

**Fond du Lac Tribal and Community College
COURSE OUTLINE FORM**

Updated 11/25/14

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

1. Prepared by: _____

2. Date submitted: _____

3. Date approved: 04/20/07 Date revised 02/25/15

4. Department/discipline: Nursing

5. Department(s) endorsement(s): _____

(Signatures of the person(s) providing the endorsement are required.)

6. Course Title: Mathematics for Medication

Abbreviated course title (25 characters or less): _____

7. Course Designator: NURS

8. Course Level: 1025

9. Number of Credits: Lecture 3

Lab _____

10. Control Number (on site) 40

Control Number (online) _____

11. Catalog/Course description:

Mathematics for medication covers the mathematics necessary for clinical calculations. Dimensional analysis will be used to teach dosage calculations. Metric system, drug measure systems, reading medication labels and a review of basic mathematics will be included. This course is intended only for students in the nursing program. (Prerequisite: Appropriate placement test score or successful completion of MATH 0020 Beginning Algebra. (There will be a chance to test out by taking a competency test that will be available for the student to take one time & pass at the 90% level).

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s): Appropriate placement test score or successful completion of MATH 0020 Beginning Algebra. (There will be a chance to test out by taking a competency test that will be available for the student to take one time & pass at the 90% level).

Co-requisite:

13. **Course Materials** (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Dimensional Analysis for Meds 3rd Ed. by Anna M. Curren or
Math for Meds: Dosages & Solutions 9th Ed. by Anna M. Curren

14. **Course Content** (Provide an outline of major topics covered in course)

I. Mathematics Review

A. Decimals

B. Fractions

II. Drug Measurement

- A. Metric System
- B. Percentages, Ratio, Apothecary
- III. Reading Medication Labels
 - A. Reading Oral Medication Labels
 - B. Reading Hypodermic Syringe
 - C. Reading Parenteral Medication labels
 - D. Reconstitution of Powdered Drugs
 - E. Insulin Dosages
- IV. Dosage Calculations using Dimensional Analysis
- V. Dosage Calculations using Body Weight & Body Surface Area
- VI. Intravenous Calculations
 - A. Introduction to IV Therapy
 - B. Flow Rate Calculation
 - C. Calculating IV Infusion & Completion Times

15. Learning Goals, Outcomes, and Assessment

At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

- A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)
- B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
- C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
- D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one's own traditions and culture, knowledge of others' traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Course learning outcomes will fulfill the identified competencies

Course Learning Outcomes:

Upon completion of this course, the student will be able to:

1. Demonstrate competency in using the D2L format (A)
2. Identify and use information found on syringes and labels (A, C)
3. Demonstrate use of medical language, abbreviations, & notations (A, B)
4. Apply, analyze, and evaluate information in dosage calculations & infusion rates/times using dimensional analysis(C)
5. Apply, synthesize and use medical information in metric measure (A, B, C)
6. Calculate dosage, infusion time, & modality of administration. (A, C)

16. Minnesota Transfer Curriculum (MnTC): If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See www.mntransfer.org

Goal Area(s): _____

Goal and Outcomes: