

SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
PHARMACY TECHNICIAN
Revision Date: 10/2022

I. CATALOG DESCRIPTION

Course Number: PHRM 1120
Course Title: Calculations for Pharmacy Technicians
Prerequisite(s): Admission to the Pharmacy Technician Program

Catalog Description: The focus of this course is to orient students to the basic calculations performed in the pharmacy setting. Students will develop problem-solving skills, including how to use information from written prescriptions, hospital orders, and labels of products. Pharmacy calculations typically used on a daily basis in retail and institutional pharmacies are emphasized. Business terms and business math skills essential to pharmacy practice are also covered.

Credit Hours: Class 3
Hours: 45
Lab Hours: 0
Total Contact Hours: 45

II. COURSE OBJECTIVES: *Course will:*

1. Demonstrate the ability to read, interpret, and solve calculation problems encountered in the preparation and distribution of drugs.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Describe subdivisions of numbers, number systems, estimating, and accuracy.
2. Perform pharmacy calculations while retaining accuracy and the correct number of significant figures.
3. Demonstrate the relationship between units of measurement and use their correct abbreviations.
4. Utilize ratios, percents, and proportions in pharmacy practice.
5. Use ratio-proportion and dimensional analysis methods to calculate doses related to the administration of medication using various systems of measurement.
6. Calculate days' supply and quantity to dispense.
7. Convert between the household and metric measurement systems.
8. Accurately read drug labels for amount of active ingredient contained in a measured amount of medication and calculate the amount of medication to dispense for a specific dose.
9. Calculate the quantity of active ingredient in medication preparation.
10. Calculate age-, weight-, and BSA specific drug doses or dose range when given recommended dose information.
11. Calculate IV drip rates and flow rates.
12. Calculate the amounts of ingredients needed to enlarge or reduce a formula.
13. Calculate the amount of ingredients needed for compounding mixtures and the amount of active ingredient in a described mixture using the allegation method and special

dilations.

14. Calculate business application needs such as percent markup, percent profit, overhead, profit, percentage of average wholesale price, days' supply, and inventory reordering methods.

B. GENERAL EDUCATION LEARNING OUTCOMES

1. GELO 5: Analytical, Quantitative, and Scientific Reasoning

The student will demonstrate the ability to apply mathematical and scientific methods to solve problems from an array of contexts and everyday situations.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Understanding Number Systems and Operations
- B. Performing Ratios, Percent, and Proportion Calculations
- C. Developing Prescription and Medication Order Literacy Skills
- D. Understanding Measurement Systems and Dose Calculations
- E. Learning Specific Types of Dose Calculations
- F. Performing Calculations for Compounding
- G. Conducting Business Operations
- H. Performing Calculations for Sterile Parenteral Solutions

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):

Digital Access to McKennon, Skye A., *Pharmacy Calculations for Technicians* (current edition). Paradigm Education Solutions, 2021.

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 1. Lecture
 2. Student prepared presentations and discussions
 3. Guest speakers
 4. Transparencies, handouts, videos, power points
 5. Demonstrations
 6. Online web resources
 7. Homework and class participation

VII. METHODS OF EVALUATION

- A. Methods of evaluation typically include a combination of the following:
 1. Refer to the Southeast Community College catalog for the grading scale or see below.
 2. Refer to the Course Information Document (CID) for specifics.

SCC STANDARD GRADING SCALE POLICY:

A+	95-100	C+	75-79
A	90-94	C	70-74
B+	85-89	D+	65-69
B	80-84	D	60-64
		F	Below 60

VIII. SPECIFIC COURSE REQUIREMENTS:

- A. A grade of C or better is required to advance to the next semester.
- B. Refer to the Course Information Document (CID).