

MAT 210: Brief Calculus: Calculus for Business and Economics



Overview

Topics covered in this course include limits and derivatives of algebraic, logarithmic, and exponential functions; the definite integral; analysis of graphs; optimization; applications of the derivative; and more. Content in this course is adaptive, allowing you to achieve mastery in a certain concept before moving on to the next. This course uses Gradarius, a calculus learning platform that personalizes your learning based on the topics you already know and the topics you still need to learn. You will also have access to individualized coaching as you move through each topic in this course.

Course Prerequisites and Requirements

To be successful in this course, we recommend English language fluency and computer literacy. We also encourage you to make sure your laptop or desktop computer meets the technical requirements. MAT 117 is strongly suggested as a prerequisite for success in this course.

What You'll Learn

- Meaning and computation of average rate of change, and applications
- Meaning and computation of instantaneous rate of change, and applications
- Marginal analysis
- Meaning and computation of accumulation, and applications
- Techniques to solve optimization problems, and applications

Transcript

This course appears on your transcript identically to how it appears on the transcript of an enrolled ASU student who has taken the course on one of ASU's campuses.

This course satisfies 3 credit hours toward the Mathematics (MA) General Studies requirement at Arizona State University. It is strongly encouraged that you consult with your institution of choice to determine how these credits will be applied to their degree requirements prior to transferring your credit.

Exams and Grading

Instructor led

10%

Gradarius Topics (24)

20%

Gradarius Quizzes (5)

70%

Final Exam

Self paced

20%

Quizzes (5)

80%

Final Exam

Creators

Fabio A. Milner

Director & Professor of Mathematics,
Applied Mathematics and Mathematics Education

Fabio Milner studies structured population models, including demography, epidemics, ecology, and tumor growth. Populations are usually structured by age (demographic and/or age-of-disease), and may also be structured by sex, size, or other relevant variables. The team studies theoretical properties of the models, such as existence, uniqueness, preservation of non-negativity, and asymptotic behavior, as well as real-life applications. Professor Milner and his collaborators are also developing a family of epidemiological models structured by immunological variables in order to describe the multi-scale problem of disease propagation at the individual level (“small scale”) and at the population level (“large scale”) in a single model. They are studying the long-term population effect that chickenpox vaccination in childhood may have many decades later in increased incidence of the shingles by a combination of repeated exposure to the Varicella zoster virus and decreased immune response.



Chandrani Banerjee

Senior Lecturer,
School of Mathematical and Statistical Sciences

Chandrani Banerjee completed a master’s of science in applied mathematics from Texas Tech University in 2007. Her research area was in mathematical modeling of biological systems. She has taught a variety of courses in Algebra, Trigonometry, Analytical Geometry, Calculus, Business Calculus and Statistics as a Faculty at Texas Tech University and at University of Arizona. She has been teaching at ASU since 2012 including both in-person and online classes over a wide variety of courses, such as Enhanced Freshman Math, College Algebra, Brief Calculus and Math for Business Application. She likes to teach a culturally diverse body of students and enjoys interacting with students from different countries and communities. Apart from teaching she is active as a course-coordinator and serves in course development committees.

