

Business Calculus

MAC 2233

Course Description:

This course is intended to introduce students to calculus concepts that are prerequisites for some advanced topics in business, economics, and social sciences. This course covers limits, continuity, first and higher derivatives, and the differential, with applications to graphing, rates of change, and optimization methods; techniques of integration and applications; introduction to multivariate calculus.

Course Learning Objectives (including liberal studies learning objectives assigned to the course):

1. Find limits of single-variable functions graphically and algebraically, including one-sided limits, infinite limits, and limits at infinity
2. Study continuity of single-variable functions
3. Find first and higher derivatives of single-variable functions
4. Use derivatives to answer questions in marginal analysis in business and economics
5. Graph curves using information from the function's first and second derivatives
6. Find optimal solutions for single-variable functions
7. Find indefinite and definite integrals of single-variable functions
8. Apply techniques of integration to find area between curves, average values of single-variable functions, and more
9. Find partial derivatives of multi-variable functions
10. Find optimal solutions for multi-variable functions.
11. Select and apply appropriate methods (i.e., mathematical, statistical, logical, and/or computational models or principles) to solve real-world problems.
12. Use a variety of forms to represent problems and their solutions.

Grading Assignments:

Three Unit Exams

Final Exam

Quizzes

Homework

Lecture Participation via Learning Catalytics (interactive student response tool)

LIBERAL STUDIES STATEMENT

This course has been approved to meet FSU's Liberal Studies Quantitative and Logical Thinking requirements and helps you become a critical analyst of quantitative and logical claims.

In order to fulfill the State of Florida's College mathematics and computation requirement the student must earn a "C–" or better in the course.

By the end of the course, students will demonstrate the ability to:

1. Select and apply appropriate methods (i.e., mathematical, statistical, logical, and/or computational models or principles) to solve real-world problems.
2. Use a variety of forms to represent problems and their solutions.

UNIVERSITY ATTENDANCE POLICY

Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

ACADEMIC HONOR POLICY

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the

process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and... [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/Academics/Academic-Honor-Policy>)

AMERICANS WITH DISABILITIES ACT

Florida State University (FSU) values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive, and welcoming. FSU is committed to providing reasonable accommodations for all persons with disabilities in a manner that is consistent with academic standards of the course while empowering the student to meet integral requirements of the course.

To receive academic accommodations, a student:

- (1) must register with and provide documentation to the Office of Accessibility Services (OAS);
- (2) must provide a letter from OAS to the instructor indicating the need for accommodation and what type; and, (3) should communicate with the instructor, as needed, to discuss recommended accommodations. A request for a meeting may be initiated by the student or the instructor.

Please note that instructors are not allowed to provide classroom accommodations to a student until appropriate verification from the Office of Accessibility Services has been provided.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the

Office of Accessibility Services 874 Traditions Way 108 Student Services Building Florida State University Tallahassee, FL 32306-4167 (850) 644-9566 (voice) (850) 644-8504 (TDD)
oas@fsu.edu <https://dsst.fsu.edu/oas>

ACADEMIC SUCCESS

Your academic success is a top priority for Florida State University. University resources to help you succeed include tutoring centers, computer labs, counseling and health services, and services for designated groups, such as veterans and students with disabilities. The following information is not exhaustive, so please check with your advisor or the Dean of Students office to learn more.

CONFIDENTIAL CAMPUS RESOURCES

Various centers and programs are available to assist students with navigating stressors that might impact academic success. These include the following:

Victim Advocate Program
University Center A, Rm. 4100
(850) 644-7161
Available 24/7/365
Office Hours: M-F 8-5
<https://dsst.fsu.edu/vap>

Counseling and Psychological Services
Askew Student Life Center, 2nd floor
942 Learning Way
(850) 644-8255
<https://counseling.fsu.edu/>

University Health Services
Health and Wellness Center
(850) 644-6230
<https://uhs.fsu.edu/>