

Columbus State Community College

Mathematics Department Course Syllabus

Course Number: **MATH 1122**

Course Name: **Foundations of Quantitative Reasoning**

Prerequisite: **MATH 1025 with a grade of C or better or placement equivalent**

Credits: **5**

Class Hours per Week: **6**

COURSE DESCRIPTION

This college level mathematics course is designed for students seeking non-STEM degrees. It is a quantitative reasoning course focusing on thought processes involved when investigating situations described by measurements. Three threads define the curriculum: Numeracy-students will develop and use the concepts of numeracy to investigate and explain quantitative relationships and solve problems in a variety of real-world contexts. Mathematical Modeling-students will make decisions by analyzing mathematical models, including situations in which the student must recognize and/or make assumptions. Probability and Statistics-students will use the language and structure of statistics and probability to investigate, represent, make decisions, and draw conclusions from real-world contexts. The classroom is designed to be an active learning experience supported by student communication. MATH 1122 is designed with co-requisite strategies to provide near-college-ready students an opportunity to complete their college gateway mathematics course.

UNITS OF INSTRUCTION

- Numeracy
- Mathematical Modeling
- Probability & Statistics

INSTITUTIONAL LEARNING GOALS

This course addresses the following Columbus State general education goals:

- Critical Thinking
- Quantitative Literacy
- Effective Communication

GENERAL INSTRUCTIONAL METHODS

Instructional methods may include face-to-face or video lectures or demonstrations, face-to-face or virtual discussion, individual or group activities including the use of visual aids, calculators, computers and/or other technologies. Students may be expected to participate in these activities during class and/or outside of class. Instructors may require class participation, collaborative learning, and peer review.

In class, you are assessed and graded on your achievement of the outcomes for this course. You may also be required to participate in broader assessment activities.

STANDARDS AND METHODS OF EVALUATION

It is expected that 90% will be an A, 80% a B, 70% a C, 60% a D, and anything less is failing. Grades will not be curved, skewed, or otherwise inflated.

To achieve a mastery of the course material, the Ohio Department of Higher Education expects that the average student should be prepared to spend an average of 15 hours per week for 16 weeks on this course to receive an average grade.

TEXTBOOKS, MANUALS, REFERENCES, AND OTHER REQUIRED MATERIALS

- Textbook is available for download inside the Blackboard shell. A hard copy can be purchased at the bookstore.
- A basic scientific calculator or graphing calculator is REQUIRED. The Texas Instruments' TI-84 (regular, Plus, Silver, etc.) graphing calculator is the department standard calculator. However, any basic scientific calculator or other graphing calculator (such as the CASIO-FX-9750GII, TI-Nspire (non CAS version), or TI-83) is sufficient for use in this course.
Your instructor may require that your graphing calculator's memory be reset (all RAM cleared) prior to each proctored assessment. Additional resources supporting the use of the TI-84 and CASIO-FX-9750GII may be available at: <http://www.csc.c.edu/academics/departments/math/graphing-calculator.shtml>.
- Other materials provided.