

Montgomery County Community College
 MAT 202
 Calculus and Analytic Geometry III
 4-4-0

COURSE DESCRIPTION:

This is a third course in the calculus sequence. It is designed primarily for students who will major in mathematics, science, engineering, or business. Topics include vector analysis, solid analytic geometry, partial derivatives and multiple integrals with applications. A TI 84 Plus Graphing Calculator is required for the course.

PREREQUISITE(S):

MAT 201 - Calculus and Analytic

CO-REQUISITE(S):

None

Upon successful completion of this course, the student will be able to:

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHOD
1. Model motion in three dimensions with vectors.	Lecture, Group work Homework, Projects, Quizzes	Homework, Quizzes, Tests, Projects
2. Integrate and differentiate vector functions in order to study two and three dimensional curves and surfaces.	Lecture, Group work Homework, Projects, Quizzes	Homework, Quizzes, Tests, Projects
3. Extend the ideas of functions of one-variable to functions of two or more variables including partial differentiation and multiple integration.	Lecture, Group work Homework, Projects, Quizzes	Homework, Quizzes, Tests, Projects
4. Apply principles of single and multivariable calculus to vector fields and parametric surfaces.	Lecture, Group work Homework, Projects, Quizzes	Homework, Quizzes, Tests, Projects
6. Use the graphing calculator in relevant Calculus III concepts.	Lecture, Group work Homework, Projects, Quizzes	Homework, Quizzes, Tests, Projects

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

COURSE APPROVAL:

Prepared by: Roger Willig, Professor of Mathematics	Date: 4/1998
Revised by: Roger Willig, Professor of Mathematics	Date: 12/2000
Revised by: Walter R. Hunter, Professor of Mathematics	Date: 9/2004
Revised by: Walter R. Hunter, Professor of Mathematics	Date: 9/2006

Revised by: Mark McFadden	Date: 2/1/2013
VPAA/Provost or designee Compliance Verification: Dr. Victoria Bastecki-Perez	Date: 2/4/2013

Revised by: Walter Hunter	Date: 9/21/2016
VPAA/Provost or designee Compliance Verification:	Date: 9/21/2016



This course is consistent with Montgomery County Community College's