

EASTERN ARIZONA COLLEGE

Math for Medications

Course Design

2018-2019

Course Information

Division Allied Health
Course Number HCE 114
Title Math for Medications
Credits 2
Developed by Diane Knapp
Lecture/Lab Ratio 2 Lecture/0 Lab

Transfer Status

ASU	NAU	UA
Non Transferable	Elective	Non Transferable

Activity Course No
CIP Code 51.0800
Assessment Mode Pre/Post Test (30 Questions/30 Points)
Semester Taught Fall and Spring
GE Category None
Separate Lab No
Awareness Course No
Intensive Writing Course No
Diversity and Inclusion Course No

Prerequisites

MAT 100 or higher with a grade of "C" or higher or math placement test score as established by District policy or instructor approval

Educational Value

This course is intended for students and community members who are interested in any Allied health major.

Description

This course is an introductory course for reading medication documents and accurate calculation of dosages and solutions. The content includes review of basic math, systems of measurement, introduction to medication administration, and dosage calculation.

Supplies

Basic calculator

Competencies and Performance Standards

1. Perform basic math operations.

Learning objectives

What you will learn as you master the competency:

- a. Change Roman numerals to Arabic numbers and Arabic numbers to Roman numerals.
- b. Compare the size of fractions; add, subtract, divide, and multiply fractions; and reduce fractions.
- c. Compare the size, add subtract, divide, multiply, and round off decimals.
- d. Change fractions to decimals and decimals to fractions.
- e. Use ratio and proportion to calculate problems for a missing term (X).
- f. Convert fractions to percent and ratios.

Performance Standards

Competence will be demonstrated:

- o on assigned activities
- o on written exams

Criteria - Performance will be satisfactory when:

- o learner demonstrates the ability to solve the variety of math problems

2. Convert within and between systems of measurements.

Learning objectives

What you will learn as you master the competency:

- a. Convert metric measures to their equivalents in metric.
- b. Identify symbols and interpret measures in the apothecaries' and household systems.
- c. Convert a unit of measure to its equivalent in another system of measure (for example, metric to apothecaries').

Performance Standards

Competence will be demonstrated:

- o on assigned activities
- o on written exams

Criteria - Performance will be satisfactory when:

- o learner demonstrates the ability to convert units within and between systems of measurements

3. Demonstrate basic concepts of the administration of medications.

Learning objectives

What you will learn as you master the competency:

- a. State the six "rights" of safe medication administration.
- b. Identify common routes for medication administration.
- c. Identify important critical thinking skills necessary in medication administration.
- d. Identify home care considerations in relation to medication administration.
- e. Interpret a given medication order.
- f. Interpret medication labels.

- g. Calculate doses using ratio-proportion, formula method or dimensional analysis.

Performance Standards

Competence will be demonstrated:

- on assigned activities
- on written exams

Criteria - Performance will be satisfactory when:

- learner responds correctly to questions related to methods of administration and calculation

Types of Instruction

Classroom Presentation

Grading Rationale

A pretest may be administered at the beginning of the course, which will not count as part of the final grade. The final written exam (post-test) will count as 20% of the final grade. The chapter tests will count as 50% of the final course grade. Assignments and activities will count as 30% of the final grade.

Grading Scale

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%