PHA5930 Seminar in Pharmacy Research

Fall 2023

2 Credit Hours – [Satisfactory/Unsatisfactory]

The purpose of this course is to increase student awareness of the dimension of research conducted by the College of Pharmacy faculty and to encourage and nurture student interest in research-related training. The course combines research seminar presentations given by faculty across the College of Pharmacy, small group activities, and independent learning activities to promote interest in research and development of seminar and scientific literature evaluation skills. Research seminars will be provided by approximately two faculty from each department within the College of Pharmacy in order to expose students to the breadth of research in the college. Faculty will be asked to provide a research paper for the students to review ahead of time. Seminars will be provided via Zoom. Small group activities will involve group reflections of seminar content.

Teaching Partnership Leaders

Larisa Cavallari, Pham.D.

Email: lcavallari@cop.ufl.edu

Office: MSB PG22Phone: 352 – 273 -8245

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

Mei He, Ph.D.

• Email: mhe@cop.ufl.edu

Office: UF Cancer and Genetics Research Complex, Rm 0458

• Phone: 352 – 273 - 9847

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

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

Course-Level Objectives

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

- 1. Describe the dimension of research conducted by the College of Pharmacy faculty.
- 2. Differentiate between basic, clinical, and translational research.
- 3. Discuss the gaps filled by unique research conducted by faculty in the College.
- 4. Describe varying approaches to addressing research questions.
- 5. Describe current issues in clinical pharmacology including research methodologies and how they impact pharmacotherapy.
- 6. Recognize the potential impact of scientific discoveries on disease management.
- 7. Explain regulatory requirements for conducting research involving human subjects or animals.
- 8. Describe, generally, the importance of the Nuremberg Code, Declaration of Helsinki, and The Belmont Report for the protection of human research subjects.
- 9. Participate effectively as a team member to discuss research questions posed by faculty in the college and hypotheses and study methodology used to address these questions.
- 10. Identify potential problems that may arise during research conduction and potential solutions to address the problems.
- 11. Appropriately conduct research dissemination.

Course Pre-requisites

- 1. Completion of all Year 1 Pharm.D. program coursework including milestones.
- 2. Satisfactory completion of Blocks 5, 6, and 7.

Course Co-requisites

1. Admission into the PharmD program

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

None.

Use <u>UF VPN to access UF Libraries Resources</u> 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.]

This course is S/U. In order to receive an "S", you must receive an overall course grade of 69.5%.

Table 1.1 Evaluation and Grading

Assessment Item	Criteria
Seminar Participation	
Group Reflections (n=7)	
In-Class Quizzes	Must Achieve
Small Group Presentations	"Satisfactory"
Scientist Research Report	
Total	

Table 1.2 Grading Scale

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

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 <u>NO EXCEPTIONS</u> will be made in situations where a student's grade is "close."

Description of Assignments

Seminar Participation

Students are expected to participate in research seminars by listening and asking intuitive questions. Students may be called upon to answer questions during seminar discussions. Students are expected to have their camera on during the Zoom sessions.

Group Reflections

Attendance is mandatory for all small group sessions. Groups will be asked to rotate the discussion leader each day. Reflections are expected to contain student recollections and thoughts about the research and not phrases copied verbatim from the speaker's slides, handouts, or other materials. Grades will be pass or fail. Assignments will be graded for the group, with each member of the group who participated in the small group activity receiving the same grade. A passing score will be awarded for reflections that include the required components and provide insightful reflection.

Quizzes

Quizzes, consisting of 3 short answer questions, will be administered at the beginning of each small group activity to assess individual students' understanding of the seminar material presented that day. A passing score will be awarded if over 50% of questions for all quizzes are answered correctly.

Small Group Presentation

Each student must participate in the small group presentation of research projects at the end of the course. Presentations will be graded for the group, with each member of the group who participated in the presentation receiving the same grade. Grades will be pass or fail. A passing score will be awarded for presentations that include the required components, contain accurate information, and provide insightful reflection. The group is also expected to respond appropriately to questions from the audience.

Scientist Research Report

Complete a one-to-two-page report summarizing what you learned about a scientist and how he or she advanced the field of pharmacology. If you were to repeat an experiment done by the scientist you chose in today's environment, also describe the study objective and basic study design you would use, keeping in mind regulatory aspects of research. Passing scores will be awarded for reports that are well written and contain accurate and insightful reflection. Students will be asked to present their reports to the 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 <u>Educational Technology and IT Support Contact Information</u> 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 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 <u>8 required sessions</u>. A student who misses greater than <u>2 sessions</u> (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

There will be a 1pt reduction for every day an assignment is turned in late.

Course Specific Policies

Students are expected to:

- 1. Be diligent and timely in studying the course material.
- 2. Be on time for class sessions, quizzes, and exams.
- 3. Be prepared for group discussions during Zoom calls.
- 4. Do your own work.
- 5. Actively collaborate with peers when assigned to groups.
- 6. Submit an absent ticket for an exam or other assigned class activity at least 24 hours prior to the event.
- 7. Dress appropriately for class sessions.
- 8. Turn off cell phones and other electronic communication devices during a class session or Zoom conference.
- 9. Be quiet during class sessions including peer presentations.
- 10. Be focused and avoid distractive behaviors in class.
- 11. Appropriately use the computer in class, i.e., do not be looking at unrelated information on the web site during class.
- 12. Participate in class or group discussions.

13. Raise one's hand to be recognized before making a comment during a class session.

- 14. Be respectful to the speakers and course instructors.
- 15. Be respectful to fellow students in discussions.
- 16. Be courteous, respectful, and civil when using discussion boards.
- 17. Focus on the course learning activities; it is not respectful to study for other coursework during the class session.
- 18. Address faculty with the appropriate title and name, i.e., Dr. (last name) or Professor (last name).
- 19. Address concerns about performance or course material directly with the course coordinator, facilitator, or teaching assistant.
- 20. Seek assistance with academic or personal difficulties as soon as possible.

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 <u>UF COP Course policies</u>.

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 <u>COP Student Mistreatment Report</u>.

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):

Larisa Cavallari, Pham.D.

• Email: lcavallari@cop.ufl.edu

Office: MSB PG22Phone: 352 – 273 -8245

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

Mei He, Ph.D.

• Email: mhe@cop.ufl.edu

Office: UF Cancer and Genetics Research Complex, Rm 0458

• Phone: 352 – 273 - 9847

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

Instructional Designer:

Skylar Johnson, M.A.

• Email: skylarjohnson@cop.ufl.edu

Phone: 352 – 273 - 5719

Academic Coordinator Gainesville Campus:

Ashleigh Langford

Email: <u>lynn8597@ufl.edu</u>Office: HPNP 4309

• Phone: 352 - 273 - 6284

<u>2PD Absence/Tardy Ticket</u> <u>3PD Absence/Tardy Ticket</u>

Educational Coordinators:

Katie Orben

Jessica Linares

Email: korben06@ufl.edu
 Office: Jacksonville Campus
 Phone: 904-244-9590

• Email: jnoriegalinares@ufl.edu

Office: Orlando CampusPhone: 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 Examplify 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		11				
[Recommended for Independent Study]	Mod#	Activity	Activity Title	Objectives	Contact Time (hr)	Responsible
	1	Module	Week 1		()	
		Unit	Course Introduction/Identifying a Research Question	1,2,3,4,5,9		Larisa Humma Cavallari, Mei He
11/29/23		Other	Review syllabus		0.5	Larisa Humma Cavallari, Mei He
11/29/23		Reading	Intro slide set		0.5	Larisa Humma Cavallari, Mei He
11/29/23 from 11am-12pm		Active Learning Session Zoom	Seminar 1: Medicinal Chemistry	1-2,4-6,9	1	Wenjun Xie
11/29/23 from 1pm- 3pm		Active Learning Session Zoom	ALS 1: Seminar Reflections	1-2,4-6,9	2	
In Class During Afternoon Session		Quiz (In Class)	Quiz 1			Larisa Humma Cavallari, Mei He
11/30/23 at 10am		Assignme nt (Graded)	Written Group Reflection 1			Larisa Humma Cavallari, Mei He
		Unit	Question to Hypothesis			Larisa Humma Cavallari, Mei He
11/30/23 from 10am-11am		Active Learning Session Zoom	Seminar 2: Medicinal Chemistry	1-2,4-6,9	1	Yanjun Li
11/30/23 from 11am-12pm		Active Learning Session Zoom	Seminar 3: Pharmacodynamics	1-2,4-6,9	1	Jay McLaughlin
11/30/23 from 1pm- 3pm		Active Learning Session Zoom	ALS 2: Seminar Reflections	1-2,4-6,9	2	
In Class During Afternoon Session		Quiz (In Class)	Quiz 2			Larisa Humma Cavallari, Mei He
12/1/23 at 10am		Assignme nt (Graded)	Written Group Reflection 2			Larisa Humma Cavallari, Mei He

Date / Time						
[Recommended					Contact	
for Independent	NA144	A - (!!(A a the site of Title	Objections	Time	D ibla
Study]	Mod#	Activity Unit	Activity Title Study Design	Objectives	(hr)	Responsible Larisa Humma
		Uniit	Study Design			Cavallari, Mei
						He
12/1/23 at 10am		Assignme	Research Report: Part 1 - Selection of			Larisa Humma
		nt (Orandad)	Scientist			Cavallari, Mei
12/1/23 from 10am-		(Graded) Active	Seminar 4: Pharmacodynamics	1-2,4-6,9	1	He Siobhan Malany
11am		Learning	Commar 4. 1 Harmaccaynamics	1 2,4 0,5	·	Clobilari Malariy
		Session				
40/4/00 (44		Zoom	O	40400		Al-Link and
12/1/23 from 11am- 12pm		Active Learning	Seminar 5: Pharmaceutics	1-2,4-6,9	1	Abhisheak Sharma
12piii		Session				Onanna
		Zoom				
12/1/23 from 1pm-		Active	ALS 3: Seminar Reflections	1-2,4-6,9	2	
3pm		Learning Session				
		Zoom				
In Class During		Quiz (In	Quiz 3			Larisa Humma
Afternoon Session		Class)				Cavallari, Mei
12/6/23 at 11am		Assignme	Written Group Reflection 3			He Larisa Humma
12/0/25 at 11aiii		nt	Written Group Renection 3			Cavallari, Mei
		(Graded)				He
		Unit	Study Significance			Larisa Humma
						Cavallari, Mei He
12/6/23 from 11am-		Active	Seminar 6: Pharmaceutics	1-2,4-6,9	1	Fan Zhang
12pm		Learning				
		Session Zoom				
12/6/23 from 1pm-		Active	ALS 4: Seminar Reflections	1-2,4-6,9	2	
3pm		Learning				
		Session				
In Class During		Zoom Quiz (In	Quiz 4			Larisa Humma
Afternoon Session		Class)	QuiZ T			Cavallari, Mei
						He
12/7/23 at 10am		Assignme	Written Group Reflection 4			Larisa Humma
		nt (Graded)				Cavallari, Mei He
		Module	Week 2			Larisa Humma
						Cavallari, Mei
						He
		Unit	Data Analysis			Larisa Humma
						Cavallari, Mei He
12/7/23 from 10am-		Active	Seminar 7: Pharmacotherapy and	1-2,4-6,9	1	Danxin Wang
11am		Learning	Translational Research			

Data / Time			T	-		
Date / Time [Recommended for Independent Study]	Mod#	Activity	Activity Title	Objectives	Contact Time (hr)	Responsible
		Session Zoom				
12/7/23 from 11am- 12pm		Active Learning Session Zoom	Seminar 8: Pharmacotherapy and Translational Research	1-2,4-6,9	1	Julio Duarte
12/7/23 from 1pm- 3pm		Active Learning Session Zoom	ALS 5: Seminar Reflections	1-2,4-6,9	2	
In Class During Afternoon Session		Quiz (In Class)	Quiz 5			Larisa Humma Cavallari, Mei He
12/11/23 at 10am		Assignme nt (Graded)	Written Group Reflection 5			Larisa Humma Cavallari, Mei He
		Unit	Obstacles and How to Overcome Them			Larisa Humma Cavallari, Mei He
12/11/23 from 10am-11am		Active Learning Session Zoom	Seminar 9: Pharmaceutical Outcomes & Policy	1-5,9,10	1	Mikael Svensson
12/11/23 from 11am-12pm		Active Learning Session Zoom	Seminar 10: Pharmaceutical Outcomes & Policy	1-5,9,10	1	Almut Gertrud Winterstein
12/11/23 from 1pm- 3pm		Active Learning Session Zoom	ALS 6: Seminar Reflections	1-5,9,10	2	
In Class During Afternoon Session		Quiz (In Class)	Quiz 6			Larisa Humma Cavallari, Mei He
12/12/23 at 11am		Assignme nt (Graded)	Written Group Reflection 6			Larisa Humma Cavallari, Mei He
		Unit	Regulatory Considerations			Larisa Humma Cavallari, Mei He
12/12/23		Lecture Video	Human Subject Research		0.5	Larisa Humma Cavallari, Mei He
12/12/23		Lecture Video	Animal Research		0.5	Larisa Humma Cavallari, Mei He
12/12/23 from 1pm- 3pm		Active Learning Session Zoom	ALS 7: Seminar Reflections		2	Larisa Humma Cavallari, Mei He

	1		Г	1		
Date / Time [Recommended for Independent					Contact Time	
Study]	Mod#	Activity	Activity Title	Objectives	(hr)	Responsible
In Class During Afternoon Session		Quiz (In Class)	Quiz 7			Larisa Humma Cavallari, Mei He
12/13/23 at 10am		Assignme nt (Graded)	Written Group Reflection 7			Larisa Humma Cavallari, Mei He
		Module	Week 3			Larisa Humma Cavallari, Mei He
		Unit	Small Group Presentations			Larisa Humma Cavallari, Mei He
12/13/23 from 10am-12pm		Active Learning Session Zoom	ALS 8: Individual Presentations	1-6,9,11	2	Larisa Humma Cavallari, Mei He
12/13/23 from 1pm- 3pm		Active Learning Session Zoom	ALS 8: Small Group Presentations	1-6,9,11	2	Larisa Humma Cavallari, Mei He
12/13/23 at 10am		Assignme nt (Graded)	Research Report: Part 2			Larisa Humma Cavallari, Mei He
In Class During Afternoon Session		Assignme nt (Graded)	Small Group Presentations			Larisa Humma Cavallari, Mei He
			Total Contact Hours		30	

Appendix C: Rubric for Assessing Student Participation in Class

	Exemplary	Proficient	Developing	Unacceptable
	(Score = 3)	(Score = 2)	(Score = 1)	(Score = 0)
Frequency of participation in class	Student initiates contributions more than once in each recitation.	Student initiates contribution once in each recitation.	Student initiates contribution at least in half of the recitations	Student does not initiate contribution & needs instructors to solicit input.
Quality of comments	Comments are always insightful & constructive; uses appropriate terminology. Comments balanced between general impressions, opinions & specific, thoughtful criticisms or contributions.	Comments mostly insightful & constructive; mostly use appropriate terminology. Occasionally comments are too general or not relevant to the discussion.	Comments are sometimes constructive, with occasional signs of insight. Student does not use appropriate terminology; comments not always relevant to the discussion.	Comments are uninformative, lacking in appropriate terminology. Heavy reliance on opinion & personal taste, e.g., "I love it", "I hate it", "It's bad" etc.
Listening Skills	Student listens attentively when others present materials, perspectives, as indicated by comments that build on others' remarks, i.e., student hears what others say and contributes to the dialogue	Student is mostly attentive when others present ideas, materials, as indicated by comments that reflect & build on others' remarks. Occasionally needs encouragement or reminder from T.A of focus of comment	Student is often inattentive and needs reminder of focus of class. Occasionally makes disruptive comments while others are speaking.	

Appendix D: Active Learning Reflections

Grade Determination:

Satisfactory = 3 Points with a score of "Meets Expectations" in 2 of the 3 areas. **Unsatisfactory** = 2 or less points

Proficiency Level	Accomplished (2 Points)	Meets Expectations (1 Point)	Deficits Exist (0 Points)
Quality of Information	Interprets information	Information is summarized and	Reflections are
	in accurate and highly	not a reiteration of	descriptive: a reiteration
	insightful ways. Cites	information provided by the	of what was presented by
	readings and prior	instructor or in readings.	instructor or read. Serious
	experiences and	References are sometimes	misinterpretations or non-
	explains how these	made to other readings or	interpretation of the
	references extend and	experiences. Interpretations of	information is evident.
	refine insights.	information are precise and	Reflection is shallow and
		clear.	egocentric.
Organization	Information is very well	Information is logically	Information is
	organized with well-	organized, and most	disorganized.
	organized paragraphs	paragraphs are well-organized.	
	and subheadings where	One or two paragraphs could	
	appropriate.	be better organized.	
Mechanics	No grammatical,	1-2 grammatical, spelling or	Three or more
	spelling or punctual	punctual errors.	grammatical, spelling or
	errors.		punctual errors.

Appendix E: Group Presentation

Grade Determination:

Satisfactory = 4 Points with a score of "Meets Expectations" in 3 of the 4 areas. **Unsatisfactory** = 3 or less points

	Accomplished (2 Points)	Meets Expectations (1 Point)	Deficits Exist (0 Points)
Content Did the presentation have valuable information?	Presentation had an exceptional amount of valuable information. Knowledge of the subject extended beyond expectations. Knowledge of the subject is evident throughout.	Presentation had a good amount of valuable information. Knowledge of the subject met expectations. Information was clear, appropriate, and correct.	Presentation had little or no valuable information. Insufficient knowledge of the subject. Information was incorrect and/or confusing.
Collaboration Did everyone contribute to the presentation? Was everyone well versed in the presentation material?	The team members built on each other's ideas extensively. It was very evident that all of the group members contributed equally to the presentation.	The team members built on each other's thoughts most of the time. It seemed like everyone contributed to the presentation but the contributions of several members could have been greater.	It seemed as though only a few people were knowledgeable of the content and/or contributed to the presentation.
Organization Was the presentation well organized and easy to follow?	The presentation was well organized, well prepared and easy to follow.	The presentation had organizing ideas but could have been much stronger with better preparation.	There were minimal or no signs of organization or preparation.
Presentation Did the presenters speak clearly? Was it obvious the material had been rehearsed? Were materials free of errors?	Presenters did an e excellent job engaging the class in the presentation. Presenters were very confident and spoke clearly. Materials were free of spelling/grammatical errors.	Presenters showed evidence of planning prior to presentation. Presenters were generally confident and spoke clearly. Materials had less than 2 spelling/grammatical errors.	Presenters demonstrated little evidence of planning prior to presentation. Presenters mumbled and/or speaking was not clear. Materials had spelling/grammatical errors.

Appendix F: Scientist Research Report

Rubric Grade Determination:

Satisfactory = 9 Points with a score of "Accomplished" in 3 of the 4 areas.

Unsatisfactory = 8 or less points

Criteria	Exemplary	Accomplished	Developing	Beginning
	3	2	1	0
	Yes	Yes, but	No, but	No
Quality of Information	Scientist's work is summarized very well. Clearly identifies insight in how to apply these points in the future.	Summary of scientist's work is accurate but not precise. Cites how thoughts from the scientist's work can be applied in the future.	Summary of scientist's work is sketchy. Attempts to apply thoughts to the future but this is not clearly described.	Summary of scientist's work is very sketchy. No application to the future.
Organization	Good organization; points are extremely well organized from a logical perspective.	Although organized, the logical thoughts supporting the points could be improved.	Some organization but there is weak logical progression in thoughts.	Poorly organized.
Grammar, Usage, Mechanics, Spelling	No errors	Only one or two errors	More than two errors	Numerous errors distract from understanding
Verbal Presentation Skills	The scientist's work and contribution to the field is clearly and accurately presented with major accomplishments included.	The presentation is generally clear with minimal inaccuracies or omissions.	The presentation is somewhat clear with some inaccuracies or omissions.	The presentation is difficult to follow with major work by the scientist omitted or misrepresented.