

**JAMESTOWN COMMUNITY COLLEGE**  
**State University of New York**

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**INSTITUTIONAL COURSE SYLLABUS**

**Course Title:** Calculus/BUS/Social Science II

**Course Abbreviation and Number:** MAT 1640

**Credit Hours:** 3

**Course Type:** Lecture

**Course Description:** Students will study an introduction to integral calculus for functions of a single variable and the calculus of functions of several variables. Techniques of integration and differentiation and applications of these techniques to the behavioral, management, and social sciences are studied.

Prerequisite: MAT 1630 or MAT 1710. A student cannot receive graduation credit for both MAT 1640 and MAT 1720.

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**General Education Requirements Met**

**Student Learning Outcomes:**

Students who demonstrate understanding can:

1. Model exponential growth and decay and continuously compounding interest
  2. Compute antiderivatives and definite integrals for specified functions
  3. Use integration to find areas in the  $xy$ -plane
  4. Compute partial derivatives
  5. Demonstrate different techniques of integration
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**Topics Covered:**

- Logarithm Functions
  - Applications of the Exponential and Natural Logarithm Functions
  - The Definite Integral
  - Functions of Several Variables
  - Techniques of 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:

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 2023