

# INTRODUCTION TO PHARMACY

(Course # 501)

Fall 2006

Course Coordinator:

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**Sequence:** Fall Sequence, Block 1  
**Year:** 1<sup>st</sup>. Academic/Professional  
**Format:** 1- Credit Course  
**Faculty:** Faculty & Guest Lecturers (Adjunct Faculty)  
**Prerequisites:** None

## COURSE DESCRIPTION:

This course serves as an introduction to the practice of pharmacy and conceptual basis of pharmaceutical care. Various characteristics of the pharmacy profession in modern American health care delivery system including history of pharmacy, overview of the health care system, current topics in health care, legal influence on practice trends, technological issues facing pharmacy practice, and roles of pharmacists and technicians will be discussed. An overview of the information systems and technology at Pacific University will also be provided. After this course, students should be able to understand and describe the philosophical foundations and values of pharmacy practice as well as their own relationship to patients and the healthcare system.

## COURSE OBJECTIVES:

1. Understand the history of pharmacy in the United States (US).
2. Develop an understanding of the basic concepts of US health care system including current topics in health-care, legal influence on practice trends, job responsibilities of pharmacists, and pharmacy technicians.
3. Understand the concept of professionalism as a pharmacist including the responsibilities, communication skills, academic dishonesty, and ethical issues.
4. Develop an understanding of the basic theoretical concepts of communication with patients as well as other health care professionals and counseling principles.

5. Develop the understanding of computer technology through conceptual exposure to database tools and resource utilization enabling them to retrieve drug literature.

### **COURSE COMPETENCIES:**

At the conclusion of this course, the student should be able to:

1. Describe the historical perspective of the pharmacy profession.
2. Identify the current issues facing pharmacy and the legal trends shaping the profession.
3. Describe the career opportunities in different fields of pharmacy, such as pharmaceutical industry, academia, institutional practice, ambulatory care, consultant practice, managed care, governmental agencies and institutions, and pharmacy technicians.
4. Describe various post graduate opportunities in pharmacy.
5. Recognize the major focus of selected national and international pharmacy professional organizations and associations.
6. Explain the purpose of selected government and non-government agencies.
7. Identify and describe pharmacy student organizations, such as professional associations, fraternities, and academic organization.
8. Understand basic concepts of professionalism, ethics, and communication skills.
9. Describe the use of information systems and technology as it relates to the profession of pharmacy and retrieval of basic drug literature and health-care information.

### **RELATIONSHIP OF COURSE COMPETENCIES TO TERMINAL COMPETENCIES of the School of Pharmacy, Pacific University**

The following terminal competencies are specified to give the instructor direction in projecting his/her lectures. Behaviors or course competencies acquired in a specific course will enable the student, at some later point, to be able to perform the specified terminal competencies. Competencies *1, 8, 10*, and *14* relate to the content of this course.

1. **Retrieve, evaluate, and interpret health science literature efficiently and accurately for pharmaceutical care, research, and education.**
2. Independently identify and assess patient parameters relative to the effectiveness and adversities of drug therapy utilizing:
  - a. a medical history
  - b. appropriate physical findings (and physical assessment skills)
  - c. laboratory tests
  - d. diagnostic tests
  - e. serum concentration of drugs
  - f. a medication history
  - g. cost analysis
3. Select and recommend the therapeutic and diagnostic agent(s) most appropriate to individual patient variables using acceptable therapeutic goals and end points.

4. Utilize the principles of pharmacokinetics to calculate dosage regimens, predict and evaluate therapeutic outcomes.
5. Select, evaluate, and recommend appropriate drug product(s) and/or dosage form(s) which are most useful for a disease state in an individual patient on the basis of biopharmaceutical, economic, quality-control and assurance as well as other relevant information.
6. Assess patient information and symptoms of illness in order to make appropriate referral or other recommendations.
7. Demonstrate knowledge and skills in drug use control areas such as:
  - a. compounding and dispensing of medications
  - b. I. V. and nutritional support
  - c. adverse drug reaction reporting
  - d. drug information systems
  - e. poison information systems
  - f. drug utilization evaluation
  - g. controlled substances monitoring
  - h. pharmacy quality assurance activities
  - i. computer application
8. **Communicate effectively with health-care professionals and patients to ensure the provision of safe and effective pharmaceutical care.**
9. Provide patient consultation services utilizing a comprehensive database, in combination with knowledge inculcating pathophysiology, therapeutic principles, pharmacokinetics goals and end points.
10. **Integrate sociological, behavioral, economic and environmental aspects of patient care into professional practice.**
11. Provide instruction to health professionals regarding drug therapy.
12. Apply basic principles of management and administration to the practice of pharmacy.
13. Interpret and comply with pharmacy laws and drug regulations.
14. **Demonstrate appropriate professional and ethical judgment in the provision of pharmaceutical care services.**
15. Demonstrate the ability to design and evaluate research in the identification and solution of problems relevant to pharmaceutical care.

## **RELATIONSHIP to NAPLEX COMPETENCIES**

Upon completion of the course, the student should be able to fulfill the following NAPLEX competency areas:

*3.1.0 Access, evaluate, and apply information to promote optimal health care.*

3.1.1 Identify the typical content and organization of specific sources of drug and health information for both health-care providers and consumers.

## REQUIRED TEXTBOOKS/ REFERENCES:

1. **Introduction to health care delivery, Third Edition**, Aspen Publishers. Gaithersburg, Maryland, 2001. Edited by Robert L. McCarthy, and Kenneth W. Schafermeyer, PhDs
2. Readings as selected by course coordinator or instructor(s).
3. Students are responsible for **ALL** material presented in class, and/or on the **course on webct**.

## TOPICAL OUTLINE:

- I. History of Pharmacy
- II. Current topics in health-care and legal trends influencing pharmacy practice
- III. Career Opportunities
  - a. Pharmaceutical Industry
  - b. Academia
  - c. Institutional Practice
  - d. Ambulatory Care
  - e. Mental health Services
  - f. Consultant Practice/Long term care/Home care
  - g. Managed Care
  - h. Government and Non-government Agencies
    - i. United States Pharmacopoeia Convention, Inc.
    - ii. Federal Food and Drug Administration
    - iii. National Institutes of Health
    - iv. Drug Enforcement Agency
    - v. Veterans Administration
    - vi. Centers for Disease Control and Prevention
    - vii. Military
  - i. Professional Associations and Society
    - i. American Society of Health System Pharmacy
    - ii. American Pharmaceutical Association
    - iii. National Community Pharmacists Association
    - iv. National Association of Chain Drug Stores
    - v. American College of Apothecaries
    - vi. American Association of Colleges of Pharmacy
    - vii. American College of Clinical Pharmacy
    - viii. Pharmaceutical Manufacturers Association
    - ix. American Society of Consultant Pharmacists
    - x. National Pharmaceutical Association
    - xi. American Association of Pharmaceutical Scientists
- IV. Pharmacy Disciplines

- i. Pharmacy Administration
  - ii. Pharmaceutics and Drug Delivery
  - iii. Medicinal Chemistry
  - iv. Clinical Pharmacy
- V. Post Graduate Education
- VI. Pharmacy Organizations
  - a. Student National Pharmaceutical Association
  - b. National Community Pharmacists Association
  - c. Academy of Students of Pharmacy, American Pharmaceutical Association
  - d. The Rho Chi National Pharmacy Honor Society
  - e. Kappa Epsilon Fraternity
  - f. Kappa Psi Fraternity
  - g. Phi Delta Chi Fraternity
  - h. The Black Apothecary
  - i. Pharmacy Student Council
  - j. International Student Association
- VII. Professionalism, Ethical issues, and communication skills
- VIII. Use of Information Systems at Pacific University for the retrieval of basic drug/health care information

**INSTRUCTIONAL/METHODOLOGY/ACTIVITIES:**

*A typical day in this block will be structured as follows:*

1. Classroom instruction will consist of
  - a. Retracing the history of the pharmacy profession, its roots, and evolution in the US.
  - b. Discussing ‘hot button’ issues in pharmacy and legal trends shaping practice
  - c. Identifying opportunities for pharmacists, discussing various national and international organizations.
2. Team and individual active learning projects will be assigned
  - a. Presenting current topics in pharmacy practice
  - b. Discussing ethical dilemmas, professionalism
  - c. Reading material may be provided or assigned to complement the material to be discussed for each day.
  - d. Retrieving drug information using basic search tools
3. Formative assessment  
*Each day will end with a formative assessment of student learning of that day’s material. This assessment may be formal (written) or informal (question/answer session) or a combination of methods.*

## EVALUATIONS

### Assessment Design and Methods

#### Formative Assessment

1. Practice Quizzes

Depending on time availability, quizzes may be given and should be taken by individual students prior to the introduction of new material. They will cover the previous day's material. Quizzes/practice questions may also be distributed to students via *webct* if time does not allow. The objectives of these assessments are to identify any particular areas of weakness so that they may be addressed in class prior to the summative assessment and to give students an idea of what to expect for the summative assessment both in style and content of assessment items. There are no points assigned to these assessments.

2. End-of-Day Assessment

The end of day assessment may be formal or informal or a combination of both. The objective of this assessment is to assist students in identifying areas of weakness prior to studying on their own after class. There are no points assigned to these assessments.

Debates: Students may be asked to prepare an argument regarding solutions to cases provided in class. Cases will be prepared such that there is more than one potential "correct" answer to the questions so that students may learn to accept multiple solutions to a given therapeutic or ethical problem.

#### Summative Assessments

Assessment 501, which is scheduled for Friday, **September 8<sup>th</sup>**, will cover all material (8/28-9/6) presented in block 501, plus the first two days of block 502. Block 501 will make up a total of 70% of the assessment while the first day of 502 will make up the remaining 30%. An additional **5 percentage points** will be added to an individual's assessment score if his/her team scores at least **95%** on the team assessment. The *extended-learning* assessment is scheduled for **Monday, September 11<sup>th</sup>**. This assessment score is the sole determinant for passing the block.

*Questions on the assessment or quizzes may be multiple choice, true/false, short answer, matching, or fill-in. They encompass various levels of assessment including recall, application, synthesis, analysis, and evaluation.*

### Continuous Improvement

The end-of-block evaluation will be reviewed by the Associate Dean for Academic Affairs which will be followed by a review by the block faculty in order to make adjustments and improvements.

### **Curricular Experimentation**

None

### **Special Projects/Assignments**

Class activities/assignments have been developed to complement lecture material. Full participation in these activities/assignments is expected of all students. For assessment purposes, students will be held accountable for the learning objectives associated with these activities/assignments.

### **GRADES:**

Pacific University, School of Pharmacy uses a “**Pass**”/“**No Pass**” system of recording student achievement. The faculty of the School has set the standard of achievement for each student at 90%. Therefore, in order to receive a “**Pass**” (designated as “**P**” on the transcript), a student must achieve a score of 90% on each assessment. If a student does not achieve 90%, then he or she must attend *extended-learning* for that portion of the curriculum at a pre-designated time, be reassessed and achieve a level of 90%. Students who are required to attend *extended-learning* must also achieve a score of 90% in order to progress to the next academic year. A “**NP**” (no pass) will appear on the student’s transcript until the 90% competency level is attained.

### **COURSE POLICIES:**

1. The College/University policies concerning student Conduct and Cheating during examinations described in the Pacific University, School of Pharmacy (SOP) Student Handbook/Manual and the Pacific University By-Laws on Student Code of Conduct and Judiciaries described in the handbook shall apply to this course.  
Just a reminder: **Academic dishonesty will result in a course grade of “NP.”**
2. Students have the responsibility to take all scheduled assessments on the announced date and time. A student who reports to the class late during an assessment shall not given any extra time.
3. A student, who fails to appear and take the assessment on its scheduled date and time, shall earn the grade of “NP” unless his/her absence is considered “excused”.

4. An absence from an examination/assessment shall be considered “excused” if it occurs because of any of the following situation: **(a valid documentation must be submitted for proof)**
  - a. Hospitalization of the student due to illness or accident
  - b. Death in the student’s immediate family (ex. Spouse, parents, guardians, siblings, children)
  - c. Summon of the student to appear for Jury Duty or before a court
  - d. Any other excuse that has been approved by the Assistant Dean

The absentee student shall submit documents supporting the above claims (hospital admission form, death certificate, or court subpoena) to the course coordinator. Upon satisfactory verification, the student shall be allowed to take a makeup exam. The makeup exam may be in any form (term paper, essay...), per the discretion of the course coordinator.

5. **American Disability Act Statement:** Pacific University is committed to providing an educational environment that is accessible to all students. In accordance with this policy, students in need of accommodations due to a disability should contact the Office of the Dean of Students, Learning Support Services for verification and determination of reasonable accommodations as soon as possible after admission to the University, or at the beginning of each semester. The Dean of Students, Eva Krebs, can be reached at 503-352-2212; e-mail: [krebsec@pacificu.edu](mailto:krebsec@pacificu.edu).
6. All students are expected to attend classes regularly and promptly.
7. Students who abstain from attending classes are held responsible for the course materials.
8. The school policy concerning Dress Code as described in the SOP Student Handbook/Manual shall apply to this course.
9. All students are required to abide by any applicable policy that is listed in the Student Handbook.
10. The students are required to periodically check *webct* for any program and/or course updates.
11. **The provisions of this syllabus may be added to, deleted from, or changed if, in the opinion of the course coordinator(s), it becomes necessary to do so to achieve course objectives. The students will be notified in advance of any such changes.**

**SPECIAL NOTES:**

Classes start at 8 a.m. and end at 3 p.m. Students will be allowed a 1 hour break for lunch. The time for the lunch break will be at the discretion of the facilitator for that day. Scheduling and duration of team activities will also be at the discretion of the facilitator. Students are expected to attend class and participate in all learning activities, especially team activities.

Facilitators encourage questions and discussions during class time. The block system does not constrain class time to 50 minute periods; consequently, block faculty expect, and it is to your advantage to seek additional clarification, amplification of concepts, or further explanation during class time. The block faculty wants you to be in the position of being satisfied that you understand the day's concepts by the time you leave at 3:00 p.m., so ask questions, seek clarification, and request amplification during class time.

Additionally, if you have a question, or need clarification, please don't try to get help by whispering to your neighbor. It's quite likely that he/she or other classmates also need help, so ask your question, or make your comment out loud so that everyone can benefit! Finally, you can't learn if you can't hear adequately, or can't see material on the screen, or if the facilitator is going too fast, so please let the facilitator know if you can't hear, can't see, or if he/she needs to slow down.

A student whose name does not appear on the official University course roster will **not** be allowed to remain in the class or take any exams. If you have registered for the course and paid your fees but your name is not on the class roll, you may show the instructor an official University paid receipt for the course to remain temporarily in class while you follow University procedure to be placed on the University Official class roster as quickly as possible. Registration printout is not acceptable.

Students are encouraged to review and check their graded exam upon receipt. You (Students) have 48 hours after the graded exam is distributed to bring any discrepancies to the attention of the course coordinator, OR you have accepted your exam score as is.

The cumulative 'academic' year-end assessment schedule will be coordinated by the Office of the Assistant Dean. Do not schedule travel arrangements at the end of the academic year until after the end of the Year-end Assessment Period. Year-end assessment times for this course will not be adjusted to accommodate any changes except in the case of emergencies as approved by the Assistant Dean.

**SCHEDULE OF LECTURES:**

<b>Block Day</b>	<b>Date</b>	<b>Topics Covered (501)</b>	<b>Facilitator</b>
1	28 August (Mon)	History of pharmacy; overview of the US healthcare system; current issues and legal trends influencing pharmacy profession	Dutta
2	29 August (Tues)	Career opportunities for pharmacists and specializations within the profession; post graduate education and opportunities; pharmacy organizations and societies; governmental and national agencies	Dutta
3	30 August (Wed)	Ethical issues in pharmacy; professionalism, communal responsibilities of a pharmacist; overview of the technology resources at PU; use of information resources to retrieve basic drug information	Fujisaki