

# MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE

## COURSE OUTLINE

**DEPT. PHRM**

**COURSE NUMBER: 1110**

**NUMBER OF CREDITS: 3**

**Lecture: 2 Lab: 1 OJT 0**

<b>Course Title:</b>
Pharmaceutical Calculations

<b>Catalog Description:</b>
Pharmaceutical Calculations teaches students to demonstrate proficiency in specific calculation methods and principles related to pharmacy tasks. Students will utilize basic arithmetic principles in completing tasks associated with a pharmacy technician. Throughout this course basic math skills will be reviewed that are necessary for the required calculations that become more advanced as students' progress through the course. Students will also demonstrate understanding of various measurement systems and various dosage calculations.

<b>Prerequisites or Necessary Entry Skills/Knowledge:</b>
PHRM 1100

**FULFILLS MN TRANSFER CURRICULUM AREA(S) (*Leave blank if not applicable*)**

- ☐ Goal 1: Communication: By meeting the following competencies:
- ☐ Goal 2: Critical Thinking: By meeting the following competencies:
- ☐ Goal 3: Natural Sciences: By meeting the following competencies:
- ☐ Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:
- ☐ Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:
- ☐ Goal 6: The Humanities and Fine Arts: By meeting the following competencies:
- ☐ Goal 7: Human Diversity: By meeting the following competencies:
- ☐ Goal 8: Global Perspective: By meeting the following competencies:
- ☐ Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:
- ☐ Goal 10: People and the Environment: By meeting the following competencies:

<b>Topics to be Covered</b>
This course will cover basic math concepts, in conjunction with math concepts specific to dosage and measurement calculations required for pharmacy calculations.

<b>Student Learning Outcome</b>
Interpret roman numerals.
Calculate ratios and proportions.

Demonstrate the conversion of weights and measures and direct ratios and proportions.
Calculate dosages for adults and children based on various parameters.
Demonstrate how to reduce and enlarge proportions
Demonstrate problem solving skills including specific gravity, percent strength, weight and volume, weight and weight, and volume and volume.
Calculate percentages and strengths of medications.
Demonstrate basic business math principles.
Determine flow rates associated with Intravenous (IV) fluids.
Convert temperatures between Celsius and Fahrenheit.
Determine correct concentrations and dilutions.
Calculate amounts of ingredients needed for a formulation.
Calculated the number of doses required for a prescription order.
Convert metric measurements between apothecary and household measurements.
Discuss how the medication/use process differs in various patient care settings.

**Is this course part of a transfer pathway:** Yes ☐ No ☒

**\*If yes, please list the competencies below**

Revised Date: 1/24/2022