Course Syllabus

Department: Mathematics

Date: October 23, 2014

I. Course Prefix and Number: MAT 090

   Course Name: Basic Mathematical Concepts for Nursing Students

   Credit Hours and Contact Hours: 0 Credit Hours, 1 Contact Hour, 1 Imputed Credit

   Catalog Description including pre- and co-requisites:

   This course is designed to help incoming nursing students to understand and carry out the mathematics for the problems they will encounter in their nursing curriculum; specifically dosage problems. Topics include unit conversion, rounding rules, formatting decimals, conversion factors and dimensional analysis.

   This is an imputed credit course. This course does not fulfill FLCC's Mathematics requirement nor fulfill general elective credit. Course is graded on a Satisfactory or Unsatisfactory basis

II. Course Outcomes and Objectives

   Student Learning Outcomes:
   Upon completion of the course the participant will be able to:
   1. Use dimensional analysis to solve dosage problems
   2. Convert measurements between units.
   3. Interpret the abbreviations used in dosage problems.
   4. Round decimals appropriate to the problem.

   Relationship to Academic Programs and Curriculum:

   This course is a developmental course that prepares nursing students for the mathematics problems they will encounter in their major.

   College Learning Outcomes Addressed by the Course:
   N/A

III. Instructional Materials and Methods

   Types of Course Materials:

   Calculator: any kind

   Methods of Instruction (e.g. Lecture, Lab, Seminar ...):
   1. Lectures
   2. Discussions
   3. Demonstrations
   4. Group activities
IV. Assessment Measures (Summarize how the college and student learning outcomes will be assessed):

Student Learning Outcomes will be assessed through a variety of activities. The Mathematics department believes that each instructor should determine the grading system and evaluation methods that will be used in their sections of the course. Any grading system used in the course must be consistent with the College Catalog. These methods must be communicated to students the first week of the semester in writing. Possible evaluation methods include quizzes, tests, portfolios, collected assignments, group activities, et. al. Such evaluations and related assignments will develop a student’s ability to read problems carefully, perform mathematics and use problem-solving techniques. Course policies with respect to attendance, late work, plagiarism, etc. must be communicated to the student.

V. General Outline of Topics Covered:

(This outline is not intended to be covered in sequence.)
1) Unit Conversion
   a) Metric
   b) Apothecary
   c) Household

2) Decimal Rounding Rules
   a) Tablets
   b) Capsules
   c) cc/ml
   d) drops
   e) milligrams

3) Formatting Decimals
   a) Naked decimals
   b) Trailing zeros

4) Dimensional Analysis
   a) Conversion factors

5) Dosage Problems
   a) IV Drips
   b) IV Pumps
   c) Pediatrics
   d) Oral Medications
   e) Heparin Protocol