Course and Number: MATH 1025 Quantitative Literacy

CREDITS: 3       CLASS HOURS PER WEEK: 6 (8 week term); 3 (16 week term)
PREREQUISITES:  DEV 0110 OR DEV 0115 with a C or better or by placement

DESCRIPTION OF COURSE (AS IT APPEARS IN THE COLLEGE CATALOG):
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.

SPECIAL COURSE REQUIREMENTS:
Computer/internet access is required to complete ALEKS online homework assignments

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

GENERAL EDUCATION GOALS:
Columbus State Community College has defined a series of general education outcomes that all students are expected to acquire before they graduate which include:

- Critical Thinking
- Effective Communication
- Quantitative Literacy

TEXTBOOK, MANUALS, REFERENCES, AND OTHER REQUIRED MATERIALS:
- *Pathways to Math Literacy* by Dave Sobecki and Brian Mercer
- 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.

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.cscc.edu/academics/departments/math/graphing-calculator.shtml.

STANDARDS AND METHODS FOR EVALUATION:
Group Assignments (daily) = 10%
Individual Class Assignments (daily) = 20%
Unit Portfolios (2@ 5%) = 10%
Midterm = 20%
Final Exam = 20%
ALEKS online homework = 20%

Group Assignments: Students will complete group assignments during every class period. 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.)

Individual Assignments: Students will complete individual assignments during every class period after the group learning has occurred. Individual assignments will be graded on accuracy. These assignments are to be completed in-class and cannot be made up if a student misses class.

Unit Portfolios: Students will submit a portfolio around the same time as the midterm and again around the same time as the final exam. The portfolio will consist of the group and individual assignments completed in class, answers to short discussion questions that follow each lesson, and Excel assignments that follow some lessons.

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.

ALEKS Online Homework: To practice the learning outcomes of the course, students will complete an ALEKS assignment for each lesson.

GRADING SCALE:
90% - 100% = A
80% - 89% = B
70% - 79% = C
60% - 69% = D
0% - 59% = E
UNITs OF INSTRUCTION

- Unit 1: 1-1 Percentages and Pie Charts
- Unit 2: 1-2 Interpreting and Drawing Bar Graphs
- Unit 3: 1-3 Organizing Information with Venn Diagrams
- Unit 4: 1-4 Estimation and Number Sense
- Unit 5: 1-8 Recognize Patterns
- Unit 6: 1-10 Using Measures of Average
- Unit 7: 2-1 Basic Probability
- Unit 8: 2-2 Dimensional Analysis
- Unit 9: 2-3 Rates of Change
- Unit 10: 2-4 Interpreting Relative Difference/Relative Error
- Unit 11: 2-5 Inputs, Outputs, and Writing Applied Expressions
- Unit 12: 2-7 Polya’s Problem Solving Procedure
- Unit 13: 2-8 Algebraic Expressions in Decision Making
- Unit 14: 2-9 Solving Equations and Inequalities
- Unit 15: 3-1 The Basics of Graphing
- Unit 16: 3-2 Slope and Rate of Change
- Unit 17: 3-3 The Connection Between Graphs and Equations
- Unit 18: 3-5 Writing Linear Equations Based on Data
- Unit 19: 3-6 Linear Relationships and Lines of Best Fit
- Unit 20: 3-7 Solving Problems with Linear Equations and Systems
- Unit 21: 4-1 Standard Deviation and Normal Distributions
- Unit 22: 4-6 Using Scientific Notation

GENERAL INSTRUCTIONAL METHODS:
Collaborative learning, online assignments using ALEKS