NORMANDALE COMMUNITY COLLEGE **5/29/2014**
COMMON COURSE OUTLINE
MATH 1010, MEDICAL DOSAGES CALCULATIONS

I. EFFECTIVE DATE OF OUTLINE

Fall Semester, 2010. To be reviewed by the department annually.

II. CATALOG DESCRIPTION

A. MATH 1010
B. Medical Dosages Calculations
C. 1 Credit
D. Offered Spring Semesters and Summer Sessions
E. Prerequisite: MATH 0700 or 0670 with a grade of C or higher, or B or higher in high school Algebra II (within the past 2 years), or placement in MATH 1100.
F. Topics include metric and household systems of measurement and conversions between systems, understanding and interpreting drug orders and drug labels, oral and parenteral dosage calculations, and pediatric and adult dosage calculations based on weight.

III. RECOMMENDED ENTRY SKILLS/KNOWLEDGE

A. Arithmetic skills with whole numbers, integers, fractions, decimals, percentages, and proportions.
B. Ability to perform arithmetic operations with elementary algebraic expressions.
C. Familiarity with algebraic notation and algebraic problem solving.
D. Ability to use a 4 function calculator to carry out computations involving basic arithmetic.

IV. OUTLINE OF MAJOR CONTENT AREAS

Topics include:

A. Systems of Measurement
B. Conversions between Systems; metric and household
C. Conversions for other Clinical Applications: time and temperature
D. Equipment used in Dosage Measurement
E. Interpreting Drug Orders
F. Understanding Drug Labels
G. Oral Dosage of Drugs
H. Parenteral Dosage of Drugs
I. Reconstitution of Solutions
J. Pediatric and Adult Dosages based on Body Weight

V. LEARNING OUTCOMES

Upon successful completion of MATH 1010, students will be able to:

A. Understand the basic units of the different systems of measurements used in medical practice.
B. Accurately convert measurements between different systems of units (e.g. metric, household).
C. Understand the various types of equipment used to accurately measure dosage quantities.
D. Accurately understand and interpret drug orders.
E. Accurately understand and interpret drug labels.
F. Accurately calculate oral dosages of drugs.
G. Accurately calculate parenteral dosages of drugs.
H. Accurately calculate reconstitution of solutions.
I. Accurately calculate pediatric and adult drug dosages based upon weight.

VI. METHODS USED FOR EVALUATION OF STUDENT LEARNING

The instructor will choose from among various evaluation techniques including – but not limited to – in-class testing, take-home testing, assignments, quizzes, attendance, and group or individual projects. The instructor will also choose a method for end-of-the-term evaluation. To maintain high standards and consistency with the nursing program, it is suggested that instructors use a grading scale similar to the following: 93%-100% A; 85%-93% B; 77%-85% C; 70%-77% D; 0%-70% F. Nursing students are required to take a medical dosages exam in order to continue in the nursing program.

VII. SPECIAL INFORMATION

The use of a scientific calculator is <u>not</u> permitted; however, instructors will require a basic 4-function calculator.