**BARTON COMMUNITY COLLEGE**

**COURSE SYLLABUS**

# **I. GENERAL COURSE INFORMATION**

Course Number: PHRM 1006

Course Title: Advanced Pharmacy Operations

Credit Hours: 3

Prerequisite: PHRM 1003--Pharmacy Operations

Division/Discipline: Workforce Training and Community Education/Pharmacy Tech

Course Description: This course demonstrates and simulates daily activities in pharmaceutical practice settings. Topics include: intravenous therapy and non-sterile compounding, sterile technique, drug delivery systems, TPN, weights and measurements. Students discuss compounding facilities and essential compounding equipment, standard packaging forms, interpreting compounding orders and formulations records. Students gain exposure to non-sterile and aseptic compounding techniques in action.

**II. INSTRUCTOR INFORMATION**

**III. COLLEGE POLICIES**

 Students and faculty of Barton Community College constitute a special community engaged in the process

 of education. The College assumes that its students and faculty will demonstrate a code of personal honor

 that is based upon courtesy, integrity, common sense, and respect for others both within and outside the

 classroom.

 Plagiarism on any academic endeavors at Barton Community College will not be tolerated. The student is

 responsible for learning the rules of, and avoiding instances of, intentional or unintentional plagiarism.

 Information about academic integrity is located in the Student Handbook.

 The College reserves the right to suspend a student for conduct that is determined to be detrimental to the

 College educational endeavors as outlined in the College Catalog, Student Handbook, and College Policy &

 Procedure Manual. (Most up-to-date documents are available on the College webpage.)

 Any student seeking an accommodation under the provisions of the Americans with Disability Act (ADA) is

 to notify Student Support Services via email at disabilityservices@bartonccc.edu.

**IV. COURSE AS VIEWED IN THE TOTAL CURRICULUM**

This course will provide the student with an understanding of the day-to-day job requirements of a pharmacy technician.

# This course is one in a series of vocational courses designed to prepare students for entry level positions. Students planning to transfer credit for a baccalaureate degree will be granted transfer credit only as determined by the four-year institution. The transferability of all college courses will vary among institutions, and perhaps even among departments, colleges, or programs within an institution. Institutional requirements may also change without prior notification. Students are responsible to obtain relevant information from intended transfer institutions to insure that the courses the student enrolls in are the most appropriate set of courses for the transfer program.

**V. ASSESSMENT OF STUDENT LEARNING**

Barton Community College assesses student learning at several levels: institutional, program, degree and classroom. The goal of these assessment activities is to improve student learning. As a student in this course, you will participate in various assessment activities. Results of these activities will be used to improve the content and delivery of Barton’s instructional program.

Course Outcomes, Competencies and Supplemental Competencies:

A. Describe the components of the health care system, personnel, and institutions relating to long-term

 patient care.

1) Summarize pharmacy law, legislation, regulations, and health care reform.

 2) Summarize health care institutional models.

 3) Identify the roles of the pharmacist and pharmacy technician in the long-term care setting.

 4) Describe the elements of a long-term care pharmacy.

 B. Define the components of home health care.

1) Identify types of home health care services and specialty programs.

2) Determine criteria for selection for home health care.

3) Review the home health care processes.

4) Illustrate the role of pharmacy and pharmacy staff in home health care.

C. Define the characteristics of home infusion, managed care, mail-order, nuclear, hospice, and federal

 pharmacies.

1) Describe the elements of a home infusion pharmacy, types of home infusion therapies, and

 equipment and supplies for home infusion.

2) Describe the elements of a managed care pharmacy, the prescription drug benefit and pharmacy

 benefit management.

3) Describe the elements, fill process, and services of a mail-order pharmacy.

4) Describe the elements, fill process, and special training requirements of a nuclear pharmacy.

5) Describe the elements and services of a hospice pharmacy.

 6) Identify federal pharmacy services in branches of the military, public health service, and the

 Department of Veterans Affairs.

7) Identify legislation and regulations specific to specialty pharmacies.

D. Demonstrate an understanding of the pharmaceutical industry, telepharmacy, and advanced pharmacy

 technician roles and responsibilities.

1) Describe the drug approval, manufacturing, and marketing processes.

2) Discuss the generic pharmaceutical industry and biotechnology.

3) Describe telepharmacy models, legislation, regulation and role of pharmacy staff in telepharmacy.

4) Discuss specialized pharmacy technician roles.

5) Explain pharmacy technician liability.

E. Describe the fundamental principles and practices of non-sterile compounding.

1) Recognize and define terminology related to non-sterile compounding technique as well as its

 importance.

2) Identify the most common drug delivery systems, dosage forms, packaging, and routes of

 administration utilized in non-sterile compounding.

3) Illustrate an understanding of proper procedures for dating, storing, and labeling prepared

 compounded products.

4) Identify correct hand washing technique and attire in preparation for compounding non-sterile

 products.

5) Demonstrate an understanding of weighing and measuring powders, liquids, and solids.

6) Describe trituration, spatulation, levigation, and geometric dilution techniques used in non-sterile

 compounding.

7) Explain different methods utilized for properly mixing suspensions, emulsions, and eutectic

 mixtures.

8) Explain the proper technique for filling capsules using punch-method as well as the processes for

 compounding troches, lollipops, medication sticks, and suppositories.

F. Identify fundamental principles and practices of aseptic compounding.

1) Recognize and define terminology related to aseptic compounding technique as well as its

 importance.

2) Define sterile preparation and the risk levels of sterile products.

3) Identify equipment necessary for aseptic compounding and the basics of a laminar flow hood.

4) Describe the differences between various needle types including their parts, as well as commercially

 available I.V. bag products.

5) Discuss total parenteral nutrition (TPN) and chemotherapy compounded preparations.

6) Identify the steps required to maintain a sterile compounding environment, to include proper hand

 washing technique and garbing.

7) Explain how to withdraw fluid from a vial and inject fluids into bags.

8) Describe the transfer of non-sterile products to sterile.

9) Explain process validation and its importance.

10) Describe proper storage requirement, expiration, and beyond-use dates.

G. Demonstrate professionalism in the pharmacy environment.

1) Practice medication safety.

2) Illustrate proper human relations and communications.

# **VI.** **INSTRUCTOR'S EXPECTATIONS OF STUDENTS IN CLASS**

# **VII. TEXTBOOKS AND OTHER REQUIRED MATERIALS**

# **VIII. REFERENCES**

# **IX. METHODS OF INSTRUCTION AND EVALUATION**

# **X. ATTENDANCE REQUIREMENTS**

# **XI. COURSE OUTLINE**

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