

# MATH 104B – Applied Mathematics (3 Credits)

## DESCRIPTION:

Emphasizing applications, topics include arithmetic, prealgebra, geometry, finance, probability & statistics. Course is only applicable for AAS and AGS degrees, and is not transferable for credit.

**Prerequisite:** None

## STUDENT LEARNING OUTCOMES:

- a. Be able to participate in a mathematically relevant conversation.
- b. Be able to accurately perform elementary arithmetic computations.
- c. Be able to correctly simplify simple algebraic expressions in one variable.
- d. Recognize and understand various problem-solving techniques.
- e. Recognize and understand various topics of basic geometry.
- f. Solve problems involved with the topics of consumer math.
- g. Recognize and solve elementary probability problems.
- h. Recognize and compute elementary statistical calculations.
- i. Have an ability to apply and extend these concepts.

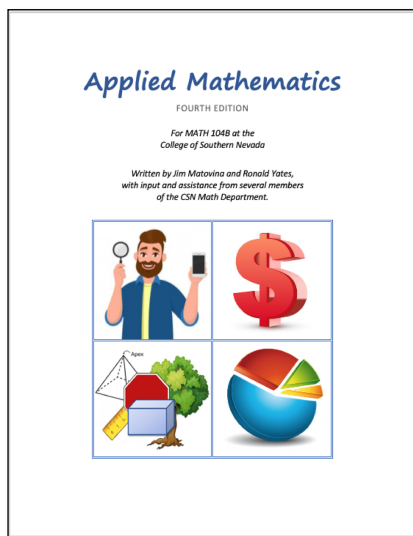
## TEXT:

**Title:** \*Applied Mathematics, Fourth Edition;

**Authors:** Jim Matovina and Ronald Yates;

**Publisher:** Self-Published. Printed by CSN Printing Services;

**Availability:** PDF Available Online at [https://library.csn.edu/sites/default/files/2020-05/104book\\_4e.pdf](https://library.csn.edu/sites/default/files/2020-05/104book_4e.pdf). Spiral-bound, black and white copies can be purchased in the CSN Bookstore.



\*Note: Full-time instructors have the right to use no text or a different text.

## OUTLINE:

- **Arithmetic & Prealgebra:** Rounding, Estimating, Order of Operations, Binary & Hexadecimal Numbers, Expressions, Linear Equations, Fair Division of Goods, Problem Solving (Matovina/Yates, Sections 1.1-1.5)
- **Geometry & Measurement:** The Metric System, Dimensional Analysis, Polygons, Circles, Solids, Perimeter, Area, Volume, Ratios, Rates, Proportions, Right Triangles, Distance, Slope (Matovina/Yates, Sections 2.1-2.5)
- **Consumer Math:** Percent, Simple & Compound Interest, Installment Buying, Budgets, Payday Loans, Leases, Mortgages (Matovina/Yates, Sections 3.1-3.5)
- **Probability & Statistics:** Counting, Factorials, Permutations, Combinations, Simple Probability, Odds, Expected Value, Fair Price, Mean, Median, Mode, GPA, Reading and Creating Bar Graphs/Line Graphs/Pie Charts (Matovina/Yates, Sections 4.1-4.5)

## EVALUATION:

Grades may be determined by student performance in one or more of the following areas: in-class tests, take-home tests, homework assignments, quizzes, special projects, papers, attendance, and class participation. Degree of importance and types of assessment used will depend on the instructor.

**This course can only be applied as the Math component for selected AAS and AGS degrees at CSN. It DOES NOT satisfy the requirements for the General Education Math Component for AA/AB/AS degrees, and is not transferable for credit.**