

Austin Community College
Institutional Pharmacy Practice – PHRA 1449
Syllabus

Instructor:

Office:

Office Hours:

Length of Program: 16 weeks
Total Number of Hours (approximate): 96
Classroom Hours: 48
Laboratory Hours: 48

Time:

Lecture:

Pharmacy Technician Lab
Highland Business Center - Room 404.0

Lab:

Pharmacy Technician Lab
Highland Business Center – Room 404.0

I. Introduction

Exploration of the unique role and practice of pharmacy technicians in an institutional pharmacy with emphasis on daily pharmacy operation. Topics include hospital pharmacy organization, work flow and personnel, medical and pharmaceutical terminology, safety techniques, data entry, packaging and labeling operations, extemporaneous compounding, inpatient drug distribution systems, to include knowledge of mechanical, automatic or robotic drug delivery systems, unit dose cart fills, quality assurance, drug storage, and inventory control.

II. Course Goals

- A. Discuss the Unit Dose Distribution System to include unit dose definitions, terms, advantages and disadvantages.
- B. Given a doctor's order, a medication profile, and medications, transcribe and fill the doctor's order, to include screening the doctor's order.
- C. Discuss the different methods of drug and pharmacy item replenishment with the use of Prime Vendor and the Red Book.
- D. State the functions and responsibilities of the various pharmacy departments.
- E. State the functions and responsibilities of a pharmacy providing home health care services.
- F. State the methods of reimbursement for hospitals.
- G. Discuss the regulatory standards, laws and rules governing hospital pharmacy practice.
- H. Discuss the Code of Ethics for pharmacists and pharmacy technicians.
- I. Define adverse drug reactions and their impact on the pharmacy and the patient.
- J. Define the function and purpose of the Pharmacy and Therapeutics Committee, and the hospital formulary.
- K. Describe aseptic technique and infection control.
- L. Define Medication Administration Record, and medication order.
- M. Discuss the role of the pharmacy technician in an inpatient setting, relating to drug distribution and procurement.
- N. Discuss the procedures and equipment used in extemporaneous compounding of pharmaceuticals.
- O. Identify causes and methods of prevention of medication errors.
- P. Identify future trends in hospital pharmacy.

III. Methods of Presentation

- A. Lecture
- B. Demonstration
- C. Audio-Visual Materials

IV. Textbooks

- A. Required
The Pharmacy Technician, Morton Publishing – RVS Bookstore
- B. References
 1. Remington's Pharmaceutical Sciences – RVS and Instructor's Library
 2. Pharmacy Practice for Technicians - Instructor's Library
 3. Drug Facts and Comparisons – RVS and Instructor's Library

V. Course Requirements, Examinations, and Grading

A. Student Evaluation

1. Measurement, Written - Approximately two (2) examinations will be given over lecture material, and will comprehensively assess the student's knowledge of concepts, principles, techniques and procedures as related to the instructional material. There will be no routine retests given. If a student misses one exam, the grade of the final exam will be averaged in the place of the missed exam grade. If any other exams are missed, grades of "0" will be given.

2. Determination of Final Grade

- a. Lecture = 2/3

- i. Exams = 100%
 - a. Exams 1-3 = 75%
 - b. Final Exam = 25%

- b. Laboratory = 1/3

- i. Laboratory Assignments = 90%
- ii. Class Participation = 10%

- c. A = 90 – 100%

B = 80 – 89%

C = 75 – 79%

D = 60 – 74%

F = 59% and below

Incomplete = To receive an I, a student must have a passing average (75% or better) and have completed at least 80% of the course work.

Withdrawal = Before considering withdrawal, please contact the instructor.

VI. Attendance

Attendance is required at all times. Roll will be taken at every class meeting. The student is required to notify the instructor if an absence is anticipated. If absences

exceed three (3), the student will be dropped from the course unless there are extremely extenuating circumstances. A student who is five (5) minutes late is considered tardy. Three (3) tardies constitute one absence. It is the student's responsibility to keep track of his/her attendance record and for all assignments, materials, examinations, etc., missed. After three (3) absences, points will be taken from participation/attendance percentage of the grade.

VII. Promotion, Failure, and/or Dismissal from the Department

- A. A minimum grade of "C" (75%) is required in both the lecture and laboratory components of all pharmacy technician courses.
- B. Any student may be dropped from the program due to excessive absences and/or consistently failing to meet class assignments, for disruptive conduct during lecture or for displaying conduct detrimental to the ethics of a pharmacy technician.
- C. The student may utilize the approved Student Grievance Procedure of Austin Community College as detailed in the ACC Student Handbook in the disposition of a grievance or complaint without fear of recrimination or retaliation as a result of filing a grievance.
- D. The Pharmacy Technician faculty and staff understand that learning in group situations can be beneficial. However, each student is expected to demonstrate his/her own competency by doing his/her own work. Any student caught cheating on examinations will be subject to disciplinary action, including an academic penalty and possible withdrawal from the program.

VIII. Scholastic Dishonesty

Acts prohibited by the college for which discipline may be administered include scholastic dishonesty, including but not limited to cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. Academic work submitted by students shall be the result of their thought, research or self-expression. Academic work is defined as, but not limited to tests, quizzes, whether taken electronically or on paper; projects, wither individual or group; classroom presentations, and homework.

IX. Students with Disabilities

Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office for Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do this three weeks before the start of the semester.

X. SCANS Competencies

In 1990, the U.S. Department of Labor established the Secretary's Commission on Achieving Necessary Skills (SCANS) to examine the demands of the workplace and whether our nation's students are capable of meeting those demands. The Commission determined that today's jobs generally require competencies in the following areas:

- A. Resources: Identifies, organizes, plans, and allocates resources

- B. Interpersonal: Works with others
- C. Information: Acquires and uses information
- D. Systems: Understands complex interrelationships
- E. Technology: Works with a variety of technologies.

The Texas Higher Education Coordinating Board requires that all degree plans in institutions of higher education incorporate these competencies and identify to the student how these competencies are achieved in course objectives.

This course, Pharmacy Practice II, incorporates the SCANS competencies in the following ways:

- A. Resources
 - 1. Identifies resources to be used in laboratory exercises
 - 2. Organizes laboratory assignments and plans groups activities to achieve goal.
 - 3. Utilizes resources available in laboratory effectively: reference books, computers, computer programs, supplies, etc.
 - 4. Manages time effectively and efficiently when completing assignments
 - 5. Manages human resources effectively and efficiently when completing assignments
- B. Interpersonal
 - 1. Demonstrates an understanding of the profession of Pharmacy
 - 2. Exhibits ethical behavior
 - 3. Appreciates the knowledge and talent of other members of the health care team
 - 4. Demonstrates ability to work within group situations in laboratory exercises
 - 5. Participates as a member of a team
- C. Information
 - 1. Acquires and evaluates information
 - 2. Organizes and maintains information
 - 3. Uses computers to process information
- D. Systems
 - 1. Understands how drugs relate to each other and implications of adverse drug reactions
 - 2. Understands how pharmacy technicians roles relate with other members of the health care team
- E. Technology
 - 1. Operates computers in laboratory
 - 2. Use problem-solving skills to solve laboratory assignments
- F. Basic Skills
 - 1. Demonstrates ability to read assignments
 - 2. Demonstrates ability to write through exams and laboratory assignments
 - 3. Demonstrates ability to listen to lecture material and take notes
 - 4. Demonstrates ability to speak in front of class during laboratory assignments
- G. Thinking Skills
 - 1. Uses creative thinking when completing assignments
 - 2. Demonstrates ability to make decisions on examinations and laboratory assignments
 - 3. Demonstrates ability to problem solve when performing drug distribution and drug procurement activities
- H. Personal Skills
 - 1. Demonstrates responsibility to complete part of group assignments
 - 2. Demonstrates integrity and honesty during assignments

Terminal Learning Objectives (Course Goals)

Enabling Learning Objectives

1. Explain the primary function of a hospital.
2. List five functions related to patient “processing” activities.
3. Explain the hospital’s role in wellness programs.
4. Describe the role of the hospital’s governing body.
5. Describe the evolution and future of the home health care industry.
6. Explain the scope of services available to a patient requiring home health care.
7. Describe the five most common drug categories, medical indications for and complications of home infusion therapy.
8. Describe the different types of infusion control devices used in home infusion therapy.
9. Describe the various roles for a pharmacy technician in a home infusion company.
10. Outline pharmacy’s involvement in home health care services
11. Identify the three different types of long-term care facilities by sponsorship.
12. Identify the major source of funding for long-term care.
13. State why the rate structure of long-term care funding has such an important effect on services.
14. Identify the difference between a service pharmacist and a consultant pharmacist.
15. Describe the supportive role of the pharmacist and pharmacy technician.
16. Explain reimbursement for hospitals
17. Distinguish between prospective and retrospective reimbursement methods.
18. Describe the basic factors involved in the DRG method of reimbursement.
19. List and explain two managed health care programs.
20. Outline ways in which drug costs can be contained.
21. Explain the role of the Pharmacy and Therapeutics Committee.
22. Describe the difference between statutes, rules, regulations, and quasi-legal standards.
23. Identify several federal and state regulatory agencies.
24. Discuss the Omnibus Budget Reconciliation Act of 1990 (OBRA-90).
25. State the need for the Food, Drug and Cosmetic Act.
26. List the major principles of the Code of Ethics for pharmacists and pharmacy technicians.
27. State several basic components of the Patients Bill of Rights.
28. State the mission of pharmacy practice.
29. Explain the pharmaceutical care.
30. Describe the drug-use process.
31. Explain the role of the pharmacist versus the role of the technician in the drug-use process.
32. Define an adverse drug reaction.
33. List and explain drug recall classifications.
34. Understand the origins and purpose of the hospital formulary.
35. List a few common universal precautions to avoid contamination.
36. Describe proper procedures for handling and disposal of hazardous agents.
37. Explain the germ theory of disease.
38. Distinguish among viruses, bacteria, fungi, and protozoa.
39. Name the first line of defense against infection.
40. Outline the major reasons for administering injectable drug products.
41. Define common injectable routes of administration.
42. Describe three characteristics of parenteral products.
43. Define a sterile product.
44. Define the technician’s role in parenteral admixture services.

45. Describe proper aseptic technique, including the use of laminar, horizontal, and vertical flow hoods.
46. Describe the equipment and procedures used in preparing parenterals.
47. Describe the purpose, functions, and advantages of the unit-dose drug distribution system.
48. Outline the steps necessary during a medication cart fill.
49. Distinguish between a decentralized and a centralized drug distribution system.
50. Define the Medication Administration Record.
51. List the information included on a medication order.
52. Outline the role of the pharmacy technician in the drug distribution functions.
53. Explain the proper procedure for repackaging of medications.
54. Describe the types of materials stored in a drug information center.
55. List five purposes of a drug information center.
56. Describe the major duties of a pharmacy technician in drug information services.
57. Define and differentiate policy and procedure.
58. List reasons to justify the need for a policy and procedure manual.
59. List five topics that could be included in each of the following pharmacy areas: administrative, distributional, and clinical.
60. List the functions involved in the drug procurement process.
61. Describe the function of the Pharmacy and Therapeutics Committee in drug selection.
62. Distinguish between generic drugs and brand name drugs.
63. List the records/reports required to be maintained in the materials management section.
64. Describe check points to be observed when a drug order is received in the hospital.
65. List the environmental considerations required in the storage of drugs.
66. Define the following temperature equivalents for drug storage: cold, cool, room temperature, warm, excessive heat.
67. Name the drugs and pharmaceutical products that require special safety precautions.
68. Calculate an inventory turn-over rate.
69. Describe what is meant by extemporaneous compounding.
70. Define a Class A prescription balance, a counter balance, and a solution balance.
71. Define a medication error.
72. Explain the universal policy to be observed if a medication error is detected.
73. Discuss some causes of medication errors and ways to prevent them.
74. List ways to decrease errors in interpreting the strength of drugs from the written order.
75. List the future trends of hospital pharmacy.
76. Identify the factors affecting the future of pharmacy and discuss their relevance.
77. Generalize future trends for the profession of pharmacy.
78. Relate trends in education to future career goals.
79. Identify specific issues related to technicians concerning the future of pharmacy.