



Brief Calculus
Rio Salado College | MAT212 31592 Fall 2018
Instructor: Steven Felling
Start Date: 09/17/2018
End Date: 05/31/2019
Credits: 3.0



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Office Hours: 3:15pm - 4:30pm

Location: Room C - 114

Official Course Description

Introduction to the theory, techniques and applications of the differential and integral calculus of functions with problems related to business, life, and the social sciences.

Official Course Prerequisites

- Prerequisites: Grade of "C" or better in MAT150, or MAT151, or MAT152, or MAT187, or appropriate Math placement test score.

Official Course Competencies

1. Find derivatives of functions using both the definition and theorems. (I)
2. Use the derivative to solve and analyze application problems related to business, life, and the social sciences. (II)
3. Use technology to model, solve, and analyze problems related to real-world applications. (II, IV)
4. Find the integral of functions using theorems. (III)
5. Use the integral to solve and analyze application problems related to business, life, and the social sciences. (IV)

Time Requirement

You will need to dedicate significant time to this college course. For each credit hour, plan to spend at least two hours a week on homework in addition to class presentation time.

Required Course Materials

Title	Edition	Author	ISBN
Graphing Calculator TI-83 or TI-84			
Brief Calculus: An Applied Approach	8th Edition	Sullivan, Michael	97804717076

This dual enrollment college course is intended for high school students at the junior and senior level

Standards And Expectations

Course Requirements

Policy:

1. Expect a daily assignment,
2. Maintain a class notebook
 - a. Classroom examples - new concepts
 - b. Written homework assignments
 - c. Returned quizzes and group work
3. Follow the dues dates for assignments as listed in chapter calendar
4. A calculator is required - (Recommended TI83/84)
5. You are responsible for any material missed due to absences.
6. Do not be late.
7. Extra help - Daily before or after school

Grading Standards:

Cumulative point system

Standard grading scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Below 60%

Quarter grades will be comprised approximately from:
Tests/Quizzes 80%
Homework/Group Work .. 20%

Each quarter grade is worth 40% of the semester grade and the final exam counts as the remaining 20% of the semester grade.

Attendance Standards:

Regular attendance is important. Students are allowed 6 absences and may be dropped from the course.

Late/Missed Work Policy:

All assigned work must be completed by designated due dates as stated in chapter assignment calendar.

All test will be taken as scheduled unless PRIOR arrangements have been made (contact can be made in person or via email).

Equipment Use Policies:

You may be assigned a computer for classroom use. You are to only use the computer in the designated websites. You are not to add or make any changes to the computer.

Calendar

Week #	Assignment
1	Unit 1 - Linear Equations
2	Unit 2 - Linear Systems and Matrices
3	Unit 2 - continued
4	Unit 3 - Linear Programming
5	Unit 4 - Simplex Method
6	Unit 4 - continued
7	Unit 5 - Sets and Counting Techniques

- 8 Unit 5 - continued
- 9 Unit 6 - Probability
- School Break
- 10 Unit 6 - continued
- 11 Unit 7 - Statistics
- 12 Unit 7 - continued
- 13 Review
- 14 Review
- 15 Additional Topic - Regression Models
- 16 Review
- 17 Semester Final Exam, Unit 9 - Trigonometry Review
- 18 Unit 9 (Additional Topic) - Trigonometry Review
- 19 Unit 10 - Limits and Continuity
- School Break
- 20 Unit 10 - Limits and Continuity, Definition of Derivative
- 21 Unit 10 - continued
- 22 Unit 11 - Derivatives (Computing derivatives, Chain Rule, Implicit Differentiation)
- 23 Unit 11 - continued
- 24 Unit 11 - continue
- 25 Unit 12 - Applications of Derivatives (Curve Sketching, Optimization, Related Rates)
- 26 Unit 12 - continued

- 27 Unit 12 - continued
- 28 Unit 13 - Trig Limits/Derivatives, L'Hopital's Rule
- School Break
- 29 Unit 14 - Integrals (Definite/Indefinite, Computing Integrals, by Substitution/Parts, Area, Differential Equations)
- 30 Unit 14 - continued
- 31 Unit 14 - continue
- 32 Unit 15 (Additional Topic) - Volumes of Solids of Revolution
- 33 Unit 16 - Applications of Integrals (Average Value, Probability Density Functions)
- 34 Unit 16 - continued
- 35 Unit 17 - Multivariable Calculus (3D coordinates, multivariate functions, partial derivatives, local extrema, optimization using Lagrange Multipliers)
- 36 Unit 17 - continued, Review
- 37 Review, Semester Final Exam

Extra Credit Policy:

Extra Credit is not available for this class. It is the belief of Rio Salado College that all work done for a class should receive regular credit and is more than sufficient to assess the understanding of material presented in the course.

Plagiarism Warning:

Plagiarism includes, but is not limited to, the use of paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling or sharing of term papers or other academic materials. Information gathered from the Internet and not properly identified is also considered plagiarism. We expect every student to produce his/her original, independent work. Any student whose work indicates a violation of the MCCC Academic Misconduct Policy (including cheating and plagiarism) can expect sanctions as specified in the college catalog (2.3.11), or online at the following

site: http://www.maricopa.edu/publicstewardship/governance/adminregs/students/2_3.php

Rio Salado College uses software that uncovers plagiarism from student to student and other data sources on the Internet. If a student is found to have plagiarized content, grade consequences will be applied in accordance with departmental policies.

Civility Policy:

The faculty of Rio Salado place a high value on the importance of general ethical standards of academic behavior and expect that communication between students and instructors or among students shall maintain the level of formality and mutual respect appropriate to any college teaching/learning situation. Language or behavior that is rude, abusive, profane, disruptive, or threatening will not be tolerated. Activity of this type is Academic Misconduct as defined in MCCCDC Policy AR 2.3.11. Students engaging in such behavior will be removed from the course with a failing grade. Additional sanctions may be applied pursuant to AR 2.3.11.

Refund Policy:

Refunds are not automatic. Students who drop courses within the refund period are eligible for a reimbursement of appropriate tuition and fees. Please see the refund policy online for deadlines and details.

Disability Statement:

Rio Salado College will make reasonable accommodations for persons with documented disabilities. Notify Disability Services and Resources and your instructor of any special needs. Contact Disability Services and Resources at (480) 517-8562.

Tuition Assistance is available to students enrolled in a Rio Salado College dual enrollment course who demonstrate financial need. Please refer to: <http://www.riosalado.edu/dual/>

The student is responsible for the information outlined in the syllabus. The student is also responsible for knowing the Rio Salado College policies in the college catalog and the student handbook. Please refer to: <http://www.riosalado.edu/dual/>

Course content and syllabus may vary from the course calendar listed above in order to meet the needs of the particular group in this course section.

Student Solution Center

Rio Salado College is dedicated to a quality learning experience and has provided the [Student Solution Center](#) webpage as a resource for students to raise issues to our attention. We look forward to the opportunity to provide an equitable solution for all involved parties. For grading or instructional issues, students should first contact their faculty member(s) in accordance with the [Instructional Grievance](#)

Process.

For non-instructional complaints, students may contact the Conduct & Community Standards team by telephone at 480-517-8749 or 480-517-8152, or email at communitystandards@riosalado.edu. Students may also contact their [state regulatory agency](#); the [Arizona SARA Council](#); and/or [the Higher Learning Commission](#) to escalate their concerns.