fibrillation	1	Katherine L Vogel Anderson, Larisa Humma

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
					Cavallari, Lina Cui
11/03/23	7	Quiz (iRAT/tRAT)	ALS 6 iRAT/tRAT		Katherine L Vogel Anderson
11/6/23 @ 2pm- 3:30pm		Facilitated Case Discussion	Zoom: Facilitated Case Discussion - AFIB/VTE Case Discussion	1.5	Bradley Phillips, Eric A Dietrich, Erin Lyn St Onge, Karen Whalen, Katherine L Vogel Anderson, Tracy Leonard
11/9/23 @ 10am- 12pm	5-7	Exam	Exam 2	2	Katherine L Vogel Anderson
	8	Module	Asthma		Bradley Phillips
	8.1	Unit	Pathophysiology of Asthma		Bradley Phillips
11/09/23	8.1	Lecture Video	Asthma Pathophysiology, Clinical Presentation, Diagnosis	0.5	Bradley Phillips
	8.2	Unit	Pharmacology of Antiasthmatics and COPD		Guenther Hochhaus
11/09/23	8.2.1	Lecture Video	Pharmacology of Antiasthmatics and COPD: Part 1	1	Guenther Hochhaus
11/09/23	8.2.2	Lecture Video	Pharmacology of Antiasthmatics and COPD: Part 2	0.6	Guenther Hochhaus
	8.3	Unit	Medicinal Chemistry of Oral and Inhaled Corticosteroids, Short-acting Beta-agonists, Long- acting Beta-agonists, Muscarinic Agents		Jane V Aldrich
11/09/23	8.3.1	Lecture Video	Medicinal Chemistry of Beta Agonists	0.5	Jane V Aldrich
11/09/23	8.3.2	Lecture Video	Medicinal Chemistry of Corticosteroids	0.5	Jane V Aldrich
11/10/23	8.3.3	Lecture Video	Medicinal Chemistry of Antimuscarinics and Other Drugs for Asthma and COPD	0.5	Jane V Aldrich
11/10/23	8.3.4	Lecture Video	Monoclonal Antibodies	0.25	Jane V Aldrich
	8.4	Unit	Management of Chronic Asthma		Bradley Phillips
11/10/23	8.4.1	Lecture Video	Pharmacotherapy Overview for Chronic Asthma	0.3	Bradley Phillips
11/10/23	8.4.2	Lecture Video	Asthma Assessment	0.3	Bradley Phillips
11/10/23	8.4.3	Lecture Video	Treating Chronic Asthma	0.3	Bradley Phillips
11/10/23	8.4.4	Lecture Video	Treating Asthma Exacerbations	0.3	Bradley Phillips
11/10/23	8.4	Reading	GINA Treatment Algorithms 2023	0.5	Bradley Phillips
11/10/23	8.4	Reading	Asthma Action Plan	0.25	Bradley Phillips
	8.5	Unit	Transcending Concept - Personalized Medicine: Asthma		Caitrin McDonough
11/10/23	8.5	Lecture Video	Personalized Medicine – Asthma	0.5	Caitrin McDonough

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
11/13/23 @ 10am-11:50am	8	Active Learning Session	ALS 7: Case Studies Part 1– Asthma (2hr workup)	1	Bradley Phillips, Guenther Hochhaus, Jane V Aldrich
11/13/23	8	Quiz (iRAT/tRAT)	ALS 7 iRAT/tRAT		Bradley Phillips
11/13/23 @ 1pm-2:50pm	8	Active Learning Session	ALS 7: Case Studies Part 2 – Asthma (2hr workup)	1	Bradley Phillips, Caitrin McDonough, Guenther Hochhaus, Jane V Aldrich
11/13/23 - submit in class	8	Assignment Graded	Individual Assignment: Asthma Action Plan		Bradley Phillips
	9	Module	COPD		Michelle Farland
	9.1	Unit	Pathophysiology of COPD		Michelle Farland
11/13/23	9.1	Lecture Video	COPD Pathophysiology, Clinical Presentation, Diagnosis	0.5	Michelle Farland
	9.2	Unit	Management of COPD		Michelle Farland
11/13/23	9.2	Lecture Video	COPD Management	1	Michelle Farland
	9.3	Unit	Transcending Concept - Health & Wellness: Smoking Cessation		Bradley Phillips
11/14/23	9.3	Lecture Video	Transcending Concepts: Health-Wellness – Smoking Cessation	1	Bradley Phillips
	9.4	Unit	Transcending Concept - Communications - Patients: Motivational Interviewing		Teresa Elaine Roane
11/14/23	9.4	Lecture Video	Introduction to ComMlt eLearning Modules	0.25	Teresa Elaine Roane
11/14/23	9.4	Video Other	ComMlt Module 3: Sense-Making and Practical Reasoning	0.75	Teresa Elaine Roane
	9.5	Unit	Transcending Concept - Population-based Care & Pharmacoeconomics		
11/15/23	9.5	Lecture Video	Population-Based Care & Pharmacoeconomics in COPD Drug Evaluation	0.5	Mikael Svensson
11/15/23	9.5	Reading	Impact of COPD Exacerbation Frequency on Costs for a Managed Care Population (PDF)	0.5	Mikael Svensson
	9.6	Unit	Transcending Concept - Specialized Populations: Geriatric Drug Dosing		Katherine L Vogel Anderson
11/15/23	9.6	Lecture Video	Geriatric Drug Dosing Considerations	0.5	Katherine L Vogel Anderson
	9.7	Unit	Transcending Concept - Evidence-Based Practice: Cohort Studies and Confounding and Bias		Serena Guo
11/15/23	9.7	Reading	A new user cohort study comparing the safety of long-acting inhaled bronchodilators in COPD (PDF) (Sections to read: Abstract, Article Summary, Methods, Tables 1, 2, and 3 (focusing on results of any death, angina, myocardial	0.5	Serena Guo

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
			infarction and stroke) and Discussion, paragraph 9.)		
11/15/23	9.7	Lecture Video	Transcending Concept: Evidence-Based Practice—Cohort Studies and Confounding & Bias	0.5	Serena Guo
11/16/23 @ 10am-11:50am	9	Active Learning Session	ALS 8: Case Studies – Part 1 COPD	1	Michelle Farland, Serena Guo, Teresa Elaine Roane
11/16/23	9	Quiz (iRAT/tRAT)	ALS 8 iRAT/tRAT		Michelle Farland
11/16/23 @ 1pm-2:50pm	9	Active Learning Session	ALS 8: Case Studies – Part 2 COPD	1	Michelle Farland, Teresa Elaine Roane
11/16/23 @ 3pm-3:30pm		Exam Review	Exam 2 Review		
	10	Module	Respiratory Conditions		Kaitlin Alexander
	10.1	Unit	Hospital-Acquired & Ventilator-Associated Pneumonias		Kaitlin Alexander
11/16/23	10.1	Lecture Video	Hospital-Acquired Pneumonia and Ventilator-Associated Pneumonia	1	Kaitlin Alexander
	10.2	Unit	Transcending Concepts - Self-Care 2: Cough & Cold (re-enforce from Patient Care 1)		
11/16/23	10.2	Lecture Video	Cough and Cold	0.75	Bradley Phillips
11/16/23	10.2	Video Other	How to Use a Nasal Spray		Bradley Phillips
	10.3	Unit	Transcending Concept - Interprofessional Communication: Listen actively, and encourage ideas and opinions of other interprofessional team members.		Carol Anne Motycka
11/16/23	10.3	Lecture Video	Transcending Concept: Interprofessional Communication - Listen actively, and encourage ideas and opinions of other interprofessional team members	0.75	Carol Anne Motycka
	10.4	Unit	Lung Cancer		David DeRemer
11/16/23	10.4	Lecture Video	Lung Cancer	1.2	David DeRemer
11/16/23	10.4	Lecture Video	Lung Cancer Immunotherapy	0.65	Mei He
11/17/23 @ 10am-11:50am	10	Active Learning Session	ALS 9: Case Studies – Part 1 Respiratory Conditions	1	Bradley Phillips, Carol Anne Motycka, David DeRemer, Kaitlin Alexander,

Date / Time [Recommended for Independent Study]	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
					Teresa Elaine Roane
11/17/23	10	Quiz (iRAT/tRAT)	ALS 9 iRAT/tRAT 9		Kaitlin Alexander
11/17/23 @ 1pm-2:50pm	10	Active Learning Session	ALS 9: Case Studies – Part 2 Respiratory Conditions	1	Bradley Phillips, Carol Anne Motycka, David DeRemer, Kaitlin Alexander, Teresa Elaine Roane
11/20/23 @ 8am-12pm	1-10	Active Learning Session	PC 3 Capstone (4hr workup)	2	Katherine L Vogel Anderson
11/20/23 at 12pm	1-10	Assignment Graded	Capstone Assignment Submission		Eric A Dietrich, Julio Duarte, Kaitlin Alexander, Katherine L Vogel Anderson
11/28/23 @ 1pm-3:30pm	1-10	Exam	Exam 3: All Modules (2.5hr)		Katherine L Vogel Anderson
			Total Contact Hours:	82	