

COURSE NUMBER: MATH 1025 - Web

COURSE TITLE: Quantitative Literacy

CREDITS: 3 hrs

CLASS HOURS PER WEEK: 1.5 hrs/week

PREREQUISITES: MATH 0114 with a “C” or higher, MATH1099 (MATH 0114 modules), or placement by COMPASS score

INSTRUCTOR: XXXXXXXXX

CONTACT: XXXXXXXXX

DESCRIPTION OF COURSE:

This is a first course in algebra specifically designed for students enrolled in programs that do not require college algebra. Traditional beginning algebra topics including basic numeric/algebraic skills and reasoning, linear equations, application modeling, and data literacy are addressed in a contextualized format using a pedagogy that promotes problem solving and critical thinking through collaborative learning and online tools.

STUDENT LEARNING OUTCOMES:

The goal of this course is to the develop students’ basic numeric, algebraic, and statistical skills necessary to be successful in the next mathematics course.

PROGRAM OUTCOMES:

- a. Recognize, define and analyze a problem.
- b. Examine issues by identifying and challenging assumptions and biases, including one’s own, and by distinguishing substantiated fact from opinion or misinformation.
- c. Apply learned concepts and knowledge to make decisions relevant to problem solving.
- d. Develop problem-solving strategies and evaluate their practical and/or ethical implications.
- e. Draw logical, well-supported conclusions by testing them against relevant criteria and standards.
- f. Adjust conclusions and viewpoints if new information becomes available.
- g. Perform mathematical computations using appropriate methods to arrive at accurate results.
- h. Analyze, interpret, and/or formulate inferences from data such as graphs, charts, tables or other quantified data.

OUTCOMES BASED ASSESSMENT OF STUDENT LEARNING:

For this course, students are expected to demonstrate the skills associated with the Institutional Learning Goals (ILG) identified below:

ILG #1: Critical Thinking

ILG #3: Quantitative Skills

In class students are assessed on their achievement of these outcomes. Names will not be used when reporting results. Outcomes-based assessment is used to improve instructional planning and design and the quality of student learning throughout the college.

COURSE MATERIALS REQUIRED:

A graphing calculator is REQUIRED. The Texas Instruments' TI-84 (regular, Plus, Silver, etc.) graphing calculator is strongly recommended, fully supported, and approved for use during proctored assessments.

Calculator Alternatives: Some students may prefer to use a CASIO-FX-9750GII, TI-Nspire (non CAS version), or a TI-83. These are less expensive options that are similar to the TI-84, and that are approved for use during proctored assessments. However, note that your instructor will primarily use the TI-84 when teaching, meaning that you will need to learn how to perform any necessary operations, using these other calculators, without your instructor's help.

Other graphing calculators may be permitted. If you own a different calculator, please check with your current instructor to see if your calculator will be allowed during their proctored assessments.

The TI-89, TI-92, TI-Nspire CAS, or other Computer Algebra System (CAS) calculators, are never allowed during proctored assessments.

Your instructor may require that your graphing calculator's memory be reset (all RAM cleared) prior to each proctored assessment.

The Columbus State Bookstore sells both the TI-84 and CASIO-FX-9750GII for your convenience. Additional resources supporting the use of the TI-84 and CASIO-FX-9750GII may be available at: <http://www.csc.edu/academics/departments/math/graphing-calculator.shtml>.

Computer/internet access

TEXTBOOK(S), MANUALS, REFERENCES, AND OTHER READINGS:

Log onto **connectmath.com**

- Class Code for Connect Math: **XXXXX-XXXXX**

NOTE: Once you sign up on Connect Math, you will need to purchase the textbook through the Connect site for \$25. Click on the textbook link on www.connectmath.com

It is highly recommended that you log on to www.connectmath.com BEFORE the course starts and order your textbook! *Pathways to Math Literacy, Second Edition* by Dave Sobecki and Brian Mercer

GENERAL INSTRUCTIONAL METHODS:

Instructional methods may include face-to-face or video lectures or demonstration, face-to-face or virtual discussion, individual or group activities including the use of visual aids, graphing 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, interpersonal interaction, collaborative learning, and peer review. Online assignments using Connect Math will count toward your course grade.

STANDARDS AND METHODS FOR EVALUATION:

Group Assignments (daily) = 20%

Connect Math Homework = 20%

Connect Math Quizzes = 20%

Midterm = 20%

Final Exam = 20%

Group Assignments: *BEFORE* class meets, students will watch the class work video and answer the before class questions on Blackboard. Students will complete group assignments during every class period using ZOOM. Group assignments will be graded on accuracy and active participation in the group. These assignments are to be completed in-class and cannot be made up if a student misses class. The instructor and other members of the group will be responsible for evaluating level of participation/contribution for each student and students will rotate through the various roles in the group (leader, recorder, communicator, etc.)

Connect Math Quizzes: Students will complete quizzes on Connect Math *AFTER* completing the group work on class.

Connect Math Homework: The homework problems will come from the textbook and will be completed in the online system, Connect Math. They consist of answers to short reflection questions that follow each lesson and application problems that are similar to the group work problems. These will be completed by each student individually, on their own.

Midterm and Final Exam: There will be a departmental midterm over the first half of the course and a departmental final exam over the second half of the course.

NOTE TO STUDENTS: To achieve a mastery of the course material, the Mathematics Department recommends that the student should be prepared to spend an average of 9 hours per week on this course.

GRADING SCALE:

90% - 100% = A

80% - 89% = B

70% - 79% = C

60% - 69% = D

0% - 59% = E/EN*

* **E:** Student has earned less than a 60% average and attempted a significant portion of assignments.

EN: Student has earned less than a 60% average and did NOT attempt a significant portion of the assignments.

SPECIAL COURSE REQUIREMENTS:

Computer/internet access is required to complete online homework assignments

ATTENDANCE/MAKE-UP POLICY:

Attendance is required to receive credit for in-class collaborative work assignments. The three lowest collaborative work assignment grades will be dropped.

Instructors: Makeup tests will only be administered with appropriate documentation.

LAST DAY TO WITHDRAW FROM COURSE

If you should decide to drop this course, but do not officially do so through Records & Registration, a failing grade will be recorded on your transcript. The last day to drop this course is **Sunday 11-6-22 (15 week classes)**. No drops will be allowed after this date. Drop forms are available from the Counseling/Advising Center and from Records and Registration.

DIVERSITY AND EQUITY INCLUSION STATEMENT

The CSCC Mathematics Department faculty value diversity of thought, perspective, and experience, and respect your identities (including but not limited to race/ethnicity, age, gender identity or expression, class, sexual orientation, religion, ability). The education, rights, and well-being of all students are encouraged and cultivated. Our goal is to foster and support safe and inclusive learning environments with equitable opportunities for all students to participate, contribute, and succeed.

COLLEGE SYLLABUS STATEMENTS:

Columbus State Community College required College Syllabus Statements on College Policies and Student Support Services can be found at <https://www.cscce.edu/academics/syllabus.shtml>.

TUTORING RESOURCES:

The following are ways of obtaining free tutoring:

- All CSCC tutoring is now on the first floor of the library (Columbus Hall). For additional information, please visit: <http://www.cscce.edu/academics/departments/math/tutoring.shtml>
All CSCC tutoring rooms are run on a drop-in basis. No appointment is necessary.
- Peer Tutoring – sign up for Peer Tutoring in The Center for Workforce Development (WD) room 1095.
- Online Tutoring - You can set up an appointment for a live one-on-one online tutoring session via the web. To find out more, sign into Blackboard and click on the “Net Tutor” icon.

WEATHER RELATED DEPARTMENT SPECIFIC POLICY:

In the event of severe weather or other emergencies which could force the college to close or to cancel classes, such information will be broadcast on radio stations and television stations. Students who reside in areas which fall under a Level III emergency should not attempt to drive to the college even if the college remains open. For more details, please refer to the college’s severe weather policy which is posted at <http://www.cscce.edu/services/weather.shtml>.

UNITS OF INSTRUCTION:

- Percentages, Pie Charts, Bar Graphs
- Using Exponents and Order of Operations
- The Basics of Graphing
- Basic Probability
- Venn Diagrams
- Using Measures of Average
- Inputs, Outputs, and Interpreting Expressions
- Dimensional Analysis
- Estimation and Number Sense
- Relative Change/Relative Error
- Standard Deviation and Normal Distribution
- Expected Value and Weighted Grades
- Slope as a Rate of Change
- Writing, Interpreting, and Evaluating Algebraic Expressions
- Solving Equations
- Solving Inequalities
- Solving Problems Numerically and Algebraically
- Direct Variation and Proportions

- Slope-Intercept Form and Linear Modeling
- Linear Relationships and Lines of Best Fit
- Solving Problems with Systems of Equations