Columbus State Community College
Mathematics Department Course Syllabus

Course Number: **MATH 1122**   Course Name: **Foundations of Quantitative Reasoning**
Credits**: 5**   Class Hours per Week**: 6**
Prerequisite: **MATH 1025 with a grade of C or better or placement equivalent**

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 virtual lectures, face-to-face or virtual discussion, individual or group activities including the use of visual aids, calculators, computers and/or other technologies. Students are expected to participate in these activities during class and/or outside of class.
In addition to class participation, the class may include collaborative learning, projects, and peer review.

STANDARDS AND METHODS OF EVALUATION
This course utilizes a variety of assessment methods including, but not limited or restricted to: exercises, collaborative activities, labs, quizzes, tests, exams, and projects.

TEXTBOOKS, MANUALS, REFERENCES, AND OTHER REQUIRED MATERIALS

- Textbook is Quantitative Reasoning, 3rd Edition, authored by Lee Wayand and available at the Columbus State Community College Bookstore.

- A basic scientific calculator <u>or</u> 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.cscc.edu/academics/departments/math/graphing-calculator.shtml.

GRADING SCALE

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.

STANDARDS AND METHODS OF EVALUATION

The grades will be determined by the total percentage accumulated at the end of the semester as follows:

Participation	15%
Test (2; 15% each)	30%
Homework	25%
Project (each part 5%)	10%
Final Exam	20%
	100%

COLLEGE SYLLABUS STATEMENTS

Columbus State Community College required College Syllabus Statements on College Policies and Student Support Services can be found at www.cscc.edu/syllabus or on the College website Quick Links "Syllabus Statements".

ATTENDANCE POLICY

To be determined by individual instructors.

Week	Topic	Assignment	Assessment
1	Reasoning & Perspective	Read Ch.1 & 2 HWK 1	RQ 1 &2
2	Reasoning & Perspective	Read Ch. 3 HWK 2	RQ 3
3	Ratios & Rates	HWK 3	
4	Scientific Numbers	Read Ch.4 HWK 4	RQ 4
5	Percentages	HWK 5	
6	Reasoning &Perspective	Read Ch. 5 HWK 6	RQ5 TEST #1
7	Visual Representations	Read Ch. 7 HWK 7	RQ7
8	Probability	Read Ch. 6 HWK 8	RQ7 Project Article & Questions
9	Data & Statistics	Read Ch. 8 HWK 9	RQ 8
10	Linear Models	Read Ch. 9 HWK 10	RQ 9
11	Exponential Models	HWK 11	
12	Tiered Systems (Taxes)	HWK 12	Final Project
13	Reasoning & Perspective	HW 13	TEST #2
14	Exponential Applications (Credit)	HWK 14	
15	Reasoning & Perspective	HWK 15	
16	FINALS		FINAL EXAM