

Introduction to Pharmacy

(Chemistry 110/Pharmacy 400D)

Course Syllabus – Spring Quarter 2009

Instructors

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Course Description

A survey of the profession of pharmacy including its history, development, scope of practice, educational requirements, ethical foundations, regulation, contemporary issues, and career opportunities. The course will be simultaneously conducted at the Ohio State University and Ohio University via videoconferencing.

Class Times

Thursdays, 4:10-6:00 p.m. [room 551 Parks Hall (OSU) & room E222 Grover Hall (OU)]

Course Materials

Required Text:

L. Michael Posey. (2009). *Pharmacy: An Introduction to the Profession* (2nd ed.). Washington, DC: American Pharmacists Association.

APhA Career Pathway Evaluation Program:

The American Pharmacists Association's Career Pathway Evaluation Program is a career decision-making resource for students (see the "careers" page at www.pharmacist.com). We will use portions of the Career Pathway Evaluation Program in our class session on career planning, and various "career option profiles" may be helpful to students in the preparation of their career pathway paper. [Note: The Career Pathway Evaluation Program uses a self assessment based on a set of "critical factors" as the foundation for their decision-making model. Students should compare their "critical factor" ratings with practitioner ratings in the various career option profiles throughout the quarter, particularly those relating to their career pathway paper.]

Carmen/Blackboard:

Additional materials will be available through our course web sites: Carmen (OSU) and Blackboard (OU). The following are among the materials to be available: the course syllabus, weekly lecture outlines, forms (e.g., journal article summary forms), readings which are not available in the required Posey text, the course gradebook, the on-line midterm examination, links to important web sites (e.g., APhA Career Pathway Evaluation Program, Pharmacists' Stories), etc. Students should also check Carmen/Blackboard regularly for updates and announcements.

Carmen and Blackboard will also be used for the submission of assignments and testing.

Course Objectives

1. To provide an introduction to the profession of pharmacy including its history, development, regulation, ethical foundations, current scope of practice, important contemporary issues, and prospects for the future.
2. To provide a summary of the medication use process, the importance of medication therapy management, and guidelines for safe medication-taking practices.
3. To provide an understanding of educational pathways in pharmacy.
4. To provide an exposure to the role of the pharmacist in contemporary health care and career opportunities in the field.
5. To provide an opportunity for students to review current articles from the pharmacy literature and prepare a short paper on a career pathway in pharmacy.

Course Requirements

1. An on-line midterm examination consisting of objective questions (multiple choice, true/false, etc.) worth 35 points will be administered. The exam will cover material discussed during class sessions or in the assigned readings.
2. A final examination worth 40 points will be administered at the conclusion of the course. This exam will be comprehensive, will consist of objective questions (multiple

choice, true/false, etc.), and will cover material discussed during class sessions or in the assigned readings.

3. Read and summarize two journal articles (one from the *Journal of the American Pharmacists Association* and one from the *American Journal of Health-System Pharmacy*) and turn-in a brief description of the articles you have read including: (1) a bibliographic citation (author, title, year, volume, number, page numbers) and (2) a brief (one paragraph) description of the content of the article. These journals are available in the Biological Sciences/Pharmacy Library at OSU and on closed reserve at the circulation desk on the fourth floor of the Vernon R. Alden Library at OU. Forms are provided on Carmen/Blackboard for preparing these summaries. Articles must be selected from issues of these journals in 2008 or 2009. Up to five points will be awarded for each of the two summaries. Students should select articles of personal interest. However, topics you may wish to consider as you select articles to read include: pharmacogenomics, workforce issues, telepharmacy, electronic prescribing, certification, drug development, ethical issues, drug regulation, medication safety, medication therapy management services, career pathways, etc. Article summaries are due on April 23rd and May 21st. These should be submitted through the drop box function in Carmen/Blackboard.
4. Write a 3-5 page (typed, double-spaced, font size no larger than 12, one-inch margins) paper on a possible career pathway in pharmacy. Career papers are due by June 4th (submit these through the drop box function in Carmen/Blackboard). Up to 15 points will be awarded for this assignment. Appropriate bibliographic citations are expected, with at least two sources not provided in class (e.g., Posey text, APhA Career Pathway Evaluation Program). Career pathway papers should include (1) a discussion of the role of the pharmacist in the selected career pathway, (2) how a student would prepare themselves to practice in this particular setting, (3) pros and cons for practicing in this particular setting, (4) a comparison of the student's critical factors assessment with practitioner ratings from the selected career pathway (see "APhA Career Pathway Evaluation Program," syllabus pages 1 & 2), and (5) how a student can learn more about this field (e.g., what professional associations are good sources of information specific to this career pathway?).

Policy on Late Assignment Submissions & Missed Exams:

Students who turn-in assignments late will be penalized one point for each day late unless they have a compelling written excuse. Since the midterm examination will be administered on-line, we are expecting all students to complete this requirement as scheduled. If a student must miss the final examination for a compelling reason with a written excuse, a make-up exam will be administered.

Course Grades

A total of 100 points will be available as follows (not counting extra credit): 35 points for the midterm exam, 40 points for the final exam, 5 points each for the required two journal article summaries, and 15 points for the career pathway paper. Letter grades will be based on cumulative performance in course requirements using the following scale [note: the instructors reserve the right to curve this scale downward (an upward curve will not be applied)]:

94-100%	A	80-83%	B-	67-69%	D+
90-93%	A-	77-79%	C+	60-66%	D
87-89%	B+	74-76%	C	0-59%	E
84-86%	B	70-73%	C-		

Extra Credit Options

Book Review:

Up to 10 points of extra credit may be earned by reading one of the following books and providing a 3-5 page (typed, double-spaced, font size no larger than 12, one-inch margins) written summary and reaction:

Is It Me or My Meds?: Living With Antidepressants, by David A. Karp (Harvard University Press, 2006)

Generation Rx: How Prescription Drugs are Altering American Lives, Minds, and Bodies, by Greg Critser (Houghton Mifflin Co., 2005)

American Pharmacy: A Collection of Historical Essays, Edited by Gregory J. Higby and Elaine C. Stroud (American Institute of the History of Pharmacy, 2005)

Dangerous Doses: How Counterfeits are Contaminating America's Drug Supply, by Katherine Eban (Harcourt Inc., 2005)

Making a Killing: The Deadly Implications of the Counterfeit Drug Trade, by Roger Bate (The AEI Press, 2008)

Reasonable Rx: Solving the Drug Price Crisis, by Stan Finkelstein & Peter Temin (Pearson Education, Inc., 2008)

Students are expected to read and summarize a book that they had not read prior to this class. Extra credit book review papers are due by June 4th (submit these through the drop box function in Carmen/Blackboard).

Guest Practitioner Facilitators:

Student volunteers at OSU and OU (up to two at each site) are sought to facilitate questioning for each of our four guest practitioners. Facilitators will prepare questions ahead of time and help start off our discussions with these important guests. Dr. Hale is available to consult with facilitators in the preparation of their questions. Up to two points of extra credit may be earned by student facilitators.

Future of Pharmacy Panelists:

Student volunteers are sought for "Alternative Futures" panels at OSU and OU (up to three at each site) on the last day of class. Panelists will prepare introductory comments relating to an alternative future for the profession in consultation with Dr. Hale. Up to three points of extra credit may be earned by student panelists.

Guest Practitioners

Guest practitioners representing a variety of practice settings in pharmacy have been invited to interact with the class throughout the quarter. Digital stories from these practitioners are available for viewing at <http://www.pharmacy.ohio-state.edu/academics/introduction-to-pharmacy/>. Students should review these “Pharmacists’ Stories” prior to the class session at which that practitioner will attend and are encouraged to use these opportunities to ask questions relating to career opportunities and the professional context in pharmacy.

Pharmacy Day

Ohio State’s “Pharmacy Day” will be conducted at the College of Pharmacy (500 W. 12th Ave.) on Saturday, April 25th beginning at 9:00 a.m. This program provides information about academic programs, admissions, and careers in pharmacy. Pharmacy Day concludes around 12:00 noon. No RSVP is necessary – if you have questions, contact Joe Orozco (orozco.5@osu.edu, 614/688-3772). Please let Dr. Hale know if you plan to attend.

Ohio Pharmacists Association Annual Conference

The OPA Annual Conference & Trade Show will be held April 17th-19th at the Greater Columbus Convention Center. This meeting will feature educational sessions, social events, and the opportunity to network with pharmacists and pharmacy students from across the state. More information can be found on the OPA web site (www.ohiopharmacist.org). Student registration is \$50 for the full conference, \$15 for 4/17 only (lunch/dinner extra), \$30 for 4/18 only (lunch included), and \$15 for 4/19 only. Please let Dr. Hale know if you plan to attend, and he will try to meet you at the meeting.

Ohio Society of Health-System Pharmacists Annual Meeting

The OSHP Annual Meeting will be held April 23rd-24th at the Crown Plaza Columbus North. This meeting will feature educational sessions, social events, and the opportunity to network with pharmacists and pharmacy students from across the state. More information can be found on the OSHP web site (www.ohioshp.org). Student registration is \$30 for one day (rates increase after April 10th). Please let Dr. Hale know if you plan to attend, and he will try to meet you at the meeting.

Pharmacy Web Sites

Students are encouraged to visit web sites as a means of learning more about the profession. Recommendations for your consideration are provided below:

www.pharmacist.com (American Pharmacists Association)

www.ashp.org (American Society of Health-System Pharmacists)

www.aacp.org (American Association of Colleges of Pharmacy)
www.amcp.org (Academy of Managed Care Pharmacy)
www.ascp.com (American Society of Consultant Pharmacists)
www.phrma.org (Pharmaceutical Research and Manufacturers of America)
www.ohiopharmacists.org (Ohio Pharmacists Association)
www.ohioshp.org (Ohio Society of Health-System Pharmacists)
www.fda.gov (Food and Drug Administration)
www.pharmacy.ohio-state.edu (OSU's College of Pharmacy)

Appointments to Meet With Dr. Hale or Dr. McMills

Students are invited to visit Dr. Hale or Dr. McMills at any time. Appointments can be scheduled by e-mailing them and providing options for convenient times to meet. Dr. Hale will travel to Athens several times during the quarter, and will be available to meet with students during these visits as well.

Class Sessions, Assignments, Examinations and Due Dates

[Note: The scheduling of specific topics is subject to change.]

[Note: We will typically start each class session with an opportunity to share information relating to "Pharmacy in the News."]

April 2 Course Orientation & The History of Pharmacy

Reading: Posey – Chapter 2

April 9 Career Decision-Making & The Scope of Pharmacy Practice

Assignment: Complete the APhA Career Pathway Evaluation Program self-assessment rating of critical factors

Reading: Posey – Chapter 6

April 16 The Scope of Pharmacy Practice Pharmacists' Stories: Dr. Joy Lehman, Hospital Pharmacy Additional Guest Practitioner: Ms. Joyce McCarthy, Director of Pharmacy, Obleness Hospital

Reading: Posey – Chapters 3

**Review Dr. Lehman's "Pharmacist Story" at:
<http://www.pharmacy.ohio-state.edu/academics/introduction-to-pharmacy/>**

April 23 Pharmacy Education & Research (Ms. Heather Agresta Deters; Drs. Nicole Kwiek, Mark McMills, Stephen Bergmeier & Jennifer Hines)

Reading: Posey – Chapter 10

First journal article summary due

April 30

**The Regulation of Pharmacy
Pharmacists' Stories: Mr. Paul Herring, Consultant Pharmacy**

Reading: Posey – Chapter 7

**Review Mr. Herring's "Pharmacist Story" at:
<http://www.pharmacy.ohio-state.edu/academics/introduction-to-pharmacy/>**

May 7

**Medication Safety
Special Guest: Mr. Terry Koons, Director, Ohio University Office of Health Promotion**

Readings: "Meeting the Unmet Needs of Patients: The Future of Our Profession and the Ohio State University College of Pharmacy" (*Ohio Pharmacist*, Dec. 2003); "Generation Rx, the Abuse of Medications, and the Ohio Pharmacists Association" (*Ohio Pharmacist*, Feb. 2009) [Provided on Carmen/Blackboard]

May 14

**Ethical Considerations in Pharmacy Practice
Pharmacists' Stories: Ms. Julie Edmonds, Home Infusion Therapy**

Reading: Posey – Chapter 5

**Review Ms. Edmonds "Pharmacist Story" at:
<http://www.pharmacy.ohio-state.edu/academics/introduction-to-pharmacy/>**

May 21

**Contemporary Issues in Pharmacy Practice
Student & Resident Panel**

Reading: "Cultural Competence in Health Care and Its Implications for Pharmacy: Part 1. Overview of Key Concepts in Multicultural Health Care" (*Pharmacotherapy* 2007;27(7):1062-1079 [Provided on Carmen/Blackboard])

Second journal article summary due

May 28

**Contemporary Issues in Pharmacy Practice
Pharmacists' Stories: Mr. Jaime Capestany, Anti-Coagulation Pharmacist**

Reading: "FDA Strategic Action Plan: Charting Our Course for the Future, Fall 2007" [Provided on Carmen/Blackboard]

**Review Mr. Capestany's "Pharmacist Story" at:
<http://www.pharmacy.ohio-state.edu/academics/introduction-to-pharmacy/>**

June 4 The Future of Pharmacy & Alternative Futures Student Panels

Readings: “Future Vision of Pharmacy Practice,” Joint Commission of Pharmacy Practitioners (JCPP), 2004; “Project Destiny Executive Summary” (2008) [Provided on Carmen/Blackboard]; “Fulfilling Pharmacy’s Destiny: A Project for the Ages” (Posey, p. 109)

Career pathway papers due

Extra credit book reports due (optional)

June 9 Final Examination & Course Evaluations (OU – 2:30) (OSU – 3:30)