

**Pharmacy Outcomes**  
Phar 6135 (2 credits)  
Spring 2008  
**SYLLABUS**

**Course Directors:**

**Twin Cities**

Jeannine Conway, PharmD, BCPS  
Assistant Professor  
Experimental and Clinical Pharmacology  
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Office Hours: Open door policy. I'm generally not available at the following times: Tues and Thursday 8 am-12:05 am (Phar 6172 labs), Thursday 3:35-4:25 (Phar 6172 Lecture), and Friday morning (clinic).

**Duluth**

Randall Seifert, PharmD  
Professor  
College of Pharmacy  
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Office hours: By appointment or stop by

**Room and Time:**

Tuesday 1:25-3:20 in 1450 Moos (TC) and LSci 163 (Duluth)

**Course Purpose:**

The goal of this course is to teach participants how to integrate knowledge of basic sciences, pharmacotherapy, pharmacy practice management, pharmaceutical care, written communication, literature evaluation, drug information retrieval, law and ethics, and pharmacoeconomics to manage patients with multiple medical conditions.

**Course Objectives:**

After completion of this course, participants will be better able to:

- 1) Communicate drug therapy recommendations (verbal and written)
- 2) Interpret medical literature and apply new knowledge to clinical situations
- 3) Retrieve and provide reliable drug information
- 4) Assess medication appropriateness and identify drug-related problems
- 5) Integrate clinical, humanistic and economic data to develop a drug therapy plan
- 6) Determine therapeutic endpoints and monitor medication regimens

Other skills that may be reviewed include conducting a patient-specific medical and medication history, understanding different pharmacy practice models, recognizing the importance of pharmacy law and ethics in decision making and evaluating outcomes of clinical interventions.

**Honor Code:**

Each student is bound by the following specific provisions as part of the Code: Academic misconduct is 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. You are required to do your own work on all case documentation and drug information questions. **Students are encouraged to work together, however the work that is turned in must be each student's own interpretation of the assignment and can not be copied from another student's work. Note plagiarism may result in course failure.**

**Classroom Etiquette Statement:**

Your professional community starts here at the College of Pharmacy with your peers, faculty, preceptors, staff and administration. It is our expectation that you will exhibit professional behavior towards other students and to faculty in the classroom at all times.

**Course and Make-up Policies:**

Excused absences for in class case discussion include illness (verified by note from a physician); a family emergency (verified by note from a professional in attendance); a University-sponsored event (verified by a University official or a note from the leader of the sponsoring organization); military duties (verified by a note from a commander). **All excused absences must be arranged with the Course Director(s) in advance of the regularly scheduled class. If you become sick or a family member becomes sick, or if there is a serious family emergency, please contact the course director as soon as possible.**

**Disability Accommodation:**

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc) who needs to arrange reasonable accommodations must contact the course director and Disability Services (612-626-1333, TC or 218-726-8217, Duluth) at the beginning of the semester. All discussions will remain confidential.

**Grading in the Course:**

Integrating your knowledge, skills, and personal caring into the provision and process of pharmaceutical care is a primary focus in this course. It is very important to not lose sight of this within the structure of the academic setting and grading. All grading in this course is done by pharmacists.

**Definitions of ratings in the "S+/S/S-" System:**

Within the contract for a grade system, it is important to provide additional qualitative feedback to students about their level of performance relative to the learning objectives and to the care of their future patients. The course will use a "S+/S/S-" rating system to add this qualitative feedback. All determinations of ratings will be made by 1) the teaching assistants with the guidance and supervision of the Course Director or 2) the course faculty. The definitions for each are given below.

**"S":**

To be considered satisfactorily completed and receive an "S" rating, activities must meet the following criteria:

1. Be completed and handed in at their due date/time
2. Show appropriate effort for thoroughness and accuracy in meeting the learning objectives and providing patient care.
3. Be completed in accordance with the Honor Code.

**"S+":**

To receive a rating of "S+", the activity must meet the criteria for an "S" rating and not meet any criteria for an "S-" rating. In addition, the student's method of completing the activity and the activity's result must provide optimal patient care in every detail (within the limitations of the activity itself).

**"S-":**

The purpose of the "S-" rating is to help the student identify components of their work that would hinder the appropriate provision of Pharmaceutical Care or any pharmacy services to patients.

A rating of "S-" will be given if a component of the rated activity is completed in a fashion:

1. That would provide less than satisfactory care to the patient or result in harm to the patient.
2. That is clearly not consistent with applicable evidence-based literature.
3. That is clearly not consistent with applicable practice laws.

Furthermore, an "S-" rating will be given if a student:

1. The activity is not handed in at its due date and time but is handed in within 24 hours of due date and time.
2. Has completed an activity with an amount of effort that is less than that necessary to meet the learning objectives but that does not meet the criteria to receive a rating of "U".

Upon receipt of an "S-" rating, the student may be asked to revise some specified component of the activity at the discretion of the Course Director. This revision must be completed in the time and manner specified by the Course Director or the "S-" rating will become an unsatisfactory, receive a "U", and be considered a breach of contract.

**"U":**

Activities that meet the following criteria will be deemed unsatisfactorily completed, will receive a "U", and thus be considered a breach of the course contract. For each unsatisfactory rating a student receives, their final grade will drop one full letter grade as described in the course contract.

1. The activity is not handed in within 24 hours after its due date and time.
2. The activity is handed in on time but is completed with extremely poor effort that clearly does not meet the majority of the learning objectives and could not provide appropriate patient care.
3. The activity is not completed in accordance with the Honor Code.
4. The activity originally received an "S-" rating AND a revision was called for by the Course Director but the revision was not completed in the time and/or manner specified by the Course Director.

**Distribution of ratings:**

Activity		
Case documentation: notes 1, 2, 3	1 rating/note	3 ratings
Case documentation: notes 4, 5, 6	2 ratings/note	6 ratings
Participation in case discussion	1 rating/class discussion	6 ratings
12 drug info questions	1 rating/question	12 ratings
		Total ratings= 27

The following table shows how the "S+/S/S-" system will be applied to the final course grade.

Number of S- ratings received	Final Grade
4 or fewer	A

5	A-
6	B*
7	C*
8	D
9 or more	F

\*S+ ratings may be used to elevate a B to a B+ and C to a C+. Students must earn at least 12 S+'s to elevate their grade.

### Format of Case Work-Ups and Presentations

- 1) Cases will be posted on the course website by the date they are due. All cases will address multiple medical conditions. Recommended readings and online resources will also be listed, as appropriate.
- 2) Each student is responsible for “completing the SOAP note” and submitting it online on the designated date. **ALL NOTES ARE DUE ON TUESDAYS AT 23:59.** Notes will be graded prior to the case discussion date so faculty can tailor the in class discussion to maximize learning. Students are also responsible for bringing a copy of their note to class to help facilitate the discussion.
- 3) Each student is responsible for working up and understanding each case. Students are allowed to work with each other; however individual work must be submitted.

### Case Content

Cases may include but **will not** be limited to the following pharmacotherapy topic areas:

- 1) Hypertension, heart failure, coronary artery disease, VTE, stroke, dyslipidemia
- 2) Asthma, COLD, ARDS, cystic fibrosis
- 3) GERD, PUD, IBD, diarrhea/constipation, cirrhosis, pancreatitis, hepatitis
- 4) Renal failure, electrolyte disorders, acid-base disorders
- 5) Seizure disorder, head injury, Parkinson’s disease, pain management, headache
- 6) Dementia, schizophrenia, depression, anxiety, sleep disorders
- 7) Diabetes mellitus, thyroid disorders, obesity
- 8) Menopausal symptoms, contraception, pregnancy and lactation
- 9) Erectile dysfunction, BPH, incontinence
- 10) Osteoporosis, rheumatoid arthritis, osteoarthritis, gout
- 11) Glaucoma, allergic rhinitis
- 12) Anemia, coagulation disorders
- 13) CNS infections, respiratory tract infections, skin/soft tissue infections, UTIs, STDs, sepsis, HIV, TB
- 14) Breast CA, lung CA, colorectal CA, lymphoma, leukemias

In class discussions may also address pharmacy practice management issues, pharmaceutical care process, written communication skills, literature evaluation, drug information retrieval, law and ethics, and pharmacoconomics.

### Grading of Case Documentation

**See attachment to syllabus with grading rubric.** The rubric has been divided to provide specific feedback on structure and clinical content. The first 3 notes will be graded in their entirety, but only the structure ratings will count towards your grade. The last 3 notes will be graded in their entirety and both the structure and clinical content ratings will count towards your grade.

Background Information and Subjective/Objective will be provided as the “day of visit note”. Students are responsible for completing the assessment and plan. How ratings are applied to create overall ratings will change during the semester.

For all notes ratings structure ratings will be applied as follows (2 classifications/note):

- 2 Missing Documentation=S-
- any missing documentation=S,
- 2 Misplaced Documentation=S,
- At least 1 Complete Documentation and no Missing Documentation=S+.

For the final 3 notes ratings for clinical content will be applied as follows (the number of classifications is dependent on the number of clinical issues):

- 50% Inappropriate=S-
- No more than 25% Inappropriate and less than 50% Satisfactory= S,
- At least 50% Satisfactory and no Inappropriate=S+.

Example: the case has problems with hypertension, lipids, and diabetes = 6 categories to be graded (the assessment and plan for each). 3 Inappropriate ratings=S-, only 2 Inappropriate ratings (rounded up from 1.5) =S, 3 satisfactory and 3 needs improvement=S+.

### Participation in Class

The class will be randomly assigned to groups of 4 on each campus. In class activities will vary in terms of structure. If students need to prepare in advance, an email notification will be sent out. In addition, each student will be assigned a letter (A, B, C, or D) which corresponds to an assignment prior to the in class discussion which will be posted on web ct. These assignments will prepare the group for the in class discussion which may include a follow-up case for the patient or additional clinical questions/issues. If a student is absent (the absence is not excused and does not meet the University definition of an excused absence) they will be assigned an S-. Students will be required to turn in their notes on their pre-assigned topic (A, B, C, D) in order to earn a S+ for the in class discussion. There will be a sign in sheet sent around each campus for attendance for each in class discussion. Each student must sign their own name. Failure to do so will result in a breach of the honor code and will be reported to the honor council.

**Each student is responsible for bringing a copy of their note to the in-class discussion.**

### Grading of Drug Information Questions:

Every other week, each student is responsible for answering 2 drug information questions. To expedite grading students must provide references (or cut and copy pertinent text) to their answer. Each answer you submit will require 3 fields of information: Your answer, your rationale, and your references. The questions will range from the simple (does this medication need to be taken with food) to the complex (can a patient be started on X medication when they take 14 other medications). BE CAREFUL, you may need to reconcile multiple references to formulate your answer.

Drug info questions	S-: Answer is missing specific recommendations (drug/dose/frequency) OR is not consistent with the references provided OR no references are attached to answer.	S: Answer is appropriate but has minor omissions or doesn't completely answer question.	S+: Answer is complete and appropriate in every detail
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Example:

A patient called your pharmacy to ask if she could take her Cipro rectally rather than oral because she is very nauseated. She has a prescription for Ciprofloxacin 500 mg tablets, 1 twice a day for 7 days. Can Cipro be administered rectally?

**Answer:** No

**Rationale:** There is no published data supporting the administration of ciprofloxacin rectally. An intact tablet does not make a good rectal formulation due to its compactness. The formulation is highly unlikely to disintegrate due to the small surface area and lack of fluid in the rectum.

**References:** There was no data supporting ciprofloxacin administration rectally. A review of Pubmed and International Pharmaceutical Abstracts searching for “rectal administration ciprofloxacin” yielded no pertinent data. In addition, Micromedex, Lexicomp, Uptodate, and AHFS yielded no information about rectal administration.

**Grading Clarification and Re-grade Requests:**

If you have questions or concerns with grades, please contact your evaluator first. The course director has final say in the grade if the student and evaluator disagree. All formal requests for re-grades must be initiated within one week from when the evaluation is released.

## ALL ASSIGNMENTS ARE DUE BY Tuesday Night at 23:59

### Course Schedule

Week	Date	Assignment	Topics/class schedule	Faculty
1	Tues 1/22	Introduction Case 1 posted by 1/23		<i>Conway/Seifert</i>
2	Tues 1/29	<b>Case 1 documentation due</b> Drug info questions posted by 1/30	No class	
3	<b>Tues 2/5</b>	<b>Drug info questions 1 and 2 due</b> Case 2 posted by 2/6	<b>Class meets to discuss case</b>	<i>Brown, A Traynor</i>
4	Tues 2/12	<b>Case 2 documentation due</b> Drug info questions posted by 2/13	No class	
5	<b>Tues 2/19</b>	<b>Drug info questions 3 and 4 due</b> Case 3 posted by 2/20	<b>Class meets to discuss case</b>	<i>Conway, Kotlyar, Bastianelli</i>
6	Tues 2/26	<b>Case 3 documentation due</b> Drug info questions posted by 2/27	No class	
7	<b>Tues 3/4</b>	<b>Drug info questions 5 and 6 due</b> Case 4 posted by 3/6	<b>Class meets to discuss case</b>	<i>Starner, Seifert, Schullo</i>
8	Tues 3/11	<b>Case 4 documentation due</b> Drug info questions posted by 3/12		
9	3/17-3/21	Spring Break	No class	
10	Tues 3/25	<b>Drug info questions 7 and 8 due</b> Case 5 posted by 3/26	<b>Class meets to discuss case</b>	<i>Pereira, Westberg, Swanoski</i>
11	Tues 4/1	<b>Case 5 documentation due</b> Drug info questions posted by 4/3	No Class	
12	<b>Tues 4/8</b>	<b>Drug info questions 9 and 10 due</b> Case 6 posted by 4/9	<b>Class meets to discuss case</b>	<i>Anderson-Haag, Tomsche, M. Peterson</i>
13	Tues 4/15	<b>Case 6 documentation due</b> Drug info questions posted by 4/16	No class	
14	<b>Tues 4/22</b>	<b>Drug info questions 11 and 12 due</b>	<b>Class meets to discuss case</b>	<i>Kirstein, Lackner, L. Traynor</i>
15	Tues 4/29		Class meets to discuss course and give Dr. Conway and Dr. Seifert constructive feedback for next year	

*Faculty and students will meet on "case discussion" dates.*

### Course Evaluation

Students will evaluate the course, the faculty and the teaching assistants.