

SYLLABUS

COURSE # AND TITLE: Math 114, Mathematics for Health Careers **# OF CREDITS:** 3

CATALOG DESCRIPTION:

This course introduces the computational skills needed to study in health careers programs. Topics include operations on fractions, decimals, percents, as well as the use of formulas, ratio and proportion, and measurement. Students will solve word problems specific to medication orders.

Semester Offered: Fall, Spring, and Summer (On Demand)

Prerequisites: Grade of "C" or better in MATH 095 *or* ACCUPLACER score of 66+ (Arithmetic) *or* 41-60 (Algebra)

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will....

<i>Learn</i>	<i>Students will actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners.</i>
<i>Think</i>	<i>Students will think analytically and creatively to explore ideas, make connections, draw conclusions, and solve problems.</i>
<i>Communicate</i>	<i>Students will exchange ideas and information with clarity and originality in multiple contexts.</i>
<i>Integrate</i>	<i>Students will demonstrate proficiency in the use of technologies in the broadest sense related to their field of study.</i>
<i>Act</i>	<i>Students will act purposefully, reflectively, and respectfully in diverse and complex environments.</i>

GENERAL LEARNING OBJECTIVES:

Upon successful completion of this course, the student will have a working knowledge of the following content areas:

1. Mastery of basic math skills.
2. Use of measurement systems including English, Apothecaries', Household and Metric.
3. Strategies of problem solving needed in health science courses.

SPECIFIC LEARNING OUTCOMES:

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

- 1.1 Add, subtract, multiply and divide integers and simplify expressions of integers and decimals.
- 1.2 Add, subtract, multiply and divide rational numbers and simplify rational expressions.

- 1.3 Read and write Roman numerals.
- 1.4 Apply computational and calculator skills to appropriate applications for health career areas.
- 1.5 Apply commutative, associative and distributive laws in simplifying and solving equations involving integers and fractions.
- 1.6 Use ratios and proportions to solve problems of direct and inverse variations in appropriate applications for health career areas.
- 1.7 Convert percents to fractions and vice-versa to solve problems in appropriate applications for health career areas.
- 1.8 Multiply and divide numbers in powers of ten form.
- 1.9 Apply logarithms in appropriate applications for health career areas.
- 1.10 Use basic concepts of Geometry including points, lines, rays, parallelograms, rectangles, squares, circles, and triangles in appropriate applications for health career areas.
- 1.11 Calculate and measure volume and density in appropriate applications for health career areas.

- 2.1 Appropriately convert units of length, weight, volume and dosage measurement systems (i.e. Metric, English, Apothecaries' and Household).
- 2.2 Use and read mathematical medical abbreviations.
- 2.3 Use and read military time.

- 3.1 Calculate correct dosages for given medications in all forms (i.e. tablets, liquids, intravenous).
- 3.2 Be able to read and construct graphs (i.e. table, bar, circle, line, etc.).
- 3.3 Understand and apply basic statistics.

OTHER REQUIREMENTS:

A scientific calculator is required.

Dean  Date 2-12-08

A current syllabus must be on file in the dean's office for every course being taught during a given semester.