Phar 6736
Cardiovascular Pharmacotherapy

8:00am-9:55am Monday, Tuesday, Thursday

Monday classes held in Lib 410 and WDH 7-135
Tuesday classes held in LSci 165 and MoosT 1-451
Thursday classes held in LSci 165 and MoosT 1-450

Anne Marie Schullo-Feulner, Pharm.D., BCPS
Course Director

Fall Semester 2015
October 12th through December 18th
Phar 6736: Cardiovascular Pharmacotherapy (1.9 Credits)  
Fall 2015

**Course Director:** Anne Schullo-Feulner, Pharm.D., BCPS  
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Pharmaceutical Care and Health Systems  
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Available by appointment.

Course Website: Available for all registered students by logging into: www.moodle.umn.edu

<table>
<thead>
<tr>
<th>Course Faculty Twin Cities</th>
<th>Course Faculty Duluth</th>
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</table>
| **Scott A. Chapman, Pharm.D.**  
Associate Professor  
Experimental and Clinical Pharmacology  
University of Minnesota College of Pharmacy  
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| **Robert J. Straka, Pharm.D., FCCP**  
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| **Youssef Roman, Pharm.D., Ph.D. (C)**  
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**Clinical Instructors**

| Sean Stewart  
Sean Stewart, PharmD, BCACP, CLS  
Clinical Pharmacist, Medication Management  
Park Nicollet Clinics – St. Louis Park and Bloomington  
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Email: sean.stewart@parknicollet.com | |
**LEARNING OBJECTIVES**

<table>
<thead>
<tr>
<th>At the conclusion of the course, students will be able to:</th>
<th>Applicable Domain</th>
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<tbody>
<tr>
<td>1. Explain the basic pathophysiology associated with common cardiovascular conditions.</td>
<td>Scientific Inquiry</td>
</tr>
<tr>
<td>2. Contrast and compare available pharmacotherapeutic options to manage patients with one or more common cardiovascular condition.</td>
<td>Patient Care</td>
</tr>
<tr>
<td>3. Evaluate, monitor and modify pharmacotherapeutic plans for managing patients with common cardiovascular conditions.</td>
<td>Patient Care</td>
</tr>
<tr>
<td>4. Identify, resolve and/or prevent drug therapy problems, and develop pharmacotherapeutic goals for patients with cardiovascular conditions.</td>
<td>Patient Care</td>
</tr>
<tr>
<td>5. Describe how to counsel patients receiving cardiovascular medications on their appropriate use.</td>
<td>Patient Care</td>
</tr>
<tr>
<td>6. Collaborate with others to apply cardiovascular pharmacotherapeutic concepts in order to produce a patient-care scenario and related questions.</td>
<td>Leadership &amp; Engagement Interprofessional Develop.</td>
</tr>
</tbody>
</table>

**PEDAGOGICAL GOALS and TOOLS:**

One of the hallmarks of being a professional is a dedication to life-long learning. To promote life-long learning, we expect you to actively participate in your own education while in the College of Pharmacy. In order to be successful in this course you need to:

- Come prepared to class:
  - Watch any and all Breeze presentations assigned – be prepared to answer questions on assigned electronic lectures
  - Complete assigned readings prior to class
  - Be prepared for quizzes and exams
  - Be prepared for active team based learning activities

- Bring your Response Card keypads ("student clickers") to class each day to facilitate learning by TurningPoint® technology – quizzes may be administered via TurningPoint. Misplaced, broken, or battery-less clickers will not be given credit.

- Participate in class
  - Contribute to solving patient cases which will be presented during lectures
  - Prepare for and participate in Team Based Learning (TBL) exercises

- Seek help when you need it!

**RECOMMENDED TEXTS:**

Students are urged to review the assigned readings prior to class to aid in the understanding of lecture material. The readings for the course will be outlined in the course schedule and include chapters from:

E-COURSE HANDOUTS AND MATERIALS:
Course notes and materials will be provided in electronic formats wherever possible through the Moodle course site. Whenever possible, the materials will be posted one week prior to a lecture, or earlier if available. Physical copies of course packets will not be available for purchase in the bookstore. The Moodle course site is organized by each class week. All materials needed for that week will be placed there. Please look at each link in advance of the lecture to ensure preparedness for the upcoming week.

PREREQUISITES:
All students will have completed PHAR 6716 Applied Pharmaceutical Care, PHAR 6722 Principles of Medicinal Agents and PHAR 6726 Pharmacology. Additionally students must be currently enrolled in PHAR 6732 Medicinal Chemistry and Pharmacology. Students are responsible for this material to the extent that basic information taught in such classes will be built upon in this course. Thus, students are encouraged to review basic cardiovascular anatomy and physiology. Instructors may briefly review this material but are not expected to.

COURSE COMMUNICATIONS:
There will be frequent communication through email, announcements in class, and via the course website about course administrative issues. Please check both the website and your email daily. If you are not in class, please get communications from a classmate.

On the course website you will see the following 2 forums: “Course Announcements,” and the “Clinical Forum/Discussion Board.” Please check the “Course Announcements” forum for information from instructors regarding the course. Please use the “Clinical Forum/Discussion Board” to post any content related questions and/or answers you may have. This is to be utilized:

1. As a way for students to share ideas and help each other learn. It will be monitored intermittently by course faculty for potential input into discussions as well.
2. As a way for students to ask questions regarding administrative questions and/or requests related to the course. It will be monitored by a TA once daily at the end of the day.

STUDENT EVALUATION AND GRADING:

Phar 6736 Overall Course Grade: The overall course grade will be determined by the results of: 3 quizzes, 3 TBL sessions, 3 written multiple choice exams, 1 in-class oral case review, 1 comprehensive final, and 3 OPTIONAL case-based extra credit activities.

Missing Grades and/or Grade Discrepancies: Each time a grade/s is added to the Moodle gradebook, students will be notified via the “Course Announcements” forum. Students are responsible for checking the gradebook for missing grades and/or grade discrepancies. If a potential inaccuracy is identified, students have one week from the day/time the announcement is posted to notify the lecturing faculty. After one week grades change requests will not be honored.
**Exams:** Exams will be given during scheduled class time. Exams will not be graded on a curve. The use of electronic devices such as Palm, other PDA, pocket computers, programmable calculators, and other devices with electronic data bases is not permitted during exams unless specified by administrator. Exams will be comprehensive and build on previous knowledge covered in each section. Analysis of composite class response for all questions will be conducted prior to releasing the grades.

Exams will not be returned to students. Faculty will facilitate the student's ability to view their exams during the optional post exam review sessions. This will be your only chance to comprehensively review your exam. If you have extenuating circumstances, you may schedule an appointment with the instructing faculty or teaching assistants to review your exam. Grades will NOT be given out over the telephone or by email.

**Post Exam Reviews and the Regrade Policy:** Post exam reviews are intended to provide students with the opportunity to continue their educational development. They are a forum for a professional and collaborative exchange of ideas and instruction – please do your part to maintain a professional educational environment. Discussions in this forum are NOT regrade requests and decisions regarding regrades will NOT be made during exam reviews. Only written regrade requests will be considered. If you would like to submit a question/s for regrade, please email your request directly to the instructor for the exam, with information that details the question number and reasons why you feel your answer is correct within 48 hours from the day/time of the post-exam review.

**Quizzes:** 3 quizzes will be given via Moodle. Students will have access to the quiz for 30 minutes in a 22 hour period (10 AM to 8 AM the following day). You will be able to take the quiz any time in that 22 hour period, however once the quiz is opened you will have 30 minutes to complete it. The standard make-up policy will apply to all quizzes. Although the quizzes are open-resource, they are not group projects. Each student is expected to take the quiz independently and submit their own work. Each student is responsible for ensuring that they are appropriately logged into the course website when taking assigned quizzes.

**Technical Support for Online Quizzes:** If you require assistance please take the following steps: **Step 1:** Consider visiting the technical support website [http://umn.edu/moodle](http://umn.edu/moodle) to troubleshoot your problem through self-help pages. **Step 2:** Call the One Help desk at 218-726-8847 in Duluth or 612-301-4357 in the TC. Following these steps will ensure that you get the assistance that you need in a timely manner. Please do not hesitate to contact Tech Support. They are there to help! If you have technical difficulties during an online quiz, or if you are uncertain your quiz submitted properly, email the instructor for that material immediately, including your chosen answers for the quiz questions.

**Note:** Late quizzes will not be accepted if a student has technical difficulties and all avenues of technical support to correct the problem were not attempted. Make-up quizzes for students who unintentionally overlooked the due date and/or time will not be granted.
In-Class Oral Case Review:

The in-class oral case review accounts for 5% of the overall course grade. This active learning activity will require the application of knowledge gained from each of the three sections. Students will be asked to review a patient case in Moodle and answer multiple choice questions regarding the patient's hypertension and hyperlipidemia. This same patient case story will continue during the in-class session. Working in groups, students will be given the second half of the story (your patient will develop either heart failure, a coronary event (MI) or atrial fibrillation) and orally answer questions.

Team Based Learning (TBL):

These assignments are designed to assist students in learning relevant content from class at a depth beyond memorization, and applying it to patient care vignettes. We will hold 3 TBL sessions each worth 2.5 points. TBL will account for 7.5% of the overall grade. Each session will consist of three phases. A “preparation phase” where you will be asked to review material before class. This may be in the form of a pre-recorded lecture or reading/s – please check the schedule for the exact assignment. The second and third phases take place in class and consist of the “readiness assurance testing” and “applied exercises.” Readiness assurance will consist of one set of questions first testing your individual knowledge (iRAT) and then testing your knowledge as a group (tRAT). The applied exercises are case based scenarios that you will work on as a group. TBL sessions will be conducted on Moodle (bring a devise) and will be closed note.

TBL Grading: The iRAT will count for 50% of the grade, while the tRAT will count for the remaining 50%. TBL sessions are intended to be an active learning experience, thus students must be present and in class to earn a TBL grade. Working remotely does not demonstrate professionalism and will not be awarded credit. Further, tRAT credit is not available to students who do not complete an iRAT. Students are responsible for bringing all items needed to complete the readiness assessments (this may include clickers, computers, batteries, etc.). Students without a working device will not be awarded credit - paper and/or verbal answers will not be accepted.

TBL Absentee policy: The iRATs will start on time - questions missed due to tardiness will be forfeited. If a student receives a Ø for the iRAT a Ø will also be awarded for the tRAT. In the event of an excused absence, students will receive the class average for the iRAT and tRAT.

Comprehensive Final Exam:

A comprehensive final exam for all three sections will contribute 20% toward the overall course grade. Approximate contributions of each section for this exam will be 30% Dr. Straka, 30% Dr. Schullo-Feulner and 40% Dr. Chapman. Students must pass the final exam with a grading of 60% or greater in order to pass the course. Exceptions will not be granted.
Extra Credit Cases:

During the course 3 extra credit activities will be available to students as OPTIONAL exercises. These activities will be complex cases and pharmacotherapy issues related to material presented in the course. Each extra credit activity will be aligned with a section of the course (section I: HTN and HLD, section II: CSA and ACS, section III: HF and arrhythmias). These activities will involve patient case scenarios and 6 multiple choice questions.

Each extra credit activity will be available as a Moodle-based quiz at the beginning of each section, and will be due prior to the Pre-Exam Review for that section. Students will be able to save partial work in Moodle and go back into the quiz at will to work on it. However, once an extra credit quiz is “submitted,” students are not able to change answers.

In order to receive credit for each question, the correct answer will need to be chosen with a referenced rationale statement. An acceptable rationale is a detailed and patient specific justification as to why the chosen answer is correct, including supporting references (lecture slides, guidelines, readings, etc). The answers to the extra credit case activity will be reviewed at the Pre-Exam Review.

Each activity will be worth 1.67% extra credit added to the final grade. Students can earn up to 5% total extra credit toward the final grade for the course. NOTE: STUDENTS ARE EXPECTED TO WORK ON THE EXTRA CREDIT ACTIVITY INDEPENDENTLY.

Final Grade: The final grade for the course will be determined according to the formula defined in the table below. Common rounding rules will be applied when determining the final grade ONLY (as per Microsoft Excel® where 0.5 and higher values are rounded up).

<table>
<thead>
<tr>
<th>Evaluation Tool</th>
<th>Point Value</th>
<th>% of Final Grade</th>
<th>Minimum Passing Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 quizzes</td>
<td>3 x 2.5</td>
<td>7.5%</td>
<td></td>
</tr>
<tr>
<td>3 TBL sessions</td>
<td>3 x 2.5</td>
<td>7.5%</td>
<td></td>
</tr>
<tr>
<td>In-Class Oral Case Review</td>
<td>5</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Exam I: HTN &amp; HLD</td>
<td>20</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Exam II: CSA &amp; ACS</td>
<td>20</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Exam III: HF &amp; Arrhythmia</td>
<td>20</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Final Exam: Cumulative</td>
<td>20</td>
<td>20%</td>
<td>≥ 60%</td>
</tr>
<tr>
<td>Extra Credit Cases</td>
<td>3 x 1.67</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Final Grade</td>
<td>105</td>
<td>105%</td>
<td>≥ 60%</td>
</tr>
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Letter Grade assignments appearing on transcripts are as follows.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>≥ 93%</td>
</tr>
<tr>
<td>A-</td>
<td>90-92%</td>
</tr>
<tr>
<td>B+</td>
<td>87-89%</td>
</tr>
<tr>
<td>B</td>
<td>83-86%</td>
</tr>
<tr>
<td>B-</td>
<td>80-82%</td>
</tr>
<tr>
<td>C+</td>
<td>77-79%</td>
</tr>
<tr>
<td>C</td>
<td>73-76%</td>
</tr>
<tr>
<td>C-</td>
<td>70-72%</td>
</tr>
<tr>
<td>D</td>
<td>60-69%</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60%</td>
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</tbody>
</table>
EXAM DATES: Exam dates will not be changed from those printed in the course schedule. Should the University be closed due to an unforeseen event, the exam will be rescheduled.

MAKE-UP POLICY FOR EXAMINATIONS, QUIZZES, TBLs, etc:

Please note MAKE-UP EXAMINATIONS WILL NOT BE OFFERED EXCEPT UNDER THE FOLLOWING CIRCUMSTANCES: illness, verified by a licensed professional; a family emergency, verified by the professional in attendance; or a University-sponsored event, verified by the sponsoring organization. Additional circumstances will be considered at the discretion of the instructor, but are not likely to be granted. If a student is unable to attend the scheduled exam, the relevant instructor must be notified (by email AND phone) at least 24 hours in advance of the exam time (where possible). If you do not receive a reply to your request prior to the exam time, please do NOT assume that your request has been granted; contact us again to confirm that your request was received and processed. If an acceptable circumstance or adequate documentation is not provided, a grade of zero on the exam will be assigned. Unless there are extenuating circumstances, students must contact the relevant instructor within 24 hours of the missed exam in order to be considered for a make-up. Depending on the circumstances, the make-up exam date will not be more than one week after the original exam date and will if possible occur before the original exam date.

DISABILITY ACCOMMODATIONS

Students with a documented disability (eg. physical, learning, psychiatric, vision, hearing, etc.) already registered with the Disability Resource Center must contact the course director within the first week of class to discuss your accommodations. Accommodations take advance planning to implement. Students who do not present documentation from Disability Services a minimum of one week before an assessment will adhere to original/traditional expectations for that assessment.

Please contact Disability Services to quantify and arrange the necessary accommodations:

Twin Cities:  http://ds.umn.edu/  612-626-1333
Duluth:  http://www.d.umn.edu/access/  218-726-8217

All discussions concerning this issue will remain confidential. English as a second language is not considered a disability by the College of Pharmacy and this course will not accommodate requests for additional exam time based on this criterion.

HONOR CODE AND CLASSROOM ETIQUETTE

Each student is bound by the honor code which defines academic misconduct as any unauthorized act which may give a student an unfair advantage over other students, including but not limited to: falsification, plagiarism, misuse of test materials, receiving unauthorized assistance and giving unauthorized assistance. Specifically, each student will be required to do their own work on all quizzes, tests, extra credit assignments, oral and written exams unless
otherwise advised by the course instructors. For exams & other assessments it will be considered a "misuse of test materials," and therefore a violation of the honor code to copy, scan, photograph, share, or otherwise re-construct such assessment content.

You signed the following statement upon accepting placement in the College of Pharmacy: 
“I hereby affirm that I have read and understood the provisions and stipulations of the University of Minnesota Pharmacy Student Code of Ethical Responsibility and Professional Behavior.”

The Code was established in the belief that central to any intellectual and professional endeavor is an atmosphere of mutual trust and respect, based on individual maintenance of community standards. Your professional community starts here at the College of Pharmacy with your peers, faculty, preceptors, staff and administrators. It is our expectation that you will exhibit professional behavior towards other students and to faculty in the classroom at all times. In turn, we will treat you with the professional respect you deserve.

COURSE/INSTRUCTOR EVALUATION

Students will have an opportunity to complete online course evaluations for course instructors as well as the overall course. We value your opinion. It’s our intention to provide a good backdrop for educational and professional development. To accomplish this it is vital that our students provide us with constructive assessment of our progress so far.

RECORDING POLICY

For information relevant to the recording policy for this course, please refer to the following link. 
http://z.umn.edu/recordingpolicy