Cardiac Disorders
Fall 2017   6 Credits

Course Purpose:

PHA 5592 is one in a series of eight courses which are organized by body system. PHA5592 introduces the student to patient care concepts, patient assessment, pharmacokinetics, pharmacodynamics, therapeutics, and therapeutic drug monitoring for patients with cardiac disorders. The learning activities emphasized during this course include gathering and processing information, identifying and prioritizing problems, planning and effecting therapeutic interventions, patient communication and counseling, and communicating with health care providers.

This post-baccalaureate working professional course is designed to introduce the practicing pharmacist to the concepts of patient care by requiring the student to provide services to actual patients as they learn. All the biomedical, pharmaceutical, social, and clinical sciences are fully integrated in the reading assignments and patient case presentations for the purpose of providing the student the opportunity to function as he/she would after graduation, but under faculty supervision.

Course Faculty and Office Hours
Course Coordinator:
Sue Markowsky, Pharm.D.
Regional Director, WPPD
Clinical Associate Professor
UF College of Pharmacy
Email: smarkowsky@cop.ufl.edu
Office Hours: Email to request phone appointment

Please see **Appendix A** for contact information of faculty and staff involved in this course and the WPPD program. Bios of the expert speakers for this course are also included in Appendix A. Each student is assigned to a facilitator and will receive an email from the facilitator at the beginning of the course. This email will provide the facilitator's email address and phone number.

Place and Time of Class Sessions
Lectures are prerecorded and posted on the course website and are available on Sakai Learning system. Lectures may be viewed at the student's individualized timeline prior to completing assignments and active learning sessions. Regional students will attend three 7-8 hour live sessions. The sessions will occur on designated Saturdays listed on WPPD calendar. Remote students will attend one weekend session (12-15 contact hours) and weekly Adobe Connect sessions. The time of the sessions will vary based on group assignment.

Relation of Course to WPPD Program Outcomes:

This course prepares the Pharm.D. student to accomplish the following abilities and the related Student Learning Outcomes (SLOs) upon graduation:

Domain 1 – Foundational Knowledge

1.1. *Learner (Learner)* - Develop, integrate, and apply knowledge from the foundational disciplines (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, assess and solve therapeutic problems, and advance population health and patient-centered care.

Domain 2 – Essentials for Practice and Care

2.1. *Patient-centered care (Caregiver)* - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize patient needs, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).

2.2. *Medication use systems management (Manager)* - Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.

2.3. *Health and wellness (Promoter)* - Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.

2.4. *Population-based care (Provider)* - Discuss how population-based care influences patient-centered care and influences the development of practice guidelines and evidence-based best practices.

Domain 3 - Approach to Practice and Care

3.1. *Problem Solving (Problem Solver)* – Identify and assess problems; explore and prioritize potential strategies; and design, implement, and evaluate the most viable solution.

3.2. *Educator (Educator)* – Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding.

3.3. *Patient Advocacy (Advocate)* - Assure that patients' best interests are represented.

3.4. *Interprofessional collaboration (Collaborator)* – Actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.

3.5. *Social & Cultural Sensitivity (Includer)* - Recognize social determinants of health in order to diminish disparities and inequities in access to quality care.

3.6. *Communication (Communicator)* – Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.

Domain 4 – Personal and Professional Development

4.1. *Self-awareness (Self-aware)* – Examine and reflect on personal knowledge, skills, abilities, attitudes, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.

4.2. *Leadership (Leader)* - Demonstrate responsibility for creating and achieving shared goals, regardless of position.

4.3. *Innovation and Entrepreneurship (Innovator)* - Engage in innovative activities by using creative thinking to envision better ways of accomplishing professional goals.

4.4. *Professionalism (Professional)* - Exhibit behaviors and values (e.g., UF PHARMD CORES) that are consistent with the trust given to the profession by patients, other healthcare providers, and society.

   a. Interpret subjective and objective data.
   b. Identify medication-related problems (identify and/or prevent drug-related problems such as inappropriate indication, therapeutic duplication, drug-disease, drug-drug interactions, incorrect drug dosage or duration of treatment, drug-allergy interactions, and clinical abuse or misuse of drugs).
   c. Develop a specific and complete care plan. This plan includes a comprehensive list of the patient's medication-related problems and for each problem, a specific plan for resolving the problem. This plan includes detailed information about what medications need to be added or discontinued and if a medication is to be added, the product that should be dispensed, the dosage, route, times of administration, duration of therapy, parameters to monitor for efficacy and toxicity, and patient counseling plans.
   d. Outline a monitoring plan for monitoring drug efficacy and toxicity.
   e. Support the care plan and decisions with evidence-based literature.

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

1. Given a patient with a cardiac disorder, demonstrate the ability to:
   a. Interpret subjective and objective data.
   b. Identify medication-related problems (identify and/or prevent drug-related problems such as inappropriate indication, therapeutic duplication, drug-disease, drug-drug interactions, incorrect drug dosage or duration of treatment, drug-allergy interactions, and clinical abuse or misuse of drugs).
   c. Develop a specific and complete care plan. This plan includes a comprehensive list of the patient's medication-related problems and for each problem, a specific plan for resolving the problem. This plan includes detailed information about what medications need to be added or discontinued and if a medication is to be added, the product that should be dispensed, the dosage, route, times of administration, duration of therapy, parameters to monitor for efficacy and toxicity, and patient counseling plans.
   d. Outline a monitoring plan for monitoring drug efficacy and toxicity.
   e. Support the care plan and decisions with evidence-based literature.
2. Demonstrate the ability to establish for a patient the "therapeutic goals" or endpoints that indicate the patient's medication problem is resolved, cured, or managed.
   a. Monitor a patient over time and assess when the endpoints are achieved.
   b. Modify a therapeutic plan or endpoints so that the patient's quality of life is optimized.

3. Recognize medications that are on the ISMP's list of high-alert medications and identify strategies for pharmacists to reduce the risk of medication errors with these medications.
4. Identify health disparities in patients with cardiac disorders, and conceptualize strategies to address those disparities
5. Conduct a patient/caregiver interview to gather information about the patient's medication therapy and health status, with consideration of the patient's culture, level of education, socioeconomic status, and emotional state of mind.
6. Demonstrate in a simulated setting, the ability to counsel a patient about medications related to cardiac disorders.
7. Educate a patient about how to take a medication and self-monitor for efficacy and toxicity.
8. Counsel patients who have problems such as medication adherence and psychosocial problems that may impact successful administration of medication.
9. Present a patient summary with confidence and in an organized format that includes only pertinent information.
10. Give a formal case presentation that includes presentation of patient data, development of a comprehensive care plan, a summary of literature pertinent to the medication-related problems, and an oral defense of recommendations.
11. For the disorders emphasized during this course:
    a. Explain the pathophysiology of the disorders
    b. Outline risk factors for development of the disorders
    c. Describe the epidemiology of the disorders
    d. Describe the clinical presentation and clinical manifestations of the disorders
    e. Discuss pharmacologic and non-pharmacological interventions that are recommended for the disorders
    f. Recall the currently accepted standard of care guidelines for the disorders
11. Given a patient/practice problem or case related to a cardiac disorder, solve the medication-related problems using clinical reasoning skills.
13. Demonstrate the ability to critically evaluate research or research papers to solve practice problems
14. Given a patient/practice problem or case related to cardiac disorders, appropriately apply evidence-based clinical practice guidelines and/or systematic reviews.
15. Demonstrate professional demeanor in carrying out learning activities and adhere to ethical principles.

Pre-Requisite Knowledge and Skills

The student must be in good academic standing with the Working Professional Doctor of Pharmacy Program, having successfully completed the Foundations course. Students should have a baccalaureate degree from an ACPE-accredited college of pharmacy that included therapeutics and pharmacokinetics. The student must also be licensed and in good standing with their respective Board of Pharmacy.

Course Structure & Outline

This course is offered in a blended learning format that utilizes a combination of face-to-face classroom instruction, on-line learning, and hands-on experiential activities. To meet the standards for course credit assignment this six-credit course requires a minimum of 96 hours of classroom instruction or the equivalent. Since the face-to-face classroom instruction is less than 96 hours, a number of alternative

instructional activities comprise the remainder of the equivalent content and serve to fulfill the curricular equivalency standard. Using a combination of live classroom instruction and alternative methods of instruction ensures that the requirements for course credit assignment are fulfilled. Please see **Appendix B** for the breakdown of instructional hours**.** Here are the course structures used in the Pharm.D. program:

    a) Multiple self-directed learning activities are required (e.g., videos, readings, web-based learning) and at selected intervals students come to class for a face-to-face learning session (e.g., case discussions, case presentations, literature reviews, problem set discussions),

    b) Class sessions are face-to-face or 'live' sessions via online classrooms,

    c) Self-directed pre-requisite learning activities must be completed prior to and after 'live' class sessions, and

    d) Learning activities completed in the actual practice setting

Acquisition of knowledge and skills are assessed using a combination of exams, presentations, and assignments. Course participation in Adobe Connect sessions (remote), discussion board activities, and attendance at a live session are also assessed. The course is divided into three units and there are learning modules within each unit. An outline of the course module topic is listed in Table 1. The corresponding module activities are posted in the Resources section, E-learning website (see Quickscan).

Table 1. Unit and module topics.

Unit	Module	Faculty Member	Assessment
A0	Course Introduction (Orientation)	Dr. Sue Markowsky	
A1	Cardiac Anatomy, Assessment	Dr. Don Reeder	Exam A (EKG and Heart Sounds Assignment)
A2	Infective Endocarditis (Parts 1 and 2)	Dr. Ado Khoury	Exam A (IE Case)
A3	Congenital Heart Disease	Dr. Christopher Campbell	Exam A
A4	Heart Failure and MTM Cases (Parts 1, 2, 3)	Dr. Shawn Anderson	Exam A (HF Case)
B1	Intro to EKG (0.5 hr) and Arrhythmias (2 hr)	Dr. Jennifer Ashton (Arrhythmias) Dr. Katie Vogel Anderson (EKG)	Exam B
B2	ACLS (Parts 1 and 2)	Dr. Michele Weizer	Online quiz after ACLS Workshop
B3	Atrial Fibrillation	Dr. Jennifer Ashton	Exam B
C1	Anticoagulation in Cardiac Patients (Heart Valves and Atrial Fibrillation) (1 hr)	Dr. Robert Shapiro	Exam B
C2	Pathophysiology of Blood Clotting and Acute Coronary Syndrome (ACS) (2 hrs)	Dr. Katie Vogel Anderson	Exam C (ACS Case)
C3	Hypertensive Crisis	Dr. Abigail Antigua	Exam C
C4	Pharmacokinetics of Cardiac Drugs	Dr. Sihem Bihorel	Exam C

Textbooks

The following textbooks will be used throughout your course of study in the WPPD program. No other textbooks will be required. Textbooks can be purchased via various internet sites; however, make sure you buy the latest editions.

1. **DiPiro et al.** Pharmacotherapy: A Pathophysiological Approach, 2017, 10th ed.
   a. This text is available via the UF library/ AccessPharmacy database. Although you can use the online version for study, most students find it essential to purchase a hardcopy of the Pharmacotherapy Text. Online access to the Pharmacotherapy text may not be available during exams.
   b. (Caution: Old editions are sold on the internet and should not be purchased. Watch carefully what edition you purchase. A Pharmacotherapy Handbook is also available with the current edition. This handbook is a useful reference in daily practice but should not be purchased in lieu of the text listed above.)
2. **Schwinghammer et al.** Pharmacotherapy Casebook: A Patient Focused Approach, 2017, 10th ed. This text is available via the UF library/AccessPharmacy database.
3. **Abate MA, Blommel ML.** Remington Education: Drug Information and Literature Evaluation, 2013, 1st Ed, Pharmaceutical Press. ISBN-10: 0857110667 ISBN-13: 978-0857110667.
4. **Lee, Mary.** Basic Skills in Interpreting Laboratory Data, American Society of Health Systems Pharmacists, 2013, 5th ed.

5. **Murphy J.** Clinical Pharmacokinetics, American Society of Health Systems Pharmacists, 2017, 6th ed. ISBN: 978-1-58528-537-2,

Instructors may require additional readings such as clinical guidelines, review articles, book chapters, or websites. They may also provide additional resources to supplement the lecture material. Required or recommended readings will be listed under assignments and responsibilities on the course schedule. Required readings not available via the textbooks above or Access Pharmacy (via online Health Sciences Library Databases) will be posted under the resources tab on the course website.

Active Learning Requirements

Active learning requires students to actively participate in synchronous learning activities and complete assignments that require either application of what is learned from lectures or independent study. During this course, active learning will occur with the activities listed below. See the Course Quickscan detailed in **Appendix C** for specific expectations required to accomplish this active learning:

1. Active participation in small group classes including "live" sessions (regional and remote students) and Adobe Connect sessions (remote students).
2. Completion of self-directed learning modules which include: a) videos, b) readings, c) assignments that require application of module knowledge, and d) online self-assessment questions.
3. Asynchronous communications and discussions with course coordinators, small group members, and/or guest lecturers via discussion boards and email.
4. Completion of the following class presentations: a) individual patient case, b) journal article update, and c) CPI / Capstone progress update.
5. Completion of homework and assignments required for workshop preparation. See the weekly planner for Units A, B, and C homework assignments and timelines posted in Resources E-learning website (remote or regional model).

Feedback to Students

Facilitators will provide written feedback on all assignments via the eLearning system. In general, written feedback can be expected within one week of assignment submission. Facilitators will also provide students with timely verbal feedback on in-class presentations and performance. In addition, students may schedule an appointment with the facilitator and/or course coordinator if they wish to obtain more detailed feedback.

Student Evaluation & Grading

Evaluation Methods

Individual Case Presentation	10%
Journal Article Presentation	3%
CPI / Capstone Progress Reports	3%
Homework (1.5% each) SLO/SWOT, EKG, IE, HF, ACLS, ACS	12%

Class participation	12%

- 4% per each session (Units A, B, C) : Includes attendance, class participation, homework, communication (e.g., email), professionalism

ACLS Quiz	3%
Exam A (Unit A)	19%
Exam B (Unit B)	19%
Exam C (Unit C)	19%

- *Note: Students must pass the Case Presentation as a requirement to pass the course. Remediation for a failed case(s) (less than 70%) will include re-submitting the case to the facilitator and may also include presenting the revised case to the group. The final score for the remediated case presentation grade will be limited to the original score. To successfully pass the course, the student must achieve a grade >= 70% on the remediation assignment. All remediation must be completed by the deadline established by the course coordinator. Otherwise, a grade of E will be assigned. No more than 2 case remediations will be permitted during the eight WPPD body system courses.
- Points will be deducted for SOAP notes that do not meet the minimum criteria (passing scores are required). See the evaluation forms for Case Presentations and SOAP notes (Sakai Resources).
- Note. Students must obtain at least a 70% (combined) average on the EXAMS and a 70% overall course grade as requirements to pass the course. Students do not have to score a 70% on each exam; only the average of the three exams needs to be at least 70%. See E learning in SAKAI System for the full policy. The requirement to achieve a score of at least 70% has been established to assure all students have achieved the course learning objectives with minimum competency.
- **Please visit the following URL so you clearly understand the UF grading policies: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx**

Grading Scale

A	96.5 – 100	A-	93.5 – 96.49
B+	90.5– 93.49	B	86.5 – 90.49
B-	83.5 – 86.49	C+	80.5 – 83.49
C	78.5 – 80.49	C-	76.5 – 78.49
D+	74.5 – 76.49	D	71.5 – 74.49
D-	69.5 – 71.49	E	<69.5

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."

Class Attendance Policy

CLASS ATTENDANCE IS MANDATORY AT THE "LIVE" EXPERIENTIAL SESSIONS (including regional and remote sessions). A form ("Request to miss part or all of a session") must be completed by the student if they cannot attend part or all of a session. The form is posted on E learning in SAKAI System. This form must be approved by the student's facilitator <u>and</u> the course coordinator. Email completed form to facilitator and course coordinator. Students are responsible for taking any exams missed via ProctorU. **NOTE:** Attendance for the remote weekend is MANDATORY. If missed, students will be required to travel to makeup a 'live' session during one of the three regional on-site sessions.

Exam Policy

There are two components to the Working Professional Pharm.D. courses; the experiential component and the didactic component. Competence in both areas is critical to being a successful Doctor of Pharmacy. Because these components are integrated within each course, a mechanism to document an acceptable level of understanding in each area is vital. As such, students must not only demonstrate competence in the course overall, but also in each component of the course in order to the pass the course.

Examination Schedule

This course has three examinations.* Students must obtain at least a 70% (combined) average on the EXAMS and, AND a 70% overall in coursework in order to pass the course. The student DOES NOT have to score a 70% on each exam, only the average of the three exams needs to be at least 70%.

Exam A (Unit A)
| Regional Sites | Sept 23, 2017 | 8:30 AM-10:30 AM |
| Remote Sites | Sept 23, 2017 | via ProctorU (8 am-12 noon EST start times) |

Exam B (Unit B)
| Regional Sites | Oct 21, 2017 | 8:30 AM-10:30 AM |
| Remote Sites | Oct 21, 2017 | via ProctorU (8 am-12 noon EST start times) |

Exam C (Unit C)
| Regional Sites | Nov 18, 2017 | 8:30-10:30AM |
| Remote Sites | Nov 18, 2017 | via ProctorU (8 am-12 noon EST start times) |

*All exams are open book.

Proctored Exam Details

For detailed exam instructions, please see Sakai Resources section, within the folder titled "Proctored Online Exams". Students should printout the documents within this folder prior to each online proctored exam. The documents include important contact information, online exam instructions, and exam rules. All exams will be proctored.

You must NOT obtain the exam at any other time than instructed unless prearranged with the course coordinator and your facilitator. The Academic Honesty Policy will apply to this exam process and

students not complying with the instructions with regards to time and location are subject to disciplinary action.

In the rare event that the online exam malfunctions and the exam is administered by an alternate method, the deadlines will be enforced and the following point deductions will be made for exams turned in late:

- ❖ 5-15 minutes   5% deduction
- ❖ 16-30 minutes   7% deduction
- ❖ 31-60 minutes   10% deduction
- ❖ 61-120 minutes   20% deduction
- ❖ >121 minutes   30% deduction

Exam Format
All examinations will be mostly in case study format so that an evaluation of the student is made not just on his/her ability to recall facts, but more importantly, the ability to apply information to improve, monitor, and evaluate pharmaceutical patient care outcomes.

Exam Posting
Exam Grades will be posted to E learning in SAKAI by the facilitator as soon as permissible. Students will be notified of grade posting by the facilitator. Exams will be returned in the next session for regional model students. Final exams for regional model students will be returned at the next class session.

Exam Review
Students have 1 week from the date of posting the exam grade on E learning in SAKAI to request a copy of the graded exam. The student has 1 week from the time of receipt of the exam to request clarifications. Facilitators will review and provide judgment on the requested clarifications.

Exam Challenges
In the event that the student is not satisfied with the facilitator's judgment, a written appeal can be made. The student has 1 week from the time of receipt of judgment to appeal. Appeals are sent to the facilitator who will forward to the course coordinator. Written appeals must include the following: The question number, an evidence-based rationale for why the student feels their response is accurate, literature citations. The exam will be regraded, in full, by a third party. The grader will assess the supporting data when grading the appealed portions of the exam. Note: the score of a fully regraded exam may increase, decrease, or stay the same. The regraded score will be considered final.

Exam Rescheduling
Examinations may be changed from the scheduled dates provided that the change does not conflict with any University of Florida or College of Pharmacy policies. Examination date changes proposed by the students as a group require the unanimous approval of the students and faculty involved.

Make-up Exam Policy
Make-up examinations will only be administered under the most EXTREME circumstances and only if the student has an excused absence. Contact your facilitator for more information.

Policy on Old Quizzes and Assignments
Course coordinators are not required to provide copies of old exams or assignments.

Assignment Deadlines
Assignment deadlines and the course schedule are outlined in Appendix C (Quick Scan). The weekly planners for Units A, B, and C are posted in e-Learning for regional and remote models. Use the weekly planner to keep on track during the course.

***Assignments Require "Independent Work"**
During the semester you will have homework and presentation assignments. These assignments must be your independent work, meaning that you did not share your answers with another student or collaborate in answering the questions. The faculty monitor closely for similarities among student answers to these assignments. If there is evidence suggesting that your assignment is not "independent work," your facilitator and course coordinators will forward your case to the University and request an academic dishonesty investigation.

You are strongly encouraged to schedule your time in advance of deadlines so that you have extra time in case of illness or emergency.

Students who encounter difficulties meeting any deadline should to immediately email/call their facilitator and discuss options available for success. Please remember, as noted above with most assignments there are **no options** for extending an assignment deadline. If the facilitator cannot be reached, the student may contact the course coordinators by email for assistance in communicating with the facilitator.

Important Assignment Rules:

1. "Homework" this semester will include questions posted online to prepare for the experiential sessions (see E-Learning Resources). Students are required to complete the assignments prior to each session. The student's work will be checked by the facilitator prior to beginning the session. Students who do not complete the material prior to the session will receive an incomplete. Students who submit late will receive a 10 percent reduction on the associated Unit Participation score (See participation rubric for the homework category).
2. All students (Remote and Regional) must submit case presentations 72 hours prior to their scheduled presentation. Do not use the UF webmail to submit cases, as it is not a secure method of sending patient information. To submit cases, go to Assignments and submit the case presentation materials (including the faculty supporting data handout merged within the same attachment). See Foundations Module titled "Case Presentations" for more information regarding case presentation format. Documents for case presentation format can also be located within E Learning for "WPPD Resources" (see Resources folder - "Case Presentation Information").
3. In order to pass the course, it is mandatory that the student pass the case presentation. Remediation for a failed case(s) (less than 70%) will include re-submitting and presenting the revised case to a remediation facilitator. The final score for the remediated case presentation grade will be limited to the original score. However, the student may pass the course if the remediated case grade

is >=70 and an overall passing course letter grade is achieved. No more than 2 case remediations will be permitted during the eight WPPD body system courses.

4. Presentation assignments will receive a "Turn-It-In" score within 24 hours of submission to the Individual Case assignment link. More specific instructions can be found on the E Learning website. A printed copy of the case presentation should be provided to the facilitator during "live" class sessions.

General College of Pharmacy Course Policies

The College of Pharmacy has a website that lists course policies that are common to all courses. This website covers the following:

1. University Grading Policies
2. Academic Integrity Policy
3. How to request learning accommodations
4. Faculty and course evaluations
5. Student expectations in class
6. Discussion board policy
7. Email communications
8. Religious holidays
9. Counseling & student health
10. How to access services for student success

Please see the following URL for this information:

http://www.cop.ufl.edu/wp-content/uploads/dept/studaff/policies/General%20COP%20Course%20Policies.pdf

Complaints

Should you have any complaints with your experience in this course please contact your course coordinator. If unresolved, contact the COP Senior Associate Dean-Professional Affairs. For unresolved issues, see: http://www.distancelearning.ufl.edu/student-complaints to submit a complaint.

Appendix A: Directions for Contacting Faculty & Course Faculty List

PHA 5592 Course Coordinator: Sue Markowsky, Pharm.D.; E-mail: smarkowsky@cop.ufl.edu
Academic Coordinator: Jackie Lavinder; E-mail: lavinder@cop.ufl.edu

Dean, College of Pharmacy
Julie Johnson, Pharm.D.
Dean, College of Pharmacy
University of Florida

Director, WPPD
Sven Normann, Pharm.D., DBAT
Assistant Dean, Clinical Associate Professor
Pharmacotherapy & Translational Research
UF College of Pharmacy, Gainesville, Florida
E-mail: normann@cop.ufl.edu

Regional Director - Regional Sites, WPPD
Douglas F. Covey, Pharm.D., FCCP, CDE, MHA
Clinical Associate Professor, Pharmacotherapy & Translational Research
UF College of Pharmacy, Gainesville, Florida
Clinical Pharmacy Specialist – Ambulatory Care James A. Haley Veterans Hospital, Tampa, Florida
E-mail: Rxcovey@ufl.edu

Regional Director – Remote Sites, Capstone Programs, WPPD
Susan J. Markowsky, Pharm.D.
Clinical Associate Professor, Pharmacotherapy & Translational Research
UF College of Pharmacy, Gainesville, Florida
E-mail: smarkowsky@cop.ufl.edu

Director – Student and Academic Affairs, WPPD
Gregory Zuest, PhD, MESS, ATC/L, CSCS
WPPD Program / UF College of Pharmacy, Gainesville, Florida
E-mail: zuest@cop.ufl.edu

Associate Dean for Curriculum and Assessment
Diane E. Beck, Pharm.D.
Professor, Pharmacotherapy and Translational Research
UF College of Pharmacy, Gainesville, Florida
E-mail: beck@cop.ufl.edu

CPA Coordinators - Clinical Practice Assessments (CPAs), WPPD*
See PE Courses for CPA Coordinator contact information.

Off Site Admissions Center - Program Manager
Off Site Admissions Center, Orlando, Florida

Schedule An Appointment By Pasting this URL into your Internet Browser:
https://www.vcita.com/v/rengram/online_scheduling?staff_id=d7a2e4006d76da8f#/schedule
E-mail: R.Engram@distancelearning.cop.ufl.edu 1-866-226-7228 (x5032)

Program Assistant, WPPD
Tracie Cooper
UF College of Pharmacy, Gainesville, Florida
E-mail: tracie@cop.ufl.edu

Whom Do You Contact?
Course Coordinator will address: smarkowsky@cop.ufl.edu

- Course specific issues (e.g., course content, assignments, grades, and exams)
- Any exceptions made for student emergencies affecting course participation or completion

Facilitators will address: _____@ufl.edu.

- Regional/remote group meetings or calls
- Initial student questions
- Homework, Assignments
- Clinical Practice Assessments (CPAs)
- Clinical Practice Improvement (CPI)
- Capstone Paper Requirement

WPPD Office will address:

- Faculty and program evaluation
- Course and transfer credit
- Facilitators and student/facilitator assignments and relationships
- Student Records
- Tuition
- Affiliation Agreements

Off Site Admissions Center - Program Manager will address:

- Registration
- Course manual and material
  Please contact Off Site Admissions Center at: REngram@embanetcompass.com

College of Pharmacy Educational Technologies Office will address:
Technical support related to e-Learning sites, myCOP, Adobe Connect, Big Blue Button (BBB),
educational videos, mobile learning technologies and other course-related items supported by the COP
Educational Technologies Office.

- Telephone: (352) 273-6290
- Office Hours: Monday through Friday - 8:00 am to 5:00 pm
- E-mail: edu-help@ahc.ufl.edu

       • Website: http://it.cop.ufl.edu
       • Related website: http://my.cop.ufl.edu

Note: When contacting the College of Pharmacy Educational Technologies Support Office staff, we suggest e-mailing your request to our edu-help@ahc.ufl.edu address. This address is monitored by multiple staff and will likely result in the fastest support response. When reporting technical issues, please include the course name and location within the course where you are experiencing a problem. For example: "PHA1234, Resources, Module 1, video title.

UF Computing Help Desk will address:
Technical difficulties related to the e-Learning System, Gatorlink accounts, UF e-mail, ISIS, myUFL and other centralized UF systems.
       • Website: http://www.helpdesk.ufl.edu/
       • E-mail: helpdesk@ufl.edu
       • Help Wiki: https://wiki.helpdesk.ufl.edu/
       • Telephone: (352) 392-4357

Note: If one of your e-Learning course links does not appear for you on the first day of class, please contact Dr. Zuest or Jackie Lavinder for assistance.
       Jackie Lavinder; E-mail: lavinder@cop.ufl.edu
       Greg Zuest; Email: zuest@cop.ufl.edu

Course Faculty

Shawn D. Anderson, Pharm.D., BCACP, is a Cardiology Clinical Pharmacy Specialist at Malcom Randall Veterans Affairs Medical Center in Gainesville, Florida. He is also a Clinical Adjunct Professor in the Department of Pharmacotherapy and Translational Research at the University of Florida College of Pharmacy. Dr. Anderson received a Pharm.D. from the University of Florida College of Pharmacy in 2006. After graduation, he completed a Postdoctoral Fellowship in Family Medicine in the Departments of Community Health and Family Medicine and Pharmacy Practice in the Colleges of Medicine and Pharmacy at the University of Florida. His current research interests include clinical and medication-related outcomes in heart failure. He is a member of the American College of Cardiology, American College of Clinical Pharmacy, Florida Society of Health-System Pharmacists and Florida Pharmacy Association. Dr. Anderson is also a peer reviewer for the Annals of Pharmacotherapy and the American Journal of Health-System Pharmacy.

Katie Vogel Anderson, Pharm.D., BCACP earned her Bachelor of Science degree in biochemistry, with a minor in math, from the Florida State University in 1999. In 2003, Dr. Vogel Anderson graduated with her doctorate of pharmacy degree from the University Of Florida College Of Pharmacy. Following this, she completed a primary care pharmacy residency at the Malcom Randall Veterans Affairs Medical Center in Gainesville. After her residency, Dr. Vogel Anderson worked as a clinical pharmacy specialist at the same VA, in both the pharmacotherapy and geriatric primary care clinics. In 2010, Dr. Vogel Anderson joined the UF COP faculty. In addition to her teaching responsibilities, Dr. Vogel Anderson practices at UF Health Internal Medicine, where she manages a pharmacotherapy service and directs an ASHP-accredited PGY-1 pharmacy residency program,. She has a joint faculty appointment in the UF College of Medicine. In 2009, Dr. Vogel Anderson and her husband, Dr. Shawn Anderson, established the Vogel/Anderson Exceptional Leader Scholarship for third-year pharmacy students. When she is not

working, Katie enjoys traveling, spending time with family and friends, and spoiling her dogs, Teddie Roosevelt and Johnnie Adams.

Abigail Dee Antigua, PharmD, BCCCP, is a clinical pharmacist at North Florida Regional Medical Center with a focus in cardiovascular medicine and surgery. She is also a clinical assistant professor for the University of Florida College of Pharmacy. Dr. Antigua has experience in teaching, precepting, research, and hospital practice, having served in numerous leadership roles over her career. She received her doctorate from the University of Florida, and completed a PGY-1 Pharmacy Practice Residency at the University of Florida Health – Shands Hospital followed by a PGY-2 Critical Care Residency at the University of Washington Medical Center in Seattle, Washington. Her research interests include anticoagulation and pain management in critically ill patients. She is a member of the American College of Clinical Pharmacy, American Society of Health-System Pharmacists, Florida Society of Health-System Pharmacists, and the Society of Critical Care Medicine. Dr. Antigua is also a peer reviewer for the Journal of Pharmacy Practice.

Jenny Ashton, PharmD, BCPS, is a clinical specialist in cardiovascular medicine and surgery at UF Health Shands Hospital. She is also a clinical assistant professor at the University of Florida College of Pharmacy. Dr. Ashton received her Doctor of Pharmacy from the University of Florida. She completed her pharmacy practice residency at UF Health Shands Hospital and a specialty residency in critical care at the University of Kentucky Chandler Medical Center. Dr. Ashton acts as primary preceptor for the cardiac critical care and cardiology elective rotations. Her areas of interest include perioperative arrhythmias following cardiothoracic surgery, drug pharmacokinetic alterations during extracorporeal circulation, and infectious diseases management of critically ill patients.

Sihem Bihorel, Ph.D., Pharm.D., M.S., joined the Center for Pharmacometrics & Systems Pharmacology and the Department of Pharmaceutics at the University of Florida College of Pharmacy as an Assistant Professor in July 2015. Her laboratory is located on the Medical City campus in Lake Nona (Orlando), where she conducts experimental and computational research. Dr. Bihorel graduated with a master's and a Pharm.D. degree from the University of Paris-Descartes in France and a Ph.D. degree from the Department of Pharmaceutical Sciences at SUNY at Buffalo. She published several peer reviewed papers and has been awarded prestigious awards including, the PROSPER Excellence award from the College of Pharmacy at UF, the PhRMA Foundation starter grant award in translational medicine and therapeutics, and the scholar award from the Center for Protein Therapeutics at Buffalo.

Christopher Campbell, Pharm.D., BCPPS, received his Doctor of Pharmacy degree from Northeastern University. Following graduation, he completed a PGY1 Pharmacy Residency and a PGY2 Pediatric Pharmacy Residency at Georgia Regents Medical Center in conjunction with the University of Georgia College of Pharmacy. He joined the faculty at the University of Florida in August 2016 and maintains a clinical practice site at UF Health Shands Hospital in the Pediatric Intensive Care Unit (PICU) and Pediatric Cardiac Intensive Care Unit (PCICU). He has spoken and presented at state and national meetings and currently serves on the UHC Pediatric Pharmacy Committee. His interests include pediatric critical care, anticoagulation, and patient safety.

Adonice Khoury, Pharm.D., is a Clinical Assistant Professor in the Department of Pharmacotherapy and Translational Research and Clinical Specialist in Internal Medicine at UF Health/Shands Hospital. Dr. Khoury received a B.S. in Microbiology & Cell Science from the UF College of Agriculture and a Doctor of Pharmacy degree from the UF College of Pharmacy. He also completed an ASHP accredited specialty residency in geriatric pharmacy practice at the Malcom Randall VA Medical Center in Gainesville. Prior to

joining the college, Dr. Khoury was the head clinical pharmacist and antimicrobial stewardship pharmacist for six years at Select Specialty Hospital in Gainesville, a 44-bed long-term acute care hospital. Dr. Khoury was active with the college at Select Specialty Hospital, serving as a preceptor for adult medicine APPE rotations. His primary clinical practice and research interest is in internal medicine with specific interests in the subspecialties of gastrointestinal and infectious diseases pharmacotherapy.

Susan Markowsky, Pharm.D. is a Clinical Associate Professor at UF College of Pharmacy and Regional Director for the Working Professional PharmD program (WPPD). She coordinates the Remote sites and the Pharmaceutical Care Writing programs for WPPD. Dr. Markowsky received the Doctor of Pharmacy degree from the University of Kentucky, after first obtaining the B.S. Pharmacy degree from the State University of New York at Buffalo. She completed an ASHP Residency at Erie County Medical Center in Buffalo, New York. Dr. Markowsky also completed an ASHP Critical Care Fellowship at Truman Medical Center in Kansas City, Missouri.

Don Reeder, Pharm.D., is a Clinical Pharmacist for the Intensive Care Units at the Malcolm Randall VA Medical Center in Gainesville, Florida. He completed a Hospital Practice Residency as well as a two-year Cardiology Fellowship at the North Florida/South Georgia Veterans' Health System. Dr. Reeder is a 2007 graduate of the University of Florida College of Pharmacy. His research interests include sepsis, heart failure and acute coronary syndrome management.

Rob Shapiro, Pharm.D., BCPS, is a Clincial Pharmacy Specialist in the Anticoagulation Clinic at James A. Haley Veterans Affairs Medical Center in Tampa, Florida. Dr. Shapiro received a Pharm.D. from the University of Connecticut in 2002. After graduation, he received a direct commission into the United States Air Force in which he served for 12 years. During that time, he was stationed at five bases and dutifully served in inpatient, outpatient, clinical and management settings and had one deployment to Afghanistan. Dr. Shapiro also completed his PGY1 residency at David Grant Medical Center at Travis Air Force Base, California in 2008. His current research interests include clinical outcomes in anticoagulation and cardiology.

Michele Weizer, PharmD, BCPS, received her Doctor of Pharmacy degree from the University of Florida College of Pharmacy in 1990 and completed an ASHP accredited residency in Clinical Pharmacy at Shands Hospital at the University of Florida in 1991. Michele spent 10 years as a clinical practitioner at JFK Medical Center in Atlantis, Florida before becoming the Director of Pharmacy Services at University Hospital and Medical Center in May 2001. She then returned to JFK Medical Center in March 2004 as the Pharmacy Automation Manager where her main responsibilities focused on implementation of the eMAR (Electronic Medication Record) project and bar coding. Michele is now the Informatics Pharmacist at JFK Medical Center. Michele enjoys teaching and holds an appointment as an associate professor with the University of Florida College of Pharmacy Working Professional Pharm. D. Program since 1996, and has served as an adjunct clinical associate professor for the University of Florida and adjunct clinical assistant professor for the undergraduate pharmacy programs for Nova Southeastern, FAMU, Mercer University, and Palm Beach Atlantic colleges of pharmacy since 1992. Michele became specialty board certified in Pharmacotherapy originally in 1994 and re-certified in 2001,2008 and in 2015. Michele has held numerous leadership positions in pharmacy organizations including past Chair of the Florida Board of Pharmacy twice and continues to serve as a member. She is a Past- President of the Florida Society of Health-System Pharmacists (2001-2002). She served as Chair of the Educational Affairs and Workforce Development Council for the American Society of Health-System Pharmacists 2006-07 and served as Chair of the ASHP Foundation Development committee 2005-06. Additionally, Michele has served on the University of Florida College of Pharmacy National Development Advisory

Board for over 10 years and served as its Chair. Michele has served as a member-at-large on the Florida Pharmacy Council and completed her as Chair of the Tripartite Continuing Education Committee for the Florida Board of Pharmacy and continues to serve as a committee member. In August 2007, Michele was presented with the Outstanding Faculty Award for the UF College of Pharmacy WPPD program. In August 2003, Michele was awarded the Pharmacist of the Year for the Florida Society of Health-System Pharmacists. In 2004, she was recognized as a Heavy Hitter in health Care by the South Florida Business Journal and most recently she was recognized as a Who's Who Among Executive and Professional Women. Other awards include University Hospital and Medical Center Director of the Year 2003, Merck Pharmacist Achievement Award 2002, Drug Topics: Pharmacist of the Year 2002, Bristol Myers Squibb President's Award 2002, and the University of Florida College of Pharmacy Distinguished Pharmacy Service Alumna Award 2000. Michele has been recognized as Preceptor of the Year for the University of Florida College of Pharmacy and Palm Beach Atlantic College of Pharmacy.

Appendix B.

Instructional Method	Curricular Equivalency (hours)	
In-class instruction (3 live sessions – 7.5 hours each)	22.5	
Instructional videos (approximately 20 hours lectures)	20	
Discussion board (minimum 3X/week, ½ hr each)	24	
CPI or capstone project (one hour per week)	16	
Journal club assignment / presentation	5 (minimum) 8 (max)	
Individual Case presentation (one per semester)	2 (mininum) 6 (max)	
Self assessments (minimum one per semester)	1 (minimum) 5 (max)	
Other cases / assignments (see quickscan)	6	9 (max)
Total (96 hours needed to meet threshold for 6 credits)	96.5 (min)	110.5 (max)

Again, to comply with the standards, students should expect to spend a minimum of 7.5 hours per live session. The length of the sessions must not be shortened.