Fond du Lac Tribal and Community College
COURSE OUTLINE FORM

Updated 9/23/14

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: 4/20/2007 Date revised: 2/25/2015
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: 0
10. Control Number (on site): 40
    Control Number (online): 0
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.

12. Course prerequisite(s) or co-requisite(s):
    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: None

13. Course Materials (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).
1. Dimensional Analysis for Meds 3rd Ed. by Anna M. Curren; or
2. Math for Meds: Dosages & Solutions 9th Ed. by Anna M. Curren

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

1. Mathematics Review
   a. Decimals
   b. Fractions
2. Drug Measurement
   a. Metric System
   b. Percentages, Ratio, Apothecary
3. 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
4. Dosage Calculations using Dimensional Analysis
5. Dosage Calculations using Body Weight & Body Surface Area
6. 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, students 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](http://www.mntransfer.org)

   Goal Area(s): **N/A**

   Goal and Outcomes:
   
   - Goal: N/A
   - Outcome:
Complete the following only if you are proposing a new course:

1. Planned pattern of offering:
2. Rationale for course: If this course is an ADDITION or replacement to current offerings, add a detailed explanation of the necessity for the change.
3. Does this course overlap with any course(s) offered at FDLTCC? If so, justify such duplication or indicate other adjustments to be made. Obtain signatures from affected departments.
4. What is the apparent or expressed student need for this course?
5. If this course includes a Native American or specifically Anishinaabe component list campus resource person/s—i.e., campus cultural/spiritual resource person/s and, if necessary, elder/s—consulted and include specific comments and written responses as appropriate.
6. Are there any additional licensing/certification requirements involved?  
   a. Provide a copy of the required licensing/certification standards to the AASC chair and to the vice president of academic affairs.
   b. Attach the required documentation to show course meets required licensing/certification standards.
7. What types of tutoring will be made available through the CAA to students taking this course?
8. How will the course be evaluated?
9. Special resources—e.g. faculty, space, equipment, library, etc
10. Special course fees:
11. Relationship of course to the college mission statement and goals.
12. Relationship of course to the department’s mission statement and goals.
13. Relationship of course to colleges/university offerings (include tribal colleges).

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