

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Calculus & Analytic Geometry III

Course Abbreviation and Number: MAT 2650

Credit Hours: 4

Course Type: Lecture

Course Description: Students will continue their study of calculus. Topics include solid analytic geometry, calculus of functions of several variables, multiple integration, two- and three-dimensional vectors, and vector calculus (including Green's Theorem and Stokes' Theorem). A computer algebra system such as Mathematica is incorporated into the course.

Prerequisite: MAT 1720.

General Education Requirements Met

SUNY

Math

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Perform operations on vectors, such as dot product and cross product
2. Perform differentiation and integration on vector-valued functions
3. Find partial derivatives of functions of several variables
4. Find limits, determine continuity, and find extrema of functions of several variables
5. Perform double and triple integration

A pre-requisite for this course is approved for the SUNY General Education category listed. This course will reinforce the student learning outcomes for this category.

Topics Covered:

- Vectors in the Plane and in Space
 - Vector-Valued Functions
 - Partial Differentiation
 - Multiple Integration
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Information for Students

- Expectations of Students
 - [Civility Statement](#)
 - [Student Responsibility Statement](#)
 - [Academic Integrity Statement](#)
 - [Accessibility Services](#)
Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
 - [Get Help: JCC & Community Resources](#)
 - [Emergency Closing Procedures](#)
 - Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

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|-------|--------|-----|--------|-----|--------|-----|-----|
| A=4.0 | B+=3.5 | B=3 | C+=2.5 | C=2 | D+=1.5 | D=1 | F=0 |
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 - Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.
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Effective Date: Fall 2021