Cardiac Disorders  
Spring 2015     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

Academic Coordinator:
Jackie Lavinder 
Program Assistant  
Working Professional PharmD Program 
Office Phone: Weekdays  352-273-6279  
Email: lavinder@cop.ufl.edu

Please see Appendix A for contact information of faculty and staff involved in this course and the WPPD program. Biosketches 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 Canvas 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.
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 discussion, problem set discussion),
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 are listed in Table 1. The corresponding module activities are posted in the Canvas E-learning website (see Quick scan).

Table 1. Unit and module topics.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Module</th>
<th>Faculty Member</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>Course Introduction (Orientation)</td>
<td>Dr. Sue Markowsky</td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>Cardiac Anatomy and Assessment</td>
<td>Dr. Don Reeder</td>
<td>Exam A</td>
</tr>
<tr>
<td>A2</td>
<td>Cardiac Arrhythmias Parts 1, 2 and 3</td>
<td>Dr. Larry Lopez</td>
<td>Exam A</td>
</tr>
<tr>
<td>A3</td>
<td>ACLS Parts 1 and 2</td>
<td>Dr. Michele Weizer</td>
<td>Quiz 1</td>
</tr>
<tr>
<td>A4</td>
<td>Pharmacokinetics of Cardiac Drugs</td>
<td>Dr. Lisa Vandervoort</td>
<td>Exam A</td>
</tr>
<tr>
<td>A5</td>
<td>Anticoagulation in Cardiac Disorders</td>
<td>Dr. Doug Covey</td>
<td>Exam A</td>
</tr>
<tr>
<td>B1</td>
<td>Chronic Stable Angina Parts 1 and 2</td>
<td>Dr. Larisa Cavallari</td>
<td>Exam B</td>
</tr>
<tr>
<td>B2</td>
<td>Acute Coronary Syndromes Parts 1, 2 and 3</td>
<td>Dr. Issam Hamadeh</td>
<td>Exam B</td>
</tr>
<tr>
<td>B3</td>
<td>Congenital Heart Disease</td>
<td>Dr. Lisa Thames</td>
<td>Exam B</td>
</tr>
<tr>
<td>B4</td>
<td>Non-inferiority Study Design (via Adobe Connect)</td>
<td>Dr. Sue Markowsky</td>
<td>Quiz 2</td>
</tr>
<tr>
<td>C1</td>
<td>Heart Failure Parts 1, 2, 3 and 4</td>
<td>Dr. Shawn Anderson</td>
<td>Exam C</td>
</tr>
<tr>
<td>C2</td>
<td>Medication Therapy Management Cardiac Cases</td>
<td>Dr. Lieth Quffa</td>
<td>Exam C</td>
</tr>
<tr>
<td>C3</td>
<td>Infective Endocarditis</td>
<td>Dr. Ado Khoury</td>
<td>Exam C</td>
</tr>
<tr>
<td>C4</td>
<td>Cardiac Drug Interactions</td>
<td>Dr. Sue Markowsky</td>
<td>Exam C</td>
</tr>
<tr>
<td>C5</td>
<td>Medication Therapy Management Career Profile</td>
<td>Dr. Whalen</td>
<td>Exam C</td>
</tr>
</tbody>
</table>
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.

   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.)


4. **Lee, Mary.** Basic Skills in Interpreting Laboratory Data, American Society of Health Systems Pharmacists, 2013, 5th ed.


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 AccessPharmacy will be posted 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 quick scan 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 assignments: a) patient case presentation, b) longitudinal patient case presentation, and c) substance abuse presentation, and e) ethical dilemma.
5. Completion of the following self-assessments required for workshop preparation: a) technology and b) ethical dilemma. Completion of online self-assessments will be assessed for participation points (homework and class preparation). See the weekly planner for Units A, B, and C homework assignments and timelines posted on the course 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%
- Comprehensive Pharmacotherapy SOAP Note 4%
- Journal Club Presentation 4%
- Homework 4%
- CPI / Capstone Progress Reports 3%
- Class participation 12%
- 4% per unit (Units A, B, C): Includes attendance, participation, homework, communication (e.g., email), professionalism
- Quiz 1 (ACLS) 4%
- Quiz 2 (Non-inferiority) 4%
- Exam A (Unit A) 20%
- Exam B (Unit B) 20%
- Exam C (Unit C1) 15%

- *Note: Students must pass the Case Presentation in order 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. 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 (Canvas Student Presentations page).
- Note: Students must obtain at least a 70% (combined) average on the EXAMS and a 70% overall in course work in order 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 CANVAS 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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>97 – 100</td>
<td>A-</td>
<td>94 - 96</td>
</tr>
<tr>
<td>B+</td>
<td>91 – 93</td>
<td>B</td>
<td>87 - 90</td>
</tr>
<tr>
<td>B-</td>
<td>84 – 86</td>
<td>C+</td>
<td>81 - 83</td>
</tr>
<tr>
<td>C</td>
<td>79 – 80</td>
<td>C-</td>
<td>77 - 78</td>
</tr>
<tr>
<td>D+</td>
<td>75 – 76</td>
<td>D</td>
<td>72 - 74</td>
</tr>
<tr>
<td>D-</td>
<td>70 – 71</td>
<td>E</td>
<td>&lt;70</td>
</tr>
</tbody>
</table>

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 CANVAS System. This form must be approved by the student’s facilitator and 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 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 Jan 31, 2015 8:30 AM-10:30 AM
Remote Sites Jan 31, 2015 via ProctorU (9 am-12 noon EST start times)

Exam B (Unit B)
Regional Sites Feb 28, 2015 8:30 AM-10:30 AM
Remote Sites Feb 28, 2015 via ProctorU (9 am-12 noon EST start times)
Exam C (Unit C)
Regional Sites  Mar 28, 2015  8:30-10:30AM
Remote Sites  Mar 28, 2015  via ProctorU (9 am-12 noon EST start times)

*All exams are open book.

Proctored Exam Details
For detailed exam instructions, please see Canvas page titled “Proctored Exams”. Students should printout the documents within this section 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. The following point deductions are made for late exams:

- 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 CANVAS 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 CANVAS 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 eLearning 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 regional or remote weekly planners). 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 a score of zero (unacceptable) on the Participation Evaluation Form for #3 Well-prepared, and #5 Actively participates in all class workshops.
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 and Practice Experiences Site Resources” (see Resources folder - “Case Presentation Information”).

3. In order to pass the course it is mandatory that the student pass the case presentation(s). 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.

4. Graded assignments must be submitted to “Turn-It-In” prior to submitting to the facilitator. More specific instructions can be found on the E Learning website. A printed copy of the assignment should also be turned in 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:

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.

University of Florida College of Pharmacy is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. This course is accredited for 20 hours (2.0 CEUs). ACPE Accreditation number is posted on the course website. To receive credit for this course, you must receive a passing grade and complete the evaluation form. Consultant Pharmacist credit (12 hours) is available for Consultant Pharmacists practicing in Florida.
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 - Clinical Practice Assessments, WPPD
Beatriz Mitrzyk, Pharm.D.
Clinical Assistant Professor, Pharmacotherapy & Translational Research
UF College of Pharmacy, Gainesville, Florida
Free-lance Medical Writer
E-mail: bmitrzyk@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
Off Site Admissions Center - Program Manager
Rayshawn E. Engram, Off Site Admissions Center, Orlando, Florida
E-mail: REngram@embanetcompass.com
1-800-431-6687 (x632)

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

Technical Support will address:

- Multimedia (streaming videos, MP3 or MP4 download) issues, contact mediahelp@cop.ufl.edu or 352-273-6281
- Technical Issues – UF Computing Help Desk
  - Web: http://www.helpdesk.ufl.edu
- Telephone: (352) 392-4357 (HELP)
- E-mail: helpdesk@ufl.edu
- The UF Computing Help Desk can assist with the technical issues related to:
  - Logging into E learning in CANVAS
  - Submitting assignments electronically
  - Opening documents
  - Posting to discussion boards
  - Taking online quizzes
  - Using Gatorlink email
  - myUFL and Gatordex systems

**Expert Presenters**

**Shawn D. Anderson, PharmD** is a Cardiology Clinical Pharmacy Specialist at the 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 Heart Association, American College of Clinical Pharmacy, American Society of Health-System Pharmacists, Florida Society of Health-System Pharmacists, and the Heart Failure Society of America. Dr. Anderson is also a peer reviewer for the Annals of Pharmacotherapy and the American Journal of Health-System Pharmacy.

**Larisa Cavallari, PharmD** received her B.S. Pharmacy and Pharm.D. degrees from the University of Georgia. She then completed a Pharmacy Practice Residency at the Veterans Affairs Medical Center in Memphis, Tennessee and a fellowship in Cardiovascular Pharmacogenomics at the University of Florida. Dr. Cavallari accepted a position as an Assistant Professor of Pharmacy Practice at the University of Illinois at Chicago after completing her training and was promoted to Associate Professor in 2009. While at UIC, she directed efforts to implement genotype-guided warfarin dosing for all patients newly starting warfarin during hospitalization. Dr. Cavallari joined the University of Florida Department of Pharmacotherapy and Translational Research as an Associate Professor in April, 2014, where she serves as director of the Center for Pharmacogenomics. Her research involves discovery of genetic variants related to cardiovascular drug response and has been funded by the NIH, American Heart Association, and other awards. Dr. Cavallari has served on both NIH and American Heart Association grant review committees and is a Board Certified Pharmacotherapy Specialist, Fellow of the American College of Clinical Pharmacy, elected Trustee (2013-2016) and Chair (2014-2016) of the American College of Clinical Pharmacy Research Institute, and Editorial Board Member for the Lexi-Comp pharmacogenetics series.
Douglas F. Covey, Pharm.D., FCCP, MHA is a Clinical Pharmacy Specialist for Ambulatory Care at the Tampa (James A. Haley) Veterans' Hospital and Clinics. He is also an Associate Professor of Pharmacy Practice for the University of Florida's College of Pharmacy. He currently holds the position of Regional Director for the University of Florida Working Professional Doctor of Pharmacy degree program. He obtained both his B.S. and Pharm.D. from the University of Florida, and a Masters in Healthcare Administration from the University of South Florida. At the Tampa VA he is a Clinical Pharmacy Specialist responsible for pharmacy’s involvement and oversight in the many specialty and sub-specialty clinics. He is clinic manager for the Anticoagulation Clinics. He routinely is consulted to the Rheumatology, Hepatitis and Pulmonary clinics among others. Dr. Covey has been active in many of the pharmacy organizations. He served as the Chairman for ACCP’s Ambulatory Care Practice and Research Network, Past Chair of the ACCP Task Force on Leadership, recent member of the ASHP Commission on Credentialing, Current Chair of the BPS Ambulatory Care Council, and has completed a term as a Board member for the Florida Society of Health-System Pharmacists. He is the Director of an ASHP PGY2 Ambulatory Care Specialty Residency and also participates on accreditation site surveys for ASHP. Areas of interest are cardiovascular pharmacotherapy research, patient education, and professional training. He has authored numerous articles and several book chapters.

Adonice Khoury, Pharm.D., BCPS is a Clinical Assistant Professor in the Department of Pharmacotherapy and Translational Research and Clinical Specialist in Internal Medicine at UF Health/Shands. 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 research interest is in infectious diseases and antimicrobial stewardship.

Larry Lopez, Pharm.D., FCCP, BCPS joined the faculty of the University of Florida College of Pharmacy in September, 1979, after completing requirements for his post-baccalaureate Doctor of Pharmacy degree. Before accepting the faculty appointment he had worked as a community pharmacist and a hospital pharmacist for nearly 10 years. He received his high school diploma in 1964 from Jesuit High School in Tampa, Florida and his Bachelor of Science in Pharmacy from the University of Florida College of Pharmacy in 1969. Dr. Lopez retired from the faculty on November 30, 2011, after 32 years of service. While a member of the faculty Dr. Lopez was responsible for teaching a number of topics related to the pharmacotherapy of both general internal medicine and cardiovascular disorders for the Colleges of Pharmacy and Medicine. He also maintained clinical practices in Internal Medicine and Anticoagulation at Shands at the University of Florida for the last 10 years of his appointment. Dr. Lopez served as Chairman of the Department of Pharmacy Practice from January, 1997 until July, 2002, Associate Chair of the same department from July, 2002, until July, 2011, when he once again assumed the position of Department Chairman until his retirement later that year. Dr. Lopez’s research revolved primarily around clinical evaluations of new therapeutic modalities for management of hypertension, myocardial ischemia and/or congestive heart failure. He received over 30 grants and contracts for support of his work in these areas and published approximately 130 abstracts, articles, monographs, and chapters on these and other topics as well. Dr. Lopez was recognized for his research accomplishments by being
named as a Fellow of the American College of Clinical Pharmacy and the American Society of Hypertension. He was Board Certified as a Pharmacotherapy Specialist in October, 2004.

Susan J. Markowsky, PharmD is a Regional Director for the Working Professional PharmD program (WPPD) at University of Florida. She coordinates the Body System Courses, 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 completed an ASHP Critical Care Fellowship at Truman Medical Center in Kansas City, Missouri.

Don Reeder, PharmD is a Clinical Pharmacist involved with the Cardiology, Neurology and Emergency Departments 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 clinical interests include establishing pharmacy-managed clinics for patients with arrhythmia and chronic stable angina.

Lisa T. Thames, PharmD, BCPS
Dr. Thames is currently the chief of pediatric clinical pharmacy services, director of the PGY-2 pediatric residency program, and co-director of the PGY-1 pharmacy practice residency program at Shands at the University of Florida. In addition, she serves as clinical assistant professor of the University of Florida College of Pharmacy. Dr. Thames received her PharmD from the University of Florida College of Pharmacy in 2004. She completed her pharmacy practice residency and pediatrics specialty residency at the University of Kentucky Chandler Medical Center. Dr. Thames is board-certified in pharmacotherapy, and her interests include pediatric medication safety and pediatric infectious diseases. Dr. Thames is currently the President of the North Central Florida Society of Health-Systems Pharmacists (NCFSHP).

Lisa Vandervoort, PharmD
Dr. Vandervoort received her Doctor of Pharmacy degree from the University of Florida College of Pharmacy in 1995 and completed a Pharmacy Practice Residency at Shands Hospital at the University of Florida in 1996. She spent 10 years as the Clinical Specialist in Infectious Disease/Internal Medicine at Orlando Regional Medical Center. For the past 3 years Dr. Vandervoort has been a Clinical Assistant Professor at the University of Florida both at the Orlando Campus and with the WPPD program. Her primary interests include pharmacokinetics, infectious disease and internal medicine.

Michele Weizer, PharmD, BCPS
Dr. Weizer 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 Automation and Clinical Coordinator at JFK Medical Center. Michele serves on the HCA eMAR Advisory Workgroup and the HCA Clinical Pharmacy Advisory Board. Additionally, Michele enjoys teaching and holds an appointment as
an associate professor with the University of Florida College of Pharmacy Working Professional PharmD 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 and again in 2008. Michele has held numerous leadership positions in pharmacy organizations and currently serves as Chair of the Florida Board of Pharmacy. 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 currently serves as Chair. Michele also serves as a member-at-large on the Florida Pharmacy Council and completed her term in February as Chair of the Tripartite Continuing Education Committee for the Florida Board of Pharmacy. 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.

Dr. Karen Whalen, Pharm.D., BCPS, CDE received her Doctor of Pharmacy degree with highest honors from the University of Florida. She completed a Pharmacy Practice Residency at the Moses Cone Health System followed by a Primary Care Residency at the James A. Haley Veterans’ Hospital. Following residency training, Dr. Whalen was a faculty member in the Department of Pharmacy Practice at Nova Southeastern University (NSU) for 12 years. While at NSU College of Pharmacy, she was an eight-time recipient of the Golden Apple Award for Teaching Excellence. In 2008, Dr. Whalen joined the faculty of the University of Florida College of Pharmacy as assistant director of the St. Petersburg Campus. In 2010, she transitioned to the main campus in Gainesville. She now serves as Director of the Master of Science in Pharmacy with concentration in Medication Therapy Management degree program. Her excellence in teaching was recognized with the Faculty Recognition Award in 2011 and 2012, and the Teacher of the Year Award in 2013. Dr. Whalen is a Board Certified Pharmacotherapy Specialist and a Certified Diabetes Educator. She has practiced ambulatory care pharmacy in a variety of settings including an academic family medicine center, community pharmacy practice, and a Veterans’ Affairs Healthcare System. Dr. Whalen is active in local, state and national pharmacy organizations, and is a past president of the Florida Pharmacy Association. She is a past recipient of the National Community Pharmacists Association Pharmacy Leadership Award, and the Florida Pharmacy Association Jean Lamberti Mentorship Award.
Appendix B.

<table>
<thead>
<tr>
<th>Instructional Method</th>
<th>Curricular Equivalency (hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class instruction (3 live sessions – 7.5 hours each)</td>
<td>22.5</td>
</tr>
<tr>
<td>Instructional videos (21 one-hour videos)</td>
<td>21</td>
</tr>
<tr>
<td>Discussion board (minimum 3X/week, ½ hr. each)</td>
<td>24</td>
</tr>
<tr>
<td>CPI or capstone project (one hour per week)</td>
<td>16</td>
</tr>
<tr>
<td>Homework cases / journal club (one per semester)</td>
<td>5 (minimum) 8 (max)</td>
</tr>
<tr>
<td>Individual Case presentation (one per semester)</td>
<td>2 (minimum) 6 (max)</td>
</tr>
<tr>
<td>Self-assessments (minimum one per semester)</td>
<td>1 (minimum) 5 (max)</td>
</tr>
<tr>
<td>Other assignments (see quick scan)</td>
<td>5</td>
</tr>
<tr>
<td>Total (96 hours needed to meet threshold for 6 credits)</td>
<td>96.5 (min) 110.5 (max)</td>
</tr>
</tbody>
</table>

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.

Appendix C. Course Quickscan
**APPENDIX C: Quick Scan 5592 Cardiac Disorders (Spring 2015)**

<table>
<thead>
<tr>
<th>Unit A</th>
<th>Unit B</th>
<th>Unit C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module</strong></td>
<td><strong>SPEAKER</strong></td>
<td><strong>Module</strong></td>
</tr>
<tr>
<td>A0</td>
<td>Course Introduction (Adobe Connect Session)</td>
<td>Markowsky</td>
</tr>
<tr>
<td>A1</td>
<td>Cardiac Anatomy and Assessment</td>
<td>Reeder</td>
</tr>
<tr>
<td>A2</td>
<td>Arrhythmias 1, 2, 3</td>
<td>Lopez</td>
</tr>
<tr>
<td>A3</td>
<td>ACLS 1, 2</td>
<td>Weizer</td>
</tr>
<tr>
<td>A4</td>
<td>Pharmacokinetics: Cardiac Drugs</td>
<td>Vandervoort</td>
</tr>
<tr>
<td>A5</td>
<td>Anticoagulation: Cardiac Patients</td>
<td>Covey</td>
</tr>
</tbody>
</table>

*Experiential Sessions*

**NOTE:** There will be 2 online quizzes during the semester: Quiz 1 (ACLS) and Quiz 2 (Non-inferiority Study Design).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Exam A (Unit A Topics) 2 h</td>
<td>- Exam B (Unit B Topics) 2 h</td>
<td>- Exam C (Unit C Topics) 2 h</td>
</tr>
<tr>
<td>- Site / Group Orientation 0.5 h</td>
<td>- Unit B Homework Case Review 1 h</td>
<td>- Unit C Homework Case Review 0.5 h</td>
</tr>
<tr>
<td>- Individual Case Presentations 1.5 hr</td>
<td>- Individual Case Presentations 2 h</td>
<td>- Individual Case Presentations 2.5 h</td>
</tr>
<tr>
<td>- JC Individual Presentations (1/4 class, 15 min each) 1 hr</td>
<td>- JC Individual Presentations (1/2 class, 15 min each) 2 hr</td>
<td>- JC Individual Presentations (1/4 class, 15 min each) 1.5 hr</td>
</tr>
<tr>
<td>- ACLS Workshop 1.5 h</td>
<td>- CPI Reports (Year 1 Students) 0.5 h</td>
<td>- Pharmacotherapy SOAP Note Discussion 1 h</td>
</tr>
<tr>
<td>- Rhythm Recognition Workshop 0.5 h</td>
<td>- SWOT / SLO meetings with facilitator after class or by phone appointment to guide experiential planning activities (Year 1 students) 0.5 h**</td>
<td>- CPA Updates and Discussion 0.5 h</td>
</tr>
<tr>
<td>- CPI / Capstone Reports (Year 2-3 Students) 1 h</td>
<td>- Homework PRN (for small class sizes as assigned)*</td>
<td>- Homework PRN (for small class sizes as assigned)*</td>
</tr>
<tr>
<td>- Completed CPA’s turned in</td>
<td>- Completed CPA’s turned in</td>
<td>- Completed CPA’s turned in</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Hours based on average group size (10 students). Supplemental case review is recommended for small class sizes <=7 students per group (Schwinghammer).** Recommend appointments outside of class to meet with 2nd and 3rd semester students for CPA / experiential activity planning (or meet in class as time permits).