

COURSE NUMBER:	MAT 155
COURSE TITLE:	Contemporary Mathematics
LECTURE HOURS PER WEEK:	3.0
LAB HOURS PER WEEK:	0.0
CREDIT HOURS PER SEMESTER:	3.0

[DL ATTENDANCE/VA STATEMENT](#)
[TEXTBOOK INFORMATION](#)

COURSE DESCRIPTION

This course includes techniques and applications of the following topics: elementary number theory; algebra; geometry; measurement; graph sketching and interpretations; and descriptive statistics.

COURSE COMPETENCIES

Module 1: Number Theory and the Real Number System

- Find the prime factorization of a number
- Find the greatest common divisor and the least common multiple of two or more numbers
- Evaluate numerical expressions containing exponents, fractions, and decimals
- Determine whether a number is rational or irrational
- Express a rational number as a terminating or a repeating decimal
- Express a terminating or a repeating decimal as a quotient of two integers
- Convert numbers from decimal notation to scientific notation and vice versa
- Perform calculations with scientific notation
- Solve applied problems involving integers, rational numbers, irrational numbers, and scientific notation

Module 2: Algebra and Graphs

- Evaluate algebraic expressions using the order of operations
- Solve linear equations and linear inequalities in one variable
- Solve verbal problems involving linear equations and linear inequalities
- Solve verbal problems involving variation
- Evaluate a formula
- Solve a formula for a specified variable
- Graph linear equations and linear inequalities in two variables

Module 3: Measurement and Geometry

- Perform conversions between metric measurements
- Solve applied problems involving metric measurements
- Perform conversions between U.S. customary and metric measurements
- Determine angle measures in figures involving vertical angles, parallel lines, and complementary and supplementary angles
- Determine measures of interior and exterior angles of regular polygons
- Solve problems involving similar figures

- Find perimeters and areas of squares, rectangles, parallelograms, triangles, and trapezoids
- Find circumferences and areas of circles
- Determine an unknown side of a right triangle using the Pythagorean Theorem
- Find volumes of solid geometric figures

Module 4: Statistics and Graph Interpretation

- Construct and interpret frequency distributions, histograms, frequency polygons, stem-and-leaf displays, and circle graphs
- Find means, medians, modes, ranges, and standard deviations for sets of data.

MINIMAL STANDARDS

An average of 60% is required for a grade of D for this course. Some programs may require a 70% average which is a grade of C.

COURSE REQUIREMENTS

See York Technical College Catalog and Handbook for attendance, withdrawal, and student conduct policies.

EVALUATION STRATEGIES/GRADING

The final course grade will be determined by a student's performance on the four modules. Each module grade may be comprised of objective and/or essay type questions, homework, individual or group projects, quizzes, etc., as required by the instructor. The modules will be evaluated as follows:

Module 1: 25%
 Module 2: 25%
 Module 3: 30%
 Module 4: 20%

Grading Scale

A = 90 – 100
 B = 80 – 89
 C = 70 – 79
 D = 60 – 69
 F = below 60

ENTRY LEVEL SKILLS

The student entering this course must be able to perform basic arithmetic and algebraic operations.

PREREQUISITES: MAT 150 or equivalent

CO-REQUISITES: None