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## **PHA 6633 - Medication Therapy Management: A Cardiovascular Focus Fall 2015 - 3 Semester Credit Hours**

### **Course Purpose:**

The course is intended to familiarize students with the provision of MTM in patients with cardiovascular disorders that range from common to complex. The student will gain hands-on practice in the core elements of MTM for patients with cardiovascular disorders, including conducting a comprehensive medication therapy review, generating a personalized medication record, designing a medication-related action plan, making pharmacotherapy interventions, and documenting the MTM service. The curricular threads of advanced pharmacotherapy knowledge, communication skills, and essential MTM business principles will be emphasized.

### **Course Faculty and Office Hours**

#### ***Course Coordinator:***

Karen Whalen, Pharm.D. BCPS, CDE, FAPhA  
Assistant Dean for Clinical Education  
Clinical Professor  
Department of Pharmacotherapy & Translational Research  
Office: Room 4321 HPNP  
Phone: (352) 273-9497  
Email: [whalen@cop.ufl.edu](mailto:whalen@cop.ufl.edu)

#### ***Office Hours***

By appointment  
Preferred contact method: email

#### ***Course Facilitators:***

Pam Roehrl, B.S., M.S., Pharm.D.  
Email: [proehrl@cop.ufl.edu](mailto:proehrl@cop.ufl.edu)

Karen Riley, Pharm.D., BCPS, CGP, BCACP, CDE  
Email: [kdriley@ufl.edu](mailto:kdriley@ufl.edu)

#### ***Course Faculty:***

Please see Appendix A for a list of faculty involved in this team-taught course.

### **Place and Time of Class Sessions**

Lectures are prerecorded and posted on the course website in the Canvas eLearning system. Lectures may be viewed at the student's convenience. The course has one 1.5-hour live online learning session each week. Live sessions are conducted via Big Blue Button and will meet on Sunday evenings from 8 to 9:30 PM EST, or 10 to 11:30 PM EST, or on Monday evenings from 9 to 10:30 PM EST, depending on the assigned section.

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## **How This Course Relates to the Learning Outcomes You Will Achieve in the MS-MTM Program:**

This course prepares the MS-MTM student to accomplish the following abilities and the related Student Learning Outcomes (SLOs) upon graduation:

- Knowledge SLO: Demonstrate comprehensive knowledge related to a specific discipline within the pharmaceutical sciences.
- Problem-Solving/Critical Thinking SLO: Demonstrate the ability to evaluate a problem that is related to a discipline within the Pharmaceutical Sciences.

This course is one of a series that will develop problem-solving and critical thinking skills and prepare the student to demonstrate comprehensive knowledge in the area of medication therapy management.

### **Course Objectives**

Upon successful completion of this course, the student will be able to demonstrate the ability to perform the following with respect to cardiovascular disorders:

1. Recognize areas of pharmacotherapy knowledge essential to the provision of MTM services.
2. Identify clinical practice guidelines and current scientific literature pertaining to the provision of MTM services.
3. Evaluate scientific literature for use in providing up-to-date, evidence-based, and cost-effective MTM services.
4. Communicate effectively with patients when providing MTM services.
5. Identify barriers to patient communication and design strategies to overcome those barriers.
6. Conduct a targeted or comprehensive medication therapy review (MTR).
7. Identify drug-related problems and recommend rational solutions based on a mastery of pharmacotherapy.
8. Create a personalized medication record for an individual patient receiving MTM services.
9. Design a medication-related action plan, taking into account patient abilities and preferences.
10. Educate patients regarding techniques to improve adherence, decrease the risk of adverse drug reactions, and maximize appropriate and safe medication use.
11. Communicate interventions effectively to physicians and other healthcare colleagues.
12. Document MTM services in a manner sufficient for following patient progress, monitoring patient outcomes, and completing billing statements.
13. Utilize sound business principles in the provision of MTM services

### **Pre-Requisite Knowledge and Skills**

The student must have successfully completed Foundations of MTM I and II

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## Course Structure & Outline

### *Course Structure*

The 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 three-credit course requires a minimum of 48 hours of classroom instruction or the equivalent. Since the face-to-face classroom instruction is less than 48 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. An outline of the course activities and their respective contribution to course credit assignment can be found in the accompanying course schedule document.

### *Course Outline/Activities*

Refer to Appendix B and C for an outline of course activities.

### **Textbooks**

The required textbook for this course is Angaran D, Whalen K, editors. *Medication Therapy Management: A Comprehensive Approach*. New York, NY: McGraw-Hill, 2015. A suggested reference text is Dipiro JT, Talbert RL, Yee GC, et al, eds. *Pharmacotherapy: A Pathophysiological Approach*, 9th ed. Both of these are available free to students via Access Pharmacy in the HSC database.

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. The readings will be available under the resources tab on the course website.

### **Active Learning Requirements**

- Discussion board posting (3)
- Weekly live online learning sessions (5)
- Quality measures exercise (1)
- Case studies - comprehensive medication review (1)
- SOAP Notes (2)

### **Feedback to Students**

Students will be provided written feedback on all assignments via the eLearning system. In general, written feedback can be expected within one week of assignment submission. In addition, students may schedule an appointment with the instructor if they wish to obtain more detailed verbal feedback. Feedback on exams and quizzes will be available via the eLearning system after 12 noon on the day following the exam or quiz.

## Student Evaluation & Grading

### Course Evaluation Methods

#### Written Assignments 25%

- Hypertension SOAP Note Exercise- 10%
- Quality Measures Assignment – 5%
- Comprehensive Medication Review - 10%

#### Quizzes 10%

- Week 2 - 5%
- Week 6 - 5%

#### Class participation 15%

- Discussion board - 3%\*
- Big Blue Button sessions - 12%

#### Exams 50%

- Midterm exam - 25%
- Final exam - 25%

**\*Please note: All postings need to be done before 6pm Sunday evening prior to the Big Blue Button session. 50 points will be deducted for late submissions.**

### Grading Scale

Additional information on minus grades is available on the University of Florida website:

<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>.

A	93-100	A-	90.0-92.9
B+	86.6-89.9	B	83.3-86.5
B-	80.0-83.2	C+	76.6-79.9
C	73.3-76.5	C-	70.0-73.2
D+	66.6-69.9	D	63.3-66.5
D-	60.0-63.2	E	<60

### Class Attendance Policy

**Attendance at the weekly Big Blue Button sessions is mandatory and participation in the group discussion is required.**

Because there are 3 opportunities to attend the Big Blue Button sessions, students who know that they will miss a session should contact the facilitator as soon as possible and arrange to attend another session. Upon approval of the facilitator only, students may make up a missed session by completing a brief written assignment for a maximum of 2 out of the 6 sessions. Failure to get approval for the missed session prior to the session will result in a mark of zero for the Big Blue Button session. Written documentation of the session content must be submitted to the facilitator no later than 1 week past the missed session.

### Quiz/Exam Policy

### ***Online Examinations***

The quizzes, midterm, and final examination will be administered online. Online examinations may consist of multiple choice, short answer and/or case-based questions. Thus, online examinations necessitate skills in typing and using a computer. **If you do not have strong keyboard skills, please do not delay in contacting the course coordinator. With early intervention you can be directed to Staff members who are equipped to review your needs.** Please note that it takes time to build these skills and this is not something that can be done at the last minute. To maintain the highest standards of academic integrity, high stakes online examinations may require the use of a proctoring system.

### ***Missing Exams and Make-Up Exam Policy***

Scheduled exams should only be missed for REAL EMERGENCIES. A student who misses an exam should notify the course coordinator via email within 24 hours. Students with an excused absence may be allowed to take a make-up exam. Make-up exams should be arranged with the course coordinator and administered within two weeks of the original exam date.

### ***Posting of Exam Grades***

Exam grades will be posted within one week of the exam. Notice will be provided to the students if there will be a delay in posting of exam grades.

### ***Exam Rebuttals***

Students have one week after posting of the exam grades to challenge any exam question. No appeals will be accepted after one week. Written appeals must include the following: the question number, an evidence-based rationale for why the student feels their response is accurate. The exam will be regraded, in full, by a third party. Note: the score of a fully regraded exam may increase, decrease, or stay the same. The regraded score will be considered final.

### **Policy on Old Quizzes and Assignments**

Students will not be provided with old quizzes, exams, or assignments.

### **Assignment Deadlines**

#### ***Late Assignments***

Please submit online assignments early to avert last minute issues with technology. Late submission of assignments will result in a 20% point deduction without adequate explanation and may result in a zero grade, depending on the assignment. Students who experience technical difficulty when submitting assignments electronically must notify the course coordinator as soon as possible.

## **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. Concerns, Appeals, and Complaints
3. Academic Integrity Policy
4. Psychomotor and Learning Expectations
5. How to request learning accommodations
6. Faculty and course evaluations
7. Computer and other technology requirements
8. Student expectations in class
9. Communications
10. Religious holidays
11. Counseling and Wellness Center
12. 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>

## **Other Course Information**

**Appendix A: Directions for Contacting Faculty & Course Faculty List**

**Appendix B. Schedule of Course Activities/Topics**

**Appendix C. Assignments and Learning Responsibilities**

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## **Appendix A: Directions for Contacting Faculty & Course Faculty List**

### ***Directions for Contacting Course Faculty***

All questions on lecture material and course communication will occur through the discussion board on the course website. Discussion boards will be organized by lecture topic and questions should be posted in the appropriate location. The discussion board will be reviewed and questions answered within 3 business days after the posting. If you do not receive a response within 3 business days after posting, please email the course coordinator who will then contact lecture faculty directly. Please see “Course Communication” Section for additional information about communicating with faculty.

### ***Course Coordinator***

#### **Karen Whalen, Pharm.D., BCPS, CDE**

Dr. Whalen is Assistant Dean for Clinical Education and a Clinical Professor in the Department of Pharmacotherapy and Translational Research at the University of Florida College of Pharmacy. She 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.

### ***Instructors***

#### **Shawn Anderson, Pharm.D., BCACP**

Shawn D. Anderson is a Cardiology Clinical Pharmacy Specialist at the Malcom Randall Veterans Affairs Medical Center in Gainesville, Florida. He is also a Clinical Assistant 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.

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**Larisa Cavallari, Pharm D, FCCP**

Dr. Cavallari 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 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 2014, where she serves as director of the Center for Pharmacogenomics. Her research involves discovery of genetic variants related to cardiovascular drug response. 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.

**Paul Doering, M.S.**

Paul Doering is a Distinguished Service Professor, Emeritus in the Department of Pharmacotherapy and Translational Research at the University of Florida's College of Pharmacy. For 28 years he was the Director or Co-Director of the statewide Drug Information and Pharmacy Resource Center at the Health Sciences Center, University of Florida. Over the years, Professor Doering has received numerous honors and awards. He was awarded Teacher of the Year five separate times and in 2007 he was named a member of the University of Florida's Academy of Distinguished Teaching Scholars. Paul is now enjoying his "retirement" years and is continuing his work with students and pharmacists through lectures, seminars, and other such things.

**Anna Hall, Pharm.D., BCACP**

Dr. Anna Hall is the Assistant Director for the UF College of Pharmacy MTM Communication and Care Center. She has served as a UF faculty member at the UF MTM Center since 2010. She is a board certified ambulatory care pharmacist. She has completed the Bruce Berger comMI (Comprehensive Motivational Interviewing Training) and train the trainer program. She and her colleagues at the UF MTM center have designed MTM service offerings that employ the use of motivational interviewing and worked with a team to train over 50 pharmacy technicians and pharmacists in motivational interviewing. She has worked with the Pharmacy Quality Alliance to develop pharmacy-related performance measures.

**Folakemi Odedina, Ph.D.**

Dr. Odedina is a Professor in the Department of Pharmaceutical Outcomes and Policy at the University of Florida College of Pharmacy. Odedina's research program focuses on the predictors of health disparities and cost-effective, community-based behavioral interventions to improve the health of Black men. She has directed more than 20 research projects, including: (1) the Florida A&M University Center for Minority Prostate Cancer Training and Research (CMPC), which comprises a trans-disciplinary team of clinical, behavioral and basic scientists; and (2) a landmark Department of Defense prostate cancer research project which accrued over 3,000 Black men in Florida. Her initiatives include the Men's Health Initiative and the Black Men's Health Consortium in Florida. Odedina's research traverses across the world with an international consortium group in Africa, Caribbean Islands, Europe and the United States. She has received numerous awards for her work, including the 1st American Society of Health-Systems Pharmacy/ Association of Black Health-System Pharmacists Leadership Award for Health Disparities (2009).

**Jennifer Ashton, Pharm.D., BCPS**

Dr. Ashton is a clinical pharmacy specialist in Cardiovascular Medicine and Surgery at Shands at the University of Florida. She is also a clinical assistant professor of pharmacy practice at the University of Florida College of Pharmacy. Dr. Ashton received her Pharm.D. from the University of Florida in 2008. She then completed her Pharmacy Practice residency at Shands at the University of Florida followed by a specialty residency in Critical Care at the University of Kentucky Chandler Medical Center. Her areas of interest include perioperative arrhythmias following cardiothoracic surgery and infectious diseases management of critically ill patients.

**Bradley W. Van Riper, Pharm.D.**

Dr. Van Riper received his Doctor of Pharmacy from the University of Florida in 2000 and completed an Ambulatory Care Residency at the Suwannee River Area Health Education Centers (AHEC)/University of Florida College of Pharmacy. He is currently a Pharmacy Manager at Walgreens and adjunct faculty at the University of Florida College of Pharmacy and College of Nursing. Dr. Van Riper precepts a student each month on his Advanced Community Pharmacy Practice rotation and has twice been named Preceptor of the Year. He has been performing MTM in a busy retail pharmacy on a regular basis for almost two years. His experiences with putting MTM into practice have made him a respected and sought after speaker in this area. Dr. Van Riper has spoken at the UF Pharmacy Practice Monthly Seminar as well as at the Florida Society of Health-System Pharmacists Annual Meeting in August, 2011. The latest MTM venture he has entered into includes an “exchange” program with the University of Florida College of Pharmacy MTM Call Center. Dr. Van Riper is also one of six appointed members to the Pharmacist’s Letter Topic Selection Committee and serves in a Peer Review capacity for them as well.

**Katherine Vogel Anderson, Pharm.D., BCACP**

Dr. Vogel Anderson 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 Doctor of Pharmacy degree from the University of Florida College of Pharmacy. Following this, Dr. Vogel Anderson completed a primary care pharmacy residency at the Malcom Randall Veterans Affairs Medical Center in Gainesville. After her residency, Dr. Vogel Anderson accepted a clinical pharmacy specialist position at the same VA, where she specialized in anticoagulation management. After five years she transferred to the VA geriatric primary care clinic, where she managed anticoagulation, hypertension, and diabetes, among other disease states, as part of a multi-disciplinary healthcare team. Dr. Vogel Anderson joined the Gainesville UF faculty in 2010. In addition to her teaching responsibilities, Dr. Vogel Anderson practices at an Internal Medicine and Medical Specialties Clinic at Shands Medical plaza.

## MTM: A Cardiovascular Focus (PHA 6633) - Course Schedule

### Lecture schedule

Week	Module	Lecture Topic	Lecturer
1 08/24-08/30	Introduction to Cardiovascular	1.1 Course Intro/Expectations 1.2 Meet the Experts 1.3 Practice Perspectives	Whalen Anderson Van Riper
2 08/31-09/06	Curricular Threads	2.1 Literature Thread – Guideline to Using Guidelines – Part I 2.2 Guidelines – Part II 2.3 Communication Thread - Cultural Competence	Doering Doering Odedina
3 09/07 – 09/13	HTN	3.1 HTN 3.2 HTN 3.3 HTN MTM Cases 3.4 Example HTN visits	Whalen Whalen Whalen Stewart & team
4 09/14-09/20	Lipids	4.1 Lipids 4.2 Lipids 4.3 Lipids MTM Cases 4.4 Example Lipid Visits	Whalen Whalen Whalen Stewart & team
5 09/21-09/27	Heart Failure	5.1 Quality & Performance Improvement 5.2 Heart Failure 5.3 Heart Failure 5.4 Heart Failure MTM Cases	Hall Anderson Anderson Anderson
6 09/28-10/04	Venous Thromboembolism	6.1 VTE 6.2 VTE 6.3 VTE MTM Cases 6.4 Atrial Fibrillation 6.5 Example Anticoagulation Visit	Vogel Anderson Vogel Anderson Vogel Anderson Ashton Sando & Team
7 10/05-10/09	Stable Angina Pectoris	7.1 Stable Angina Pectoris I 7.2 Stable Angina Pectoris II 7.3 Personalized Medicine for CV Disorders	Cavallari Cavallari Cavallari

### Exam Schedule

Midterm Exam: September 19, 2015

Final Exam: October 10, 2015

## Assignments and Learning Responsibilities:

Week	Reading Assignment	Learning Responsibility
1 08/24-08/30 (5 hours)*	Review course syllabus Review MTM core elements	View all lectures for week 1 Complete assigned readings Discussion board posting – CV experience/intentions Big Blue Button session 1.5 hours
2 08/31-09/06 (6 hours)*	Comparative Effectiveness of Medication Adherence Interventions IOM Standards for Guidelines Progress in Evidence-Based Medicine	View all lectures for week 2 Complete assigned readings Discussion board posting – cultural competence Big Blue Button session 1.5 hours
3 09/07 – 09/13 (7 hours)*	JNC 8 (2014 HTN guidelines) ASH/ISH Clinical Practice Guidelines HTN in the Elderly pp. 2437-2442 MTM Ch 27 - Hypertension	View all lectures for week 3 Complete assigned readings Big Blue Button session 1.5 hours Complete assignment <ul style="list-style-type: none"> <li>HTN exercise and SOAP notes</li> </ul> <b>QUIZ</b>
4 09/14-09/20 (8 hours)*	2013 ACC/AHA Guidelines on the Treatment of Blood Cholesterol MTM Chapter 22 - Dyslipidemia	View all lectures for week 4 Complete assigned readings Big Blue Button session 1.5 hours Discussion board posting - lipids <b>MIDTERM EXAM</b>
5 09/21-09/27 (7 hours)*	MTM Chapter 4 – Quality & Performance Improvement MTM Chapter 25 – Heart Failure 2013 AHA/ACCF Guideline for the Management of Heart Failure	View all lectures for week 5 Complete assigned readings Big Blue Button session 1.5 hours Complete assignment <ul style="list-style-type: none"> <li>Quality measures</li> </ul>
6 09/28-10/04 (9 hours)*	CHEST Oral Anticoagulants CHEST Antithrombotic Tx for VTE CHEST Prevention of VTE DiPiro Chapter 8 (A fib/Flutter section) AHA/ACC/HRS 2014 guidelines for a fib AFFIRM trial	View all lectures for week 6 Complete assigned readings Big Blue Button session 1.5 hours Complete assignment <ul style="list-style-type: none"> <li>Comprehensive med review</li> </ul> <b>QUIZ</b>
7 10/05-10/09 (6 hours)*	DiPiro Ch 6 – Ischemic Heart Disease Pharmacogenetics and CV Disease	View all lectures for week 7 Complete assigned readings Big Blue Button session 1.5 hours <b>FINAL EXAM</b>

\*Contribution to course credit assignment

All assignments will be released on Canvas at least two weeks prior to due date. Reading assignments not contained in the required text will be posted in the Resource folder designated for that week of class. **All assignments should be completed on an individual basis unless otherwise specified.**