The University of Florida
College of Pharmacy

Medication Therapy Management: A Cardiovascular Focus
PHA 6633 (3 credits)

Course Coordinator:
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Course Instructors

Shawn Anderson, Pharm.D.
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.

Rhonda Cooper-DeHoff, Pharm D, MS, FAHA, FACC
Dr. Cooper-DeHoff is Associate Professor in the Department of Pharmacotherapy and Translational Research, College of Pharmacy and Division of Cardiovascular Medicine, College of Medicine at the University of Florida in Gainesville, Florida. She earned her Pharm D degree from the University of California at San Francisco, School of Pharmacy in 1986 and completed a clinical residency there in 1987. Subsequently, in 2007, she graduated from the University of Florida with a master’s degree in medical sciences, with an emphasis in clinical investigation. Dr. Cooper-DeHoff’s research interests include hypertension, metabolic syndrome and diabetes and coronary artery disease. She is a member of the American Heart Association, American Society of Hypertension, American College of Cardiology and Florida Society of Hospital Pharmacists. In 2007, Dr. Cooper-DeHoff was named Fellow of the American Heart Association, in 2008 she received the Clinical Science Award from the Consortium for Southeastern Hypertension Control and in 2009, her research was featured by the American Society of Hypertension. In 2010, she was elected as Fellow in the American College of Cardiology, one of the few pharmacists to receive this honor.

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.

Reginald F. Frye, Pharm.D., Ph.D.
Reginald F. Frye is an associate professor in the Department of Pharmacotherapy and Translational Research at the University of Florida College of Pharmacy. Before holding his current position, he was on the faculty at the University of Pittsburgh School of Pharmacy. The focus of his clinical research program is on evaluating factors that contribute to variability in drug response through modulation of drug metabolizing enzymes and transporters. Such factors may influence response by affecting the ability of an individual to eliminate or metabolize drugs and include genetics (pharmacogenetics), age, and disease states (e.g., liver disease, heart failure, and renal disease). He has published
more than 100 peer-reviewed research publications and several book chapters. Dr. Frye is an editorial board member for journals including Pharmacotherapy and has been a reviewer on NIH study sections. The pharmaceutical industry, private foundations, and the NIH have funded his research.

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-System Pharmacists/Association of Black Health-System Pharmacists Leadership Award for Health Disparities (2009).

Niren Shah, Pharm.D. Dr. Shah received his Doctor of Pharmacy degree from the University of Florida in 2010. As a post-doctoral fellow of clinical pharmacy at East Coast Institute for Research, Dr. Shah actively participates in co-precepting clerkship students from the University of Florida, working with a large continuum of phase II-IV clinical trials, and building an extensive knowledge in cardiovascular, gastrointestinal, and psychiatric diseases. He is currently the Principal Investigator for an ongoing cardiovascular clinical trial and a Sub-Investigator for numerous other clinical trials. Additionally, he serves as a scientific reviewer for both medical and pharmacy journals, such as Annals of Pharmacotherapy, Annals of Internal Medicine, Journal of Multidisciplinary Healthcare, and Clinical Pharmacology. Dr. Shah has a strong interest in evolving his didactic teaching skills and has recently earned his teaching certificate from the University of Florida.

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. 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 Oak Hammock, a continuing care retirement community, where her focus is in geriatric patient care.

Karen Whalen, Pharm.D., BCPS, CDE Dr. Whalen received her Doctor of Pharmacy degree from the University of Florida. She then completed a Pharmacy Practice Residency at the Moses Cone Health System in Greensboro, North Carolina. Subsequently, she completed a Primary Care Residency at the James A. Haley Veterans’ Hospital in Tampa, Florida. Dr. Whalen joined the faculty of the University of Florida College of Pharmacy in 2008 as Assistant Director of the St. Petersburg Campus. Currently, she is a Clinical Associate Professor in the Department of Pharmacotherapy and Translational Research and Director of the MS-MTM Program. Prior to joining the faculty at University of Florida, Dr. Whalen was an Associate Professor of Pharmacy Practice at Nova Southeastern University for twelve years. Dr. Whalen is a Board Certified Pharmacotherapy Specialist and a Certified Diabetes Educator. She is an active in local, state, and national pharmacy associations, and is a past president of the Florida Pharmacy Association.
Course Description

The course introduces the student to principles of medication therapy management in patients with cardiovascular disorders.

Prerequisites

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

Course Credit Assignment

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 Goals

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 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.

**Required Text**


**Required and Recommend Readings/Resources**

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.

**Course Policies**

1. **Course Communication**
   All course communication, except for personal communications, will occur through the discussion board on the course website. Announcements will also be posted on the course website on Sakai as needed. 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. Please follow these guidelines regarding use of the discussion board:
   - Look for the appropriate discussion forum for your question from the list of available discussion boards.
   - Review previous postings and announcements prior to initiating a posting to avoid duplications.
   - Keep all postings professional. Postings will be reviewed for professionalism.
   - Personal concerns should be communicated directly to the course coordinator via email (and not posted on the discussion board). Course-related emails that are not of a personal nature will be referred back to the discussion board for posting.
   - Do not use the discussion board to broadcast complaints, discuss personal issues, or discuss topics not associated with the course.
   - Check for new discussion board postings on a daily basis whenever possible. To do so, click on the Discussion Board tab within the Sakai course website.
   - Anonymous postings are not permitted.
   - Failure to follow the Discussion Board rules may result in a revocation of privileges of Discussion Board use.
2. **Late Assignments**
   Please submit online assignments early to avert last minute issues with technology. Late submission of assignments will result in a point deduction 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.

3. **Faculty and Course Evaluations**

   **Faculty Evaluations.** You will receive an email from the Curricular Affairs Office requesting that you complete the faculty evaluations. If the course is team-taught, you will receive emails during the semester to alert you when to evaluate the faculty members. Please complete your faculty evaluations by the specified date and time by logging in with your GatorLink account at the following site: https://evaluations.ufl.edu

   Faculty evaluations are important feedback for your course instructors and the University and receive major consideration in the tenure and promotion process. Your input via evaluations can make a difference in our College’s teaching activities, so participate, evaluate and our College will be better for it.

   The online faculty evaluation system is completely anonymous. When you submit an evaluation, the system marks that you have submitted an evaluation for the section (so you cannot submit multiple evaluations), but from that point on, there is no connection between you and the evaluation data. Faculty evaluations also provide useful information for students. The results of your evaluation input are made available to all students in future semesters at: http://www.aa.ufl.edu/aa/evaluations/search/

   **Course Evaluations.** In the last few weeks of the course, you will receive an email with directions for completing a course evaluation. Note, course evaluations provide feedback that is different from the Faculty evaluations and both are very important to continuous improvement of our program. Course evaluations are used by the College to identify how to improve the how the course is designed and delivered. Therefore, our Courses will be better through your completion of these evaluations. You will complete Course Evaluations via a website that is different from Faculty Evaluations. These evaluations are also anonymous.

4. **Academic Honesty**

   The University considers cheating as giving or taking any information or material of academic work considered in the determination of a course grade. Academic dishonesty includes, but is not limited to: copying graded homework assignments from another student; working together with another individual on a take-home test or homework when specifically not permitted by the instructor; looking or attempting to look at another student’s test paper during an examination; sharing information about an examination with another student; and plagiarism.

   The University of Florida academic honesty policy will be strictly enforced. Academic dishonesty will not be tolerated. The complete policy and procedures for processing alleged academic dishonesty are provided in the Student-Faculty Handbook for the College of Pharmacy. This handbook is located on the College of Pharmacy web site: http://www.cop.ufl.edu. You are expected to abide by the procedures set forth in this
5. **Accommodating Disabilities**

Physically impaired students and students with learning disabilities such as hearing impairment, visual impairment, dyslexia or other specific learning disabilities such as sensory deficit or sensory-motor coordination problems should cooperate with the faculty and staff in addressing these problems in order to meet academic standards. It is the student’s responsibility to notify the faculty member IN ADVANCE if they believe that they need special accommodations for testing and/or completion of assignments. Retroactive accommodations cannot be granted if a student notifies the faculty AFTER said exams or assignments have taken place. Students with disabilities are encouraged to register with the Disability Resource Center in the Dean of Students Office. Please visit the following URL for more information: [http://www.dso.ufl.edu/drc](http://www.dso.ufl.edu/drc).

### Examination Policies

1. **Online Examinations**
   
The 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. More information on the proctoring system may be found at: [http://www.proctoru.com/](http://www.proctoru.com/)

2. **Missing Exams**
   
   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.

3. **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.

4. **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.
**Evaluation Techniques:**
Written Assignments 20%
- Hypertension Interview Guide - 3%
- CV MTM Services Proposal - 7%
- Comprehensive Medication Review - 10%

Quizzes 15%
- Week 2 - 5%
- Week 3 - 5%
- Week 6 - 5%

Class participation 15%
- Discussion board - 5%
- Elluminate sessions - 10%

Exams 50%
- Midterm exam - 25%
- Final exam - 25%

**Grading:**
Additional information on minus grades is available on the University of Florida website: [http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html](http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html).

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<tr>
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<tr>
<td>B+</td>
<td>86.6-89.9</td>
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<tr>
<td>B-</td>
<td>80.0-83.2</td>
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<tr>
<td>C</td>
<td>73.3-76.5</td>
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<tr>
<td>D+</td>
<td>66.6-69.9</td>
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<tr>
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<td>60.0-63.2</td>
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<tr>
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<tr>
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<tr>
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**Student Honor Code**

The conduct of all students is expected to conform to the standards of academic integrity as described in the University of Florida Honor Code. In adopting this Honor Code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the University community. Students who enroll at the University commit to holding themselves and their peers to the high standard of honor required by the Honor Code. Any individual who becomes aware of a violation of the Honor Code is bound by honor to take corrective action. A student-run Honor Court and faculty support are crucial to the success of the Honor Code. The quality of a University of Florida education is dependent upon the community acceptance and enforcement of the Honor Code.

THE HONOR CODE: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”