

Montgomery County Community College  
 MAT 162  
 Precalculus II  
 4-4-0

**COURSE DESCRIPTION:**

This is a continuation of MAT 161 including the following topics: exponential and logarithmic functions and trigonometry. The trigonometry topics includes right triangles, functions, graphs, identities, vectors, law of sines, law of cosines, polar coordinates and polar graphing, complex numbers, inverse functions and applications. A graphing calculator is required. Instruction will be presented using a TI-84 Plus.

**REQUISITES:**

*Previous Course Requirements*  
 MAT 161 Precalculus I

*Concurrent Course Requirements*  
 None

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Solve problems using trigonometric definitions involving angles, circular functions, and right triangles.	Lectures Small Group Discussions and/or Projects The Use of TI 84 Graphics Calculator Homework Quizzes Projects	Exams Quizzes Homework Projects
2. Graph the six trigonometric functions and their inverses.	Lectures Small Group Discussions and/or Projects The Use of TI 84 Graphics Calculator Homework Quizzes Projects	Exams Quizzes Homework Projects

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
3. Solve trigonometric identities and equations.	Lectures Small Group Discussions and/or Projects The Use of TI 84 Graphics Calculator Homework Quizzes Projects	Exams Quizzes Homework Projects
4. Use the law of sines and law of cosines to solve trigonometric applications.	Lectures Small Group Discussions and/or Projects The Use of TI 84 Graphics Calculator Homework Quizzes Projects	Exams Quizzes Homework Projects
5. Apply the complex number system using concepts such as  polar coordinates, and parametric equations.	Lectures Small Group Discussions and/or Projects The Use of TI 84 Graphics Calculator Homework Quizzes Projects	Exams Quizzes Homework Projects
6. Solve problems using logarithmic and exponential definitions and properties and use these properties them in relevant applications.		



Victoria L. Bastecki-Perez, Ed.D.

Date: 2/18/2013

Revised by: Marion Graziano/James Muscatell  
VPAA/Provost or designee Compliance Verification:

Date: 8/31/2017

Date: 11/13/2017



*This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.*