

# MATH 120XC : Quantitative Reasoning

Exposes students to a wide range of general mathematics. Problem solving and critical thinking skills, along with the use of technology, will be emphasized and reinforced throughout the course as the student becomes actively involved in solving applied problems. Topics include number theory and systems, functions and modeling, finance, geometry, measurement, probability, statistics, and selected subtopics related to the student's major field of study. Students who have received credit for this course may not also receive credit for MATH 120C.

**Credits** 4

**Lab/Practicum/Clinical Hours** 3

**Lecture Hours** 3

**Prerequisite Courses**

MATH 092C

**Prerequisites**

Satisfactory placement test scores as defined by the mathematics faculty or successful completion (with a grade of C or better) of MATH 092C or by permission of the math department chair.

**Learning Outcomes**

- Solve problems involving percent and proportion.
- Convert between number systems that have different bases.
- Apply finance formulas for simple and compound interest and annuities.
- Convert between standard and metric systems of measurement (area, volume, weight, temperature).
- Calculate perimeter, area, volume, and surface area of two- and threedimensional objects.
- Apply trigonometric relationships.
- Apply counting methods and fundamentals of probability.
- Calculate measures of central tendency and dispersion.
- Build and interpret frequency distributions and statistical graphs.
- Apply the normal distribution to solve problems.
- Apply, and interpret linear correlation and regression.