

Columbus State Community College
Math Department

Course and Number: Math for Emergency Services Math 1109

CREDITS: 3 CLASS HOURS PER WEEK: 4 (2 lecture, 2 lab)

PREREQUISITES: DEV0145 (Reading) with a C or better, and DEV0114 (Math) with a C or better.

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

This college level mathematics course is designed for students seeking degrees in Fire Science or Emergency Medical Services. Topics include: development, interpretation, and use of graphical, tabular, and formulaic relations; rates; geometry of shapes; statistics; and mathematical modeling. All topics are delivered in the context of Fire Science (FS) and Emergency Medical Services (EMS). This course focuses on building problem solving and critical thinking skills. Excel labs are included to support and extend the course topics. Just-in-time mathematics remediation is provided to support student success. This course fulfills the mathematics requirement for designated AAS degree programs at CSCC. Transfer credit is not guaranteed.

LEARNING OUTCOMES:

Unit 1: Rates

Just-in-time: Customary and Metric Units of Measure, Measuring tools, Calculator basics

Lesson A: Understanding Rates

Lesson B: Untidy Rates

Lesson C: Equality and Rates

Unit 2: Geometry

Just-in-time: Investigating pi

Lesson D: 2D Measurements

Lesson E: 3D Measurements

Lesson F: Dimensions

Unit 3: Triangles

Just-in-time: Protractor

Lesson G: Angles

Lesson H: Triangles

Lesson I: More Rates

Unit 4: Functions

Just-in-time: Arithmetic skills, order of operations

Lesson J: Function notation

Lesson K: Graphs
Lesson L: Formulas
Lesson M: Multivariable functions
Lesson N: Multivariable tables
Lesson O: Multivariable graphs
Lesson P: Arithmetic and composition
Lesson Q: Piecewise defined functions
Lesson R: Analysis

Unit 4: Statistics

Lesson S: Statistics Terminology
Lesson T: Graphs
Lesson U: Descriptive Statistics
Lesson V: Regression Analysis

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
- Quantitative Skills

EQUIPMENT AND MATERIAL REQUIRED:

- Computer/internet access
- At minimum a 4 function calculator. No Computer Algebra System (CAS) calculators permitted

TEXTBOOK, MANUALS, REFERENCES, AND OTHER READINGS:

- All materials provided in the Blackboard course

GENERAL INSTRUCTIONAL METHODS:

On-line lessons, videos, notes, applets, Discussion Board conversations, unit reviews, quizzes, iMathAS, and Excel Labs

METHODS OF EVALUATION

- Letter grades for the course will be awarded using a 90%-80%-70%-60% scale.
- The following are the requirements determined by your individual instructor: