The University of Florida College of Pharmacy
Department of Pharmaceutical Outcomes & Policy

PHA 5267: Critical Appraisal of Pharmacoeconomic Studies

Spring 2011
Friday 10:40 – 12:35pm
Communicore C1-11

Course Coordinator & Instructor:
Teresa L. Kauf, Ph.D., Associate Professor
Office: HPNP 3338
Phone: (352) 273-6252
Email: tkauf@ufl.edu

Office Hours: Combined office hours and question & answer sessions will be held via Elluminate on Wednesdays from 3 – 4:00pm (see below for more information). Otherwise, please email or phone to make an appointment.

Graduate Teaching Assistants:
There are three graduate teaching assistants (TAs) assigned to this course. Questions about course material, assignments, and grades should be directed first to your TA. If the TA cannot resolve the question or issue, he/she will refer the student to the instructor.

Each TA will have one office hour per week where students can visit in person, by phone, or chat (via the course website) without having to make an appointment (see table, below). If a student cannot meet during a TA’s office hour, s/he can schedule an appointment to meet with the TA at a different time. TA offices are located in HPNP 2314 on the Gainesville campus. The phone numbers for the TA offices are (352) 273-6629 and (352) 273-6248.

Students will be assigned to TAs by group as shown in the table below. Groups for this course will be comprised of 4 – 6 students. Students are expected to form their own groups by January 13 via the “Group Selection” assignment on Sakai. ONE member of the group should complete the information requested in the assignment (first and last name and Gatorlink ID for each member and the group’s campus) and submit the assignment on behalf of the other group members. Once all the groups have been submitted, each group will be assigned a name (e.g., JAX04). This information will be posted to the Resources section of Sakai.
<table>
<thead>
<tr>
<th>TA</th>
<th>Groups [Tentative]</th>
<th>Office Hour</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lily Ma</td>
<td>GNV Groups 01 – 16</td>
<td>Tuesdays, 3 – 4pm</td>
<td><a href="mailto:lilyma@ufl.edu">lilyma@ufl.edu</a></td>
</tr>
<tr>
<td>Olihe Okoro</td>
<td>GNV Groups 17 - 24, STP Groups</td>
<td>Tuesdays, 1 – 2pm</td>
<td><a href="mailto:ookoro@ufl.edu">ookoro@ufl.edu</a></td>
</tr>
<tr>
<td>Jennifer Guo</td>
<td>ORL &amp; JAX Groups</td>
<td>Tuesdays, 10 – 11am</td>
<td><a href="mailto:jendguo@ufl.edu">jendguo@ufl.edu</a></td>
</tr>
</tbody>
</table>

In addition to utilizing office hours, students are encouraged to take advantage of the online discussion board feature on the Sakai course website. The discussion board will be monitored on a daily basis by the TAs. **Please be sure to (a) post your question on the relevant discussion board and (b) review previous posts to determine whether your question already has been addressed.** If you post a question that has been posted and answered previously, your post may not be addressed.

**Course Description:**
A variety of technological and environmental factors are fueling continued increases in health care expenditures, including pharmaceuticals, in the United States and elsewhere. As a result, both public and private payers of health care have instituted various measures of cost containment, including the economic evaluation of pharmaceuticals, commonly referred to as “Pharmacoeconomics”. In this course, we will review decision making tools such as cost-effectiveness and cost-benefit analysis and discuss their application to resource allocation, how these tools are used in practice, and what factors limit their use or interpretation.

Why is this course important? Pharmacoeconomics techniques are becoming increasingly common in the medical and health outcomes literature and as a tool for health care decision making. Pharmacists, through their influence on drug therapy selection, must understand the tools of pharmacoeconomics so that such decisions will be made appropriately. Pharmacoeconomics is an important field of research within the pharmaceutical industry and the larger health care industry, and there are many career opportunities for pharmacists who wish to specialize in this field.

Credit Hours = 1

**Course Objectives:**
The primary objective of this course is to (1) introduce students to the fundamental methods of pharmacoeconomic analysis and (2) prepare them to read and interpret pharmacoeconomic studies. By the end of this course, students should have a working understanding of the tools for economic evaluation of pharmaceuticals and their use in decision making, including the following:

- Fundamental concepts behind rationing and economic evaluation of health care;
- The role of pharmacoeconomics in the drug development process and health care decision making;
- Strengths and weaknesses of standard pharmacoeconomic approaches available to assess the economic impact of pharmaceutical interventions, including cost-effectiveness analysis, cost-utility analysis, cost-benefit analysis, and cost-minimization analysis; and
• The role of perspective in the selection of study parameters and their impact on study design, costs, and the interpretation of results.

Students will be prepared to make drug therapy decisions and policy recommendations based on pharmacoeconomic information and constructively participate in the debate on health care rationing.

Teaching Methods and Course Structure:
This class will meet for 100 minutes on Fridays during 4th and 5th periods (10:40am – 12:35pm) for seven (7) weeks, beginning Friday, January 7, 2010. Lectures will employ the TurningPoint Classroom Student Response System (“clickers”). The clickers will be used in class to actively engage students through the use of general polling during discussions to gauge understanding of the material. Clickers will not be used for quizzes or other graded work.

The final exam will be held on Thursday, February 24, 2011 from 4 – 6pm (Gainesville rooms TBD).

Combined office hour and review sessions will be held via Elluminate on Wednesdays from 3 – 4pm, beginning January 12. These sessions will be recorded for students to view at a later date. Students may submit questions ahead of time to the instructor. Please email questions to kauf@cop.ufl.edu by noon the day of the session.

TurningPoint ResponseCard RF Remotes
Students who attend the live lecture should have their own ResponseCard RF Remote (“clicker”) for use during class discussions. For further information on how to use your clicker, please visit the UF student guide on the TurningPoint ResponseCard RF Remotes.

You are responsible for bringing your clicker to class and maintaining it in operating order. Without a properly functioning clicker you will not be able to participate in the audience response activities of the class. The room code for C1-11 is “11.”

Elluminate
Before joining an Elluminate session for the first time, please review this information. Point your browser to the UF Elluminate website at http://elm.elluminate.com/UniversityOfFlorida/index.html to sign in to meetings and view recorded meetings. Hint: use the search box to search for “PHA5267 Instructor Office Hours” to find the meeting. Or, you can point your browser directly to http://elm.elluminate.com/UniversityOfFlorida/join_meeting.html?meetingId=1247979228002.

Course Text and Resources:
There is no required text for the course. No background knowledge of economics, except for that which was covered in PHA5727, is necessary.

For those students who desire some background information prior to lecture, optional readings will be posted for each class. There are several introductory texts that cover the topics that will be discussed in the course; Essentials of Pharmacoconomics, First Edition, by Karen L. Rascati (Philadelphia, PA: Wolters Kluwer, 2009) is recommended as a reference for students who would like additional practice. Relevant chapters from Rascati are listed in the Course Schedule but will NOT be posted to Sakai due to copyright issues (with the exception of Chapter 3 which will be posted).
Some lectures will include content from published pharmacoeconomic analyses or related work, and these articles are required. In addition, a portion of the assignments for the class will rely on published articles. All required readings are listed in the Course Schedule and will be posted on Sakai.

Students without prior experience conducting literature searches in the area of pharmacoeconomics should read the module, “Searching the Published Economic Evaluation Literature,” and complete the exercise that follows it. Completion of the module and the associated exercise is completely voluntary and does not contribute directly to students’ grades. However, understanding where and how to look for pharmacoeconomic information may be helpful for completing course assignments. The module, the accompanying exercise, and an answer key are posted on the course website and can be completed at your leisure.

**Evaluation Techniques:**
Grades in this course will be based on weekly individual exercises, a group project, and a final exam as described below.

**Weekly (Individual) Exercises**
Short exercises (1 – 3 questions) will be posted on Sakai after most lectures, for a total of five exercises. These individual assignments are designed to assess your understanding of the material covered in class and in the readings. At least some questions for each week’s assignment will draw upon a published pharmacoeconomic article. The lowest of the five weekly exercise scores will be dropped. If a student cannot submit an exercise due to illness or other emergency, s/he will receive a grade of 0 for the assignment and that assignment will be dropped. Students are not required to complete all five exercises; it is perfectly acceptable to complete only four and use the omitted assignment as the dropped score.

**Group Project**
The group project involves an analysis of a published pharmacoeconomic study by Taneja and colleagues (2010). Briefly, each group will use a standardized form to evaluate the quality of the study. Then, the team will use the information in the article and its critique to address a specific decision-making scenario. All groups will evaluate the same article and the same scenario.

The group project will be graded as a whole; that is, each individual member of a group will receive the same grade. Tasks can be divided among group members, but each student should be prepared to take full responsibility for the content of the entire assignment.

Additional information about report requirements, including the scenario, will be posted to ELS at a later date.

**Final Exam**
The final exam will consist of multiple choice and true/false questions and will be held from 4 – 6pm on Thursday, 24 February 2011. The exam will cover all material presented in lecture, weekly exercises, and assigned readings.
Grading Summary:
Course grades will be determined as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Exercises</td>
<td>40% (top 4 exercise scores @ 10% each)</td>
</tr>
<tr>
<td>Group Project</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>35%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

Scores from each of the assignments will be combined to calculate the final grade. Letter grades will be assigned according to the following scheme*:

- A: 90.0 – 100%
- B+: 87.0 – 89.9
- B: 80.0 – 86.9
- C+: 77.0 – 79.9
- C: 70.0 – 76.9
- D+: 67.0 – 69.9
- D: 60.0 – 66.9
- E: <60

* In accordance with the Faculty Senate resolution of December 14, 2006, the University of Florida's grading scale will be changed to include minus grades effective the Summer 2009 term. To see the comparative chart depicting the changes to the official grading scale, see http://www.isis.ufl.edu/minusgrades.html or go to http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html for more information.

Late Assignment Policy
All assignments are due by 5:00 pm Gainesville time on the due date specified in the course schedule. Late assignments that are submitted prior to the discussion of answers or publication of an answer key will receive one of the following:

- The class mean if the actual score is the mean or higher, or
- The actual score if the score is lower than the class mean.*

Delays due to unforeseen and distressing events (e.g., serious illness, a death in the family, hardware/software failure) will be treated on a case-by-case basis by the instructor. Any assignment submitted after the publication of an answer key or discussion in class will receive a zero score, NO EXCEPTIONS.
**Academic Honesty:**
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. Student 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 University of Florida 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:

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

Students should be aware that any use of resources other than those explicitly allowed on an assignment will be considered as academic dishonesty. Plagiarism, which occurs when another person’s work is used or copied without attribution, also will be considered academic dishonesty. All incidents of demonstrated or suspected academic dishonesty will be reported to the Associate Dean for Professional Affairs, and procedures regarding academic dishonesty will be enforced. Students who fail to apply a high level of academic integrity to all conduct related to this course risk receiving a failing grade.

For more information about academic honesty and the University of Florida’s Honor Code, point your browser to the Dean of Students Office and Student Judicial Affairs at [http://www.dso.ufl.edu/judicial/procedures/studenthonorcode.php](http://www.dso.ufl.edu/judicial/procedures/studenthonorcode.php).
Communication with Faculty:
Sakai will be used for most communications between the faculty and students. Check for new announcements at least once a day for any course updates. Email will also be used once in a while for mass communication to the class, so please check your email at least once a day as well. All emails sent out to the entire class will also be posted as an announcement on Sakai.

General questions about course content or policies should be posted to the discussion board. Students are expected to help each other track down answers as best as possible. When needed, the instructor and/or TAs will respond to posts. Just be sure you are not giving answers to any assignments as this is potential grounds for academic dishonesty. Read through all the other posts in the discussion board first before posting to make sure your question has not been addressed/answered already. Please include clear subjects for your post topics to make the subject your post pertains to clear to others.

Discussion board postings and emails can easily be misinterpreted, so make sure your message is clear before sending it. Any posts/emails deemed inappropriate by the instructor and/or TAs will be dealt with on a case-by-case basis directly with the instructor or the Associate Dean for Professional Affairs.

For personal issues/questions, please email the TA or the instructor directly. Be sure to include in the subject line the course number and a brief description (e.g., PHA5267 – Family emergency). This will allow coordinators to easily identify emails related to the course in amongst the plethora of junk and other emails that are received each day. Emails not properly addressed may get lost in the shuffle and unintentionally deleted or ignored, so be sure to follow the guidelines exactly.

Accommodations for Students with Disabilities:
Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the course instructor when requesting accommodation. Request for accommodation should be made at the beginning of the semester for exams or other assignments due during the semester.

Faculty and Course Evaluations:
Course and instructor evaluations are requirements for the successful completion of this course. Course and instructor evaluations must be completed, just as exams, papers, and assignments must be completed for you to receive credit for this course and all other courses in the College of Pharmacy. If you do not complete all required course and instructor evaluations by the last day of classes, you will receive an "I" or an incomplete grade for the semester because you have not completed all of the course requirements. See the College of Pharmacy Student/Faculty handbook and the UF undergraduate catalog in the Academic Regulations Section regarding policies and procedures for the conversion of "I" grades.
## Course Schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
<th>Assignments*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Course Overview &amp; Introduction to Pharmacoeconomics</td>
<td>* Required: Ubel &amp; Goold (1998)—pp 209 – 210 only, Rascati Chapter 3</td>
<td></td>
</tr>
<tr>
<td>Jan 7</td>
<td></td>
<td>* Optional: Rascati Chapter 1 or Bungay &amp; Sanchez (2003)</td>
<td></td>
</tr>
<tr>
<td>Jan 14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan 21</td>
<td></td>
<td>* Optional: Rascati Chapter 5 or Eisenberg (1989)</td>
<td>Due Jan 20</td>
</tr>
<tr>
<td>Week 4</td>
<td>Health-Related Quality of Life</td>
<td>* Optional: Rascati Chapter 8 or Guyatt et al (1993)</td>
<td>Weekly Exercise 2: CEA</td>
</tr>
<tr>
<td>Jan 28</td>
<td></td>
<td></td>
<td>Due Jan 27</td>
</tr>
<tr>
<td>Week 5</td>
<td>Cost Utility Analysis</td>
<td>* Optional: Rascati Chapter 6 or Naglie et al (1997)—skip probabilities section</td>
<td>Weekly Exercise 3: QOL</td>
</tr>
<tr>
<td>Feb 4</td>
<td></td>
<td></td>
<td>Due Feb 3</td>
</tr>
<tr>
<td>Week 6</td>
<td>Decision Analysis</td>
<td>* Optional: Rascati Chapter 9 or Detsky et al (1997a and 1997b)—just skim the second paper—or Briggs &amp; Sculpher (1998)—skip sections 2.4 – 3)</td>
<td>Weekly Exercise 4: CUA</td>
</tr>
<tr>
<td>Feb 11</td>
<td></td>
<td></td>
<td>Due Feb 10</td>
</tr>
<tr>
<td>Feb 18</td>
<td></td>
<td></td>
<td>Due Feb 17</td>
</tr>
<tr>
<td>Week 8</td>
<td>GROUP PROJECTS DUE BY 5PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed, Feb 23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thurs, Feb 24</td>
<td>FINAL EXAM: 4 – 6:00pm. Gainesville rooms TBD.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Weekly exercises are due by 5:00pm ET on the Thursday before class. The final project is due by 5:00pm ET on Wednesday, February 23.
Course Bibliography:


Sullivan PW, Arant TW, Ellis SL, Ulrich H. The Cost Effectiveness of Anticoagulation Management Services for Patients with Atrial Fibrillation and at High Risk of Stroke in the US. Pharmacoeconomics. 2006;24(10):1021-33. Week 7 REQUIRED.
