

# PHA5226C Patient Safety & Quality in Pharmacy

Fall 2023

2 Credit Hours – [A-E Grading]

*This course focuses on the assessment of patient care. Quality improvement (QI) principles are used to provide the best possible care by the adoption of information technology and systems that reward rather than impede quality. Patient safety is an important component of quality pharmacotherapy. The appropriate reactions to adverse drug events and the anticipation of medication errors enable the implementation of systems to prevent and minimize patient risk. Quality assessment and improvement exercises will be introduced to identify and review variation in pharmacotherapy processes and outcomes. Students will use published evidence to identify targets for quality improvement, to formulate strategies to identify high-risk patients to improve patient care, and to define process and outcome measures to evaluate pharmacotherapy outcomes.*

## Teaching Partnership Leader

Rachel Reise, PharmD, MS, CPh

- Email: [rreise@cop.ufl.edu](mailto:rreise@cop.ufl.edu)
- Office: 2320 HPNP
- Phone: (352)-265-7242

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:

1. EPA A6. Collaborate as a member of an interprofessional team.
2. EPA A12. Use evidence-based information to advance patient care.
3. EPA A8. Assist in the identification of underlying system-associated causes of errors.
4. EPA A9. Maximize the appropriate use of medications in a population.

## Course-Level Objectives

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

1. Define questions related to quality medication use and use continuous quality improvement techniques in the medication use process.
2. Find and evaluate published medical literature for use in clinical decision-making and quality improvement.

3. Identify opportunities for changes in practice that are feasible and effective for improving patient outcomes.
4. Describe how to design, implement, and evaluate quality improvement programs.
5. Describe the role of the pharmacist in the improvement of quality deficits in the medication use system.
6. Monitor and evaluate the effectiveness and safety of care and implement improvements in collaboration with other health care professionals and the patient/caregiver. The following are continually monitored and evaluated: medication appropriateness, effectiveness, safety, and patient adherence through available data; biometric test results; and patient feedback.
7. Manage patient healthcare needs using human, financial, technological, data analysis, and physical resources to optimize the safety and efficacy of medication use systems.
8. Apply methods to improve patient safety.

## Course Pre-requisites

1. Completion of all Year 2 Pharm.D. program coursework including milestones.

## Course Co-requisites

1. PHA5165L Professional Practice Skills Lab V

## 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. Terri L. Warholak, David P. Nau (Editors). *Quality & Safety in Pharmacy Practice*. New York, NY: McGraw-Hill Medical; 2010. ISBN 978-0-07-160385-0. Available via HSC Library – Access Pharmacy with textbook URL: <http://accesspharmacy.mhmedical.com/book.aspx?bookID=452>

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 will be posted on Canvas.

## Other Required Learning Resources

None

## 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
iRATs (5 @ 3% each)	15%
tRATS (5 @ 2% each)	10%
Assignment 1: Project Introduction and Objectives	25%
Assignment 2: QI Methods and Evaluation	25%
Final Exam	25%
<b>Total</b>	<b>100%</b>

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."

**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 Use**

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](http://curriculum.pharmacy.ufl.edu/current-students/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 5 required ALS sessions. A student who misses greater than 1 session (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

Quizzes may be made up on a case-by-case basis if absence was approved by the Academic Coordinator. Makeup assignments may be required for excused absences from Active Learning Sessions. Students will be required to complete the makeup assignment within one week of the missed session.

## Late Assignments

Assignments will be posted with explicit due dates and students are responsible for adhering to these deadlines. No late work on the group project will be accepted (will result in a grade of zero). There are no individual assignments in this course.

## 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](#).

## 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):

Rachel Reise, PharmD, MS, CPh

- Email: [rreise@cop.ufl.edu](mailto:rreise@cop.ufl.edu)
- Office: HPNP 2320
- Phone: (352)-265-7242

Office Hours: Please see the 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:

Amie Goodin, PhD, MPP

- Email: [amie.goodin@ufl.edu](mailto:amie.goodin@ufl.edu)
- Office: HPNP 3323
- Phone: (352)-294-8829

Masoud Rouhizadeh, PhD, MSc, MA

- Email: [mrrou@cop.ufl.edu](mailto:mrrou@cop.ufl.edu)
- Office: HPNP 3334
- Phone: (352) 273-9397

Chardae Whitner, PharmD

- Email: [whitnerc@cop.ufl.edu](mailto:whitnerc@cop.ufl.edu)
- Office: JAX
- Phone: 904-244-9119

## Instructional Designer:

Chris Egan, M.Ed., NRP, CHSE, CHSOS

- Email: [cegan@ufl.edu](mailto:cegan@ufl.edu)
- Phone: 352-294-5636

## Academic Coordinator Gainesville Campus:

Ashleigh Langford

- Email: [lynn8597@cop.ufl.edu](mailto:lynn8597@cop.ufl.edu)
- Office: HPNP 4309
- Phone: 352-273-6284

## Educational Coordinators:

### Katie Orben

- Email: [korben06@ufl.edu](mailto:korben06@ufl.edu)
- Office: Jacksonville Campus
- Phone: 904-244-9590

### Jessica Linares

- Email: [jnoriegalinares@ufl.edu](mailto:jnoriegalinares@ufl.edu)
- Office: Orlando Campus
- Phone: 407-313-4087

### 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: See Link Below

Date / Time	Mod #	Activity	Activity Title	Contact Time (hr)	Responsible
	1	Module	Module 1: Patient Safety in Medication Use		
09/06/23	1.1	Lecture Video	Patient Safety and Quality (PSQ) in Pharmacy: Introduction to Course	0.3	Rachel Reise
09/06/23	1.2	Video Other	The FDA Drug Info Rounds, September 2012: Medication Errors (YouTube)	0.25	
09/06/23	1.3	Video Other	Medication Errors Frequent for Children (YouTube)		
09/06/23		Reading	Chapter 1 – Quality and the Future of Healthcare	0.25	
09/07/23	1.4	Lecture Video	Medication Misadventures	1.3	Rachel Reise
09/07/23	1.5	Lecture Video	Root Cause Analysis	0.75	Amie Goodin
09/08/23	1.6	Lecture Video	Principles of Medication Safety in Ambulatory Care	0.25	Michael Luvera (Fellow)
09/08/23		Reading	Chapter 2: Understanding Problems in the Use of Medications	0.5	
09/08/23	1.7	Lecture Video	The Sebastian Ferrero Case	0.25	Jaeyoung Choi (Fellow)
09/11/23 at 1 - 2:50pm		Active Learning Session	Active Learning Session 1: Medication Errors and Root Cause Analysis	2	Rachel Reise
09/11/23		Quiz (iRAT/tRAT)	iRAT & tRAT 1		Rachel Reise
	2	Module	Module 2: Quality Improvement		
09/11/23	2.1	Lecture Video	What is Quality Improvement?	0.75	Rachel Reise
09/11/23	2.2	Lecture Video	Quality Improvement Goals	0.5	Rachel Reise
09/12/23	2.3	Lecture Video	Quality Improvement Interventions	1	Rachel Reise
09/12/23	2.4	Lecture Video	Quality Improvement Research	0.5	Rachel Reise
09/13/23	2.5	Lecture Video	Quality Deficits (or Quality "Gaps")	1	Amie Goodin
09/13/23	2.6	Lecture Video	Quality Measures	0.75	Rachel Reise
09/14/23		Reading	How Chaos at Chain Pharmacies Is Putting Patients at Risk	1	
09/15/23		Reading	Pharmacy Quality Alliance (PQA) Measure Overview	0.25	
09/15/23		Reading	The Pharmacist's Role in Quality Improvement (pages 1-8)	0.75	
09/18/23 at 10 - 11:50am		Active Learning Session	Active Learning Session 2: Developing a Measurement Framework for a Quality Improvement Plan	2	Rachel Reise
09/18/23		Quiz (iRAT/tRAT)	iRAT & tRAT 2		Rachel Reise
	3	Module	Module 3: Study Design in Quality Improvement		
09/18/23	3.1	Lecture Video	Cluster Randomized Control Trials	0.5	Amie Goodin



<b>Date / Time</b>	<b>Mod #</b>	<b>Activity</b>	<b>Activity Title</b>	<b>Contact Time (hr)</b>	<b>Responsible</b>
09/19/23	3.2	Lecture Video	Quasi-Experimental Designs	0.5	Amie Goodin
09/20/23	3.3	Lecture Video	How to Evaluate Quality Improvement Quasi-Experimental Studies	1	Amie Goodin
09/21/23		Reading	Evidence-based Quality Improvement: The State of the Science	0.75	
09/22/23		Reading	Quasi-Experimental Study on Low-Health Literacy Flashcards & Mobile Video Reinforcement	0.5	
09/22/23		Reading	Cluster RCT of Decision Support Strategies for Reducing Antibiotic Use in Acute Bronchitis	0.5	
09/25/23 at 1 - 2:50pm		Active Learning Session	Active Learning Session 3: Selecting Effective QI Interventions and Valid Study Designs to Evaluate Interventions	2	Amie Goodin, Rachel Reise
09/25/23		Quiz (iRAT/tRAT)	iRAT & tRAT 3		
	4	Module	Module 04: Practical Applications to Improve Quality		
09/26/23	4.1	Lecture Video	Applications of Artificial Intelligence in Pharmacy	1	Masoud Rouhizadeh
09/27/23	4.2	Lecture Video	Practical Applications of Quality Improvement in Community Pharmacy	1	Chardae Whitner
		Optional/Supplemental	Evaluation of House Bill 21		
09/28/23	4.3	Lecture Video	Introduction to Data Management in Excel	0.75	Amie Goodin
09/28/23	4.4	Lecture Video	Data Management in Excel for Pharmacy QI	0.75	Amie Goodin
09/29/23	4.5	Lecture Video	Data Analysis in Excel for Pharmacy QI	1	Sebastian Jugl
		Other	Data Dictionary		
09/29/23		Assignment (Graded)	Assignment 1 Due: Project Introduction and Objectives	Assignment 1 Due: Project Introduction and Objectives	
10/04/23 at 10 - 11:50am		Active Learning Session	Active Learning Session 4: Data Science Applications	2	Chardae Whitner, Masoud Rouhizadeh, Rachel Reise
10/04/23		Quiz (iRAT/tRAT)	iRAT & tRAT 4		
	5	Module	Data Science in Pharmacy		
10/04/23	5.1	Lecture Video	Pharmacy Data Visualizations for QI - Part 1	1.5	Amie Goodin
10/05/23	5.2	Lecture Video	Customizing a Data Visualization	1	Sebastian Jugl
		Other	Data Tables for Reference and Practice		
10/06/23	5.3	Lecture Video	Identifying Public Sources of Data and Tools	0.5	Asinamai Ndai

<b>Date / Time</b>	<b>Mod #</b>	<b>Activity</b>	<b>Activity Title</b>	<b>Contact Time (hr)</b>	<b>Responsible</b>
10/09/23 at 1 - 2:50pm		Active Learning Session	Active Learning Session 5: Creating Pharmacy Data Visualizations	2	Amie Goodin, Rachel Reise
10/09/23		Quiz (iRAT/tRAT)	iRAT & tRAT 5		
10/11/23		Assignment (Graded)	Assignment 2 Due: QI Methods and Evaluation		Rachel Reise
10/09/23 at 4:45 - 5pm		Course Evaluation	Course Evaluations		
10/13/23 at 2 - 4pm		Exam	Final Exam		Rachel Reise
10/25/23 at 9 - 9:30am		Exam Review	Final Exam Review		
			<b>Total Contact Hours in Course</b>	31.6	