Washtenaw Community College Comprehensive Report

MTH 180 Precalculus
Effective Term: Winter 2018

Course Cover

Division: Math, Science and Engineering Tech
Department: Mathematics
Discipline: Mathematics
Course Number: 180
Org Number: 12200
Full Course Title: Precalculus
Transcript Title: Precalculus
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Three Year Review / Assessment Report
Change Information:
Consultation with all departments affected by this course is required.
Pre-requisite, co-requisite, or enrollment restrictions
Rationale: master syllabus update as result by assessment report
Proposed Start Semester: Winter 2018
Course Description: This course provides the necessary background in analytic geometry, trigonometry and advanced algebraic topics for calculus. Topics include trigonometric functions, identities and graphs, the conic sections, sequences and series and the binomial theorem. A graphing calculator is recommended for this course. See the time schedule for the current brand and model. Successful completion of this course with a minimum grade of "C" will raise your Academic Math level to 7.

Course Credit Hours

Variable hours: No
Credits: 5
Lecture Hours: Instructor: 75 **Student:** 75
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 75 **Student:** 75
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Level 5

Requisites

Prerequisite

Academic Math Level 5

or

Prerequisite

MTH 176 minimum grade "C"; may enroll concurrently

General Education

Degree Attributes

Assoc in Applied Sci - Area 3
Assoc in Science - Area 3
Assoc in Arts - Area 3
MACRAO Science & Math

Michigan Transfer Agreement - MTA

MTA Mathematics

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Solve, graph and perform operations of the conic sections.

Assessment 1

Assessment Tool: Common departmental exam questions
Assessment Date: Winter 2017
Assessment Cycle: Every Three Years
Course section(s)/other population: All sections
Number students to be assessed: Number of students to be assessed is 8 randomly selected students per section
How the assessment will be scored: Departmentally-developed rubric
Standard of success to be used for this assessment: 75% of the students should score 75% or higher on the questions for each outcome
Who will score and analyze the data: The course coordinator will score the student responses to the questions and then analyze the data

2. Solve and perform operations and problem representations with sequences, series and binomial expansions.

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3. Graph, transform identities, and solve problem representations of trigonometric functions.

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Course Objectives

1. Sketch a graph of a conic section and identify the distinguishing features (i.e. the center, radius, focus, etc.) of the conic section.
2. Simplify the equation of a conic section and identify the conic as a circle, ellipse, hyperbola, or parabola.
3. Evaluate a series.
4. Identify a sequence as geometric or arithmetic.
5. Expand a binomial using the Binomial Theorem.
6. Solve for a part of a right triangle using the trigonometric ratios.
7. Evaluate the graph of a trigonometric function.
8. Simplify a trigonometric expression using fundamental trigonometric identities.
9. Solve word problems using trigonometric properties.

New Resources for Course

Course Textbooks/Resources

Textbooks

Larson, R. Hostetler, R.. *Precalculus With Limits*, ed. New York: Cengage, 2010, ISBN: 1-4390-4909-2.

Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom

Reviewer	Action	Date
Faculty Preparer:		
Lisa Manoukian	*Faculty Preparer*	*Aug 21, 2017*
Department Chair/Area Director:		
Lisa Rombes	*Recommend Approval*	*Aug 21, 2017*
Dean:		

Kristin Good	*Recommend Approval*	*Aug 23, 2017*
Curriculum Committee Chair:		
Lisa Veasey	*Recommend Approval*	*Oct 23, 2017*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Oct 24, 2017*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Oct 25, 2017*