Columbus State Community College  
Mathematics Department Syllabus

Course and Number: MATH 1150 – Precalculus  
Credits: 6  
Class Hours Per Week: 6

Prerequisites: Grade of “A” in MATH 1075 or placement by ACT or COMPASS test

COURSE DESCRIPTION: This is an accelerated course intended for well-prepared students going on to take calculus. Topics include polynomial and rational functions, exponential and logarithmic functions, trigonometric and inverse trigonometric functions. Such functions are graphed and analyzed; related equations and inequalities are solved. Problem solving with related applications occurs throughout. Sequences and series are introduced. This course is intended for students with strong mathematics preparation. Students should have completed four years of high school mathematics including Algebra II or above. This course is not open to students with credit for MATH 1148 or MATH 1149.

SPECIAL COURSE REQUIREMENTS: None

COURSE GOALS: To learn the essential elements of college algebra and trigonometry necessary for success in calculus and further study in mathematics and science in an accelerated one-semester format. To further promote and develop students’ abilities to think and reason mathematically and become better problem solvers.

GENERAL EDUCATION GOALS: This course addresses the following Columbus State general education goals:
- Critical Thinking
- Quantitative Literacy

TEXTBOOK, MANUALS, REFERENCES, AND OTHER REQUIRED MATERIALS:
- My Math Lab/Course Compass – (included with purchase of a new text).
- Texas Instruments’ TI-83, TI-83PLUS, TI-84, or TI-84 PLUS Graphing Calculator (REQUIRED).

UNITS OF INSTRUCTION:
- Functions: Graphs and Analysis (Chapters 2.2, 2.4-2.6)
- Polynomial and Rational Functions (Chapters 1.6, 3.1-3.5)
- Function Operations (Chapters 2.7, 4.1)
- Exponential and Logarithmic Functions (Chapters 4.2- 4.6)
- Trigonometric Functions (Chapters 5.1-5.7)
- Analytic Trigonometry (Chapter 6.1-6.4, 6.6)
- Applications of Trigonometry: Laws of Sines and Cosines, Vectors (Chapters 7.1-7.4)
- Conic Sections (Chapters 2.2, 10.1-10.3)
- Systems of Equations and Matrices (Chapters 8.2, 8.5, 8.8, 8.9)
- Sequences and Series (Chapters 9.1-9.3)
GENERAL INSTRUCTIONAL METHODS: Lecture, discussion, demonstration, exploration and discovery exercises with the use of visual aids, graphing calculators, and/or computer resources.

STANDARDS AND METHODS FOR EVALUATION:
Final Exam = 30% of course grade (final exam is 100% departmental).
The remaining 70% of the course grade will be determined by the instructor.
No more than 15% of the course grade may be determined using non-proctored assessments.

GRADING SCALE:
Letter grades for the course will be awarded using the following scale:

- ≥ 90% - A
- 80-89% - B
- 70-79% - C
- 60-69% - D
- < 60% - E

Grades will not be curved, skewed, or otherwise inflated.