SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title;   MATHEMATICS FOR ADMINISTRATION OF MEDICATIONS

Code Wo: *A/UR*   / O ^ - /

Program: NURSING

Semester: ONE

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Author: MARIE PRICE

New.   Revision

APPROVED:

    Chairperson   Date

COURSE OBJECTIVES

PART A

A» <u>Whole Numbers</u>

    1) read, write and recite numerals and word statements naming whole numbers one to a million

    2) read whole numbers from graduated scales

    3) identify place values of digits

    4) arrange numbers in ascending and descending orders

    5) convert Roman numerals - arable numerals (1-50)

    6) add, subtract, multiply and divide whole numbers up to 7 digits

    7) given quantities and values, calculate solutions to problems, using addition, subtraction, multiplication and division

    8) given a total quantity, calculate quantities over a given time

B. <u>Fractions</u>

    1) define fractional terms

    2) read, write and recite numerals naming decimal fractions

    3) arrange fractions in ascending or descending order of value, given any three fractions

    4) add, subtract, multiply and divide fractions and mixed numbers

    5) given 2 fractions with unlike denominators, find their lowest common denominator

    6) given improper fractions, change to mixed numbers of the simplist form or whole numbers

    7) given common fractions, change to higher or lower equivalent fractions

    a) solve simple problems using addition, subtraction, multiplication and division of fractions and mixed numbers

E< Units of Measure

1) identify the standard units of measure utilized in the metric system (both S.I. and British) for measuring length, volume and capacity, weight or mass, energy and temperature,

2) explain concept of abstract measure - eg: units

3) use these standard units to measure length, volume, weight and temperature

4) change a given number of 1inear units of one denomination to units of another denomination eg: mm, cm, m and km

5) change a given number of mass units of one denomination to units of another denomination eg: mg, g and kg

6) change a given number of volume and capacity units of one denomination to units of another denomination eg: cc, mL and L

7) solve problems involving weight and volumes eg: mg/mL

F. Ratio and Percent

1) define an equation and read and write numerals and word statements using equations

2) define terms - ratio, proportion and proportionals

3) read and write numerals and word statements involving ratio and proportion

4) given problems with 1, 2 or 3 knowns, solve for one unknown with particular emphasis on solutions and mixtures

G. Signed Numbers

1) define positive and negative

2) and subtract signed numbers

Test #1

Objectives to be covered on this test are:

a) use accepted abbreviations related to administration of medications. Resource: Kozier & Erb, p. 1062-66

b) know metric and household system of measurements as it relates to calculation of medications.

   be able to convert from metric to household measurements and vice versa

   Resources: Thompson, "The Metric System", p. iv-vii
               Attached sheet of "Household to Metric
               Conversions"

Test »2

Objective to be covered on this test is:

a) use metric and/or household system of measurement in order to calculate required dosages of oral medications

   Resources: Thompson, "Calculation of Oral Dosage (Solid
               form)" and "Calculation of Oral Dosage (Liquid
               form)", p. 17-30

Test #3

Objectives to be covered on this test are:

a) be able to calculate problems in the preparation of solutions

   Resource; Thompson, "Solutions", p. 1-4

b) be able to convert from metric to household measurements and vice versa

   Resource: See objectives for Test #1

c) be able to calculate dosages of oral medication

   Resource: See Objective for Test #2

d) be able to calculate dosages of parenteral medications

   Resource: See Objective for Test #3