

College of Central Florida
MAC2311 Calculus I with Analytical Geometry (5 credits)
Section 30 (T/H 6PM- 8:15PM)
Fall 2022

Instructor: David Rau

Meeting Location: Building 7 Room 111

Office: 7-111(same as lecture)

E-mail : Raud@cf.edu

Office Hours

Monday	Tuesday	Wednesday	Thursday	Friday
	5PM - 6PM		5PM - 6PM	

TEXTBOOK: CALCULUS, Early Transcendental Functions (7th Edition)

Authors: Larson, Edwards

ISBN: 9781337552516

Required Materials: A graphing calculator is needed for this course. I fully recommend the TI83/84 calculator

DESCRIPTION An introduction to single variable calculus with applications. The course includes the study of functions, limits, continuity, differentiation and integration of algebraic, logarithmic and exponential functions, rates of change and curve sketching. Graphing calculator and/or algebraic system work is required in this course.

PREREQUISITE: MAC 1140 WITH A GRADE OF "C" OR BETTER OR A CLM SCORE OF AT LEAST 103 ALONG WITH MAC1114 WITH A GRADE OF C OR BETTER OR MAC1147 ONLY WITH A GRADE OF C OR BETTER.

Homework: Homework will be assigned for each section covered in class. Each student is expected to complete their assignments. If a student encounters difficulties with a problem(s), then the **student should refer his or her problem (s) to the instructor during class time or visit the instructor during office hours or get additional help at the Math Center.** The hours of the Math Center are listed as follows:

Math Center Hours (Room 7-106)

Monday	Tuesday	Wednesday	Thursday	Friday
8:00 am – 6:00 pm	8:00 am – 6:00 pm	8:00 am – 6:00 pm	8:00 am – 6:00 pm	8:00 am – 3:00 pm

LATE WORK: Homework will close after the exam date has passed. There will be NO opportunities for late work.

EXAMS: Students are required to take all in class exams. **NO MAKE-UP EXAMS WILL BE GIVEN UNDER ANY CIRCUMSTANCES. STUDENTS MUST SHOW WORK ON THE EXAMS FOR EACH QUESTION IN ORDER TO RECEIVE FULL CREDIT**

The grading breakdown is weighted as follows: HW: 20%
Exams : 55%
Final : 25%

*FINAL EXEMPTION FACTOR: **THERE WILL BE FOUR IN CLASS EXAM AND A FINAL EXAM. IF STUDENTS ARE SATISFIED WITH THE OVERALL AVERAGE OF THEIR FOUR EXAMS, THEY CAN CHOOSE NOT TO TAKE THE FINAL EXAM AND WILL EARN THE EQUIVALENT LETTER GRADE THAT IS ALIGNED WITH THE OVERALL AVERAGE OF THE FOUR EXAMS. OTHERWISE, THEIR AVERAGE WILL BE CALCULATED ON THE GRADING BREAK DOWN ABOVE.**

NOTE: THE FINAL EXAM MAY RELACE THE LOWEST GRADE ON THE INCLASS EXAMS

Grades: Grades are calculated based on the following procedure:

A	Excellent	90% and above	4.0 quality points
B+	Very Good	87%-89%	3.75 quality points
B	Good	80%-86%	3.0 quality points
C+	High Average	77%-79%	2.75 quality points
C	Average	70%-76%	2.0 quality points
D	Poor	60%-69%	1.0 quality points
F	Failure	59% and below	No quality points

MAC2311
Weekly Schedule

Week	Assignments	Comments
Week 1	Introduction Section 2.1, 2.2, 2.3	
Week 2	Sections 2.3, 2.4	
Week 3	Sections 2.5, 3.1	
Week 4	Sections 3.2, 3.3	Exam 1 will cover up to Section 3.3
Week 5	EXAM 1	
Week 6	Sections 3.4, 3.5	
Week 7	Sections 3.6, 3.7	
Week 8	Sections 4.1, 4.2, 4.3	
Week 9	Sections 4.4, 4.5, 4.6	
Week 10	EXAM 2 Section 4.7	Exam 2 covers up to 4.2
Week 11		
Week 12	Sections 4.8, 5.1, 5.2	
Week 13	EXAM 3	
Week 14	Sections 5.3, 5.4	
Week 15	Sections 5.4, 5.5, 5.7	
Week 16	Section 5.8 EXAM 4	
Week 17	Last week of classes	
	FINAL EXAM Tuesday Dec 6 6:00 PM-8:15PM	

THE FINAL EXAM WILL BE ON TUESDAY DECEMBER 6th DURING REGULAR CLASS TIME

Disclaimer: The Instructor reserves the rights to make any changes to these policies and procedures as well as the course outline as deemed necessary.

College Policies –Spring 2021

Academic Integrity – Cheating and/or plagiarism will not be tolerated and may result in an “F” for the course as well as disciplinary action under the Code of Student Conduct. A

student may be referred to an Academic Integrity Seminar. There will be a charge for this two-hour seminar, and attendance is required (see Student Handbook).

Access Services for Students with Disabilities – If you have a disability, serious medical condition or a learning disorder and want to request accommodations, it is your responsibility to register with the Office of Access Services and to provide verifiable documentation to Access Services as soon as possible. If eligible, Access Services will provide you with a notification of approved accommodations to give to your instructors at the beginning of the semester. For information see the Access Services webpage at <http://www.cf.edu/departments/sa/ss/access/>, contact access@cf.edu or call 352-854-2322, ext. 1580. Assistance for students is available at all CF locations, by appointment.

Classroom Decorum – Disruptive behavior will not be tolerated. Disruptive students will be asked to leave the classroom. Continuous disruptive behavior will result in withdrawal from the course and disciplinary action under the Code of Student Conduct (see Student Handbook).

Also please go on canvas to see the withdrawal dates and other college policies

MAC 2311 Calculus I With Analytical Geometry
Institutional Learning Outcomes and Course Objectives

Institutional Learning Outcomes

Learning Outcome	Quiz	Exam	Project	Classroom Activity
Quantitative and Analytical Reasoning: The student will understand and apply mathematical and scientific principles and methods.				
1. Perform accurate computations using order of operations with and without technology.	x	x		x
2. Identify and organize relevant information and complete the solution of an applied problem.	x	x		x
3. Interpret and communicate understanding of visual representations of data.	x	x		x
4. Demonstrate mathematical number sense and unit sense.	x	x		x

MAC 2311 Learning Objectives:

1. The student understands the concept of derivative geometrically, numerically, and analytically, and interprets the derivative as an instantaneous rate of change, or as the slope of the tangent line.

2. The student states, understands, and applies the definition of derivative.
3. The student finds the derivatives of functions, including algebraic, logarithmic, and exponential functions, their sums products quotients and compositions, including higher order derivatives.
4. The student finds the derivatives of implicitly-defined and inverse functions.
5. The student finds an equation for the tangent line to a curve at a point and a local linear approximation.
6. The student finds local and absolute maximum and minimum points, finds points of inflection of functions, understands the relationship between the concavity of f and the sign of f'' , and understands points of inflection as places where concavity changes.
7. The student solves optimization problems.
8. The student models rates of change, including related rates problems.
9. The student calculates the values of Riemann Sums over equal subdivisions.
10. The student interprets a definite integral as a limit of Riemann sums.
11. The student interprets a definite integral of the rate of change of a quantity over an interval as the change of the quantity over the interval, that is

$$\int_a^b f(x)dx = F(b) - F(a) \text{ where } F \text{ is an antiderivative of } f.$$

12. The student uses integration by substitution (or change of variable) to find values of integrals.
13. The student applies integration to model and solve problems in physical, biological, and social sciences, especially in solving differential equations