



FLORIDA ATLANTIC UNIVERSITY

MAC 2311-011 12493

Calculus Analytic Geometry 1

Date: Wednesday, Friday 10:00 AM - 11:50 AM

Building: Physical Science Bldg Boca **Room:** 113

4 Credit(s)

Spring 2025 - 1 Full Term

Instructor Information

Zvi Rosen

Email: rosenz@fau.edu

Office: SE 224

Office Hours: Thursday 12:00 PM - 2 PM in person, or on Zoom by appointment

rosenz.youcanbook.me.

Course Description

Calculus with Analytic Geometry 1

Gordon Rule, computational

Prerequisites: MAC 1147 or MAC 2210, or both MAC 1140 and MAC 1114, and pretest required; all courses with grades of "C" or better

In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of limits, derivatives, and definite and indefinite integrals of functions of one variable, including algebraic, exponential, logarithmic, and trigonometric functions, and applications. Topics will include limits, continuity, differentiation and rates of change, optimization, curve sketching, and introduction to integration and area. This is a General Education course.

Honors Calculus with Analytic Geometry 1 (Honors College [HC] version)

Gordon Rule, computational

Prerequisite: MAC 1147 or placement

In this course, students will develop problem solving skills, critical thinking, computational proficiency, and contextual fluency through the study of limits, derivatives, and definite and indefinite integrals of

functions of one variable, including algebraic, exponential, logarithmic, and trigonometric functions, and applications. Topics will include limits, continuity, differentiation and rates of change, optimization, curve sketching, and introduction to integration and area. This is a General Education course.

This is an in-person class. You must log into Canvas with your FAU ID and Password to access the materials and assignments in this course. If you do not know your FAU ID or Password, contact OIT for help.

This course is organized into modules by lecture date. Unless otherwise specified, each module opens at 7:00am on the day of the corresponding lecture. The course begins with the Start Here module, which will familiarize you with the organization and navigation of the course. The majority of assignments for this course are Worksheets/Homework and Pre-worksheet Quizzes. The worksheets are given out in class, worked on in class and collected at the end of class.

Prerequisites/Corequisites

Prerequisite(s): One of the following:

- MAC 1147 Graduate / Undergraduate (Minimum Grade of C)
- MAC 2210 Graduate / Undergraduate (Minimum Grade of C)
- MAC 1140 Graduate / Undergraduate (Minimum Grade of C)
and
MAC 1114 Graduate / Undergraduate (Minimum Grade of C)
- MPPTS (Minimum Grade of 075)
- MPF1 (Minimum Grade of 050)

Instructional Method

In-Person

Traditional concept of in person. Mandatory attendance is at the discretion of the instructor.

Required Texts/Materials

Calculus: Early Transcendentals

Authors: Stewart

Edition: 9th edition

Calculus**ISBN:** 9780357631478**Publisher:** Cengage Learning**Edition:** 9th**Calculus: Early Transcendentals****ISBN:** 9781337613927**Publisher:** Cengage Learning**Edition:** 9th**Calculus: Early Transcendentals****ISBN:** 9780357631478**Publisher:** Cengage Learning**Edition:** 9th

Learning Assistant (LA) Program

This section will incorporate the LA Program. LAs are pedagogically trained, fellow undergraduate students who have been successful in this subject. This LA based curriculum is designed to allow students the opportunity to learn by doing. LAs will assist students in actively learning and critically thinking about course content through collaborative group work built into the course.

LA's for this class:

LA: Chris Adokou	LA: Maya Venkatesh
Office Hours (front of MLC - GS211):	Office Hours (front of MLC - GS211):
Tue 11 am - 12 pm	Mon 12 pm - 2 pm
Wed 3 pm - 4pm	Wed 1 pm - 2 pm
Thu 2 pm - 3 pm	Fri 9 am - 10 am

LA Office Hours (possible return of up to 5 points on mastery grade)

Students will be given the opportunity to raise their exam grade by up to 6 points (maximum score 100%) by attending LA sessions in front of the MLC (hours are listed above). Guidelines to receive credit are as follows:

- Each week, student must engage and participate in at least ONE LA session for a minimum of 30 minutes. LAs will be providing a list of problems for students to work on during these sessions. Student will not receive the extra points simply for showing up. Engage and participate means the student must have meaningful conversation with the LA about course

material OR work with other students in the session to understand course material at the direction of the LA. Simply attending an LA session does NOT suffice for credit.

- Attendance each week earns the student 0.5 points toward the semester's mastery grade (capping at 5 allowable points). The total mastery score has a maximum of 57 points.
- LAs will inform the instructor about qualifying attendance points.
- If you are unable to attend any of the LA Office hour sessions, please contact your instructor by the end of week 2 to discuss other arrangements. Documentation may be required.

Course Objectives/Student Learning Outcomes

Student Learning Outcomes:

- Students will calculate a limit, derivative, or integral using appropriate techniques.
- Students will determine the continuity and differentiability of a function.
- Students will use limits and derivatives to analyze relationships between the equation of a function and its graph.
- Students will apply differentiation techniques to model and solve real world problems.
- Students will use integrals and the Fundamental Theorem of Calculus to analyze the relationship between the integral of a function and the related area.

Faculty Rights and Responsibilities

Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise. To ensure these rights, faculty members have the prerogative to:

- Establish and implement academic standards.
- Establish and enforce reasonable behavior standards in each class.
- Recommend disciplinary action for students whose behavior may be judged as disruptive under the Student Code of Conduct [University Regulation 4.007](#).

Disability Policy

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available

for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/.

Course Evaluation Method

This LA based curriculum is designed to allow students to **learn** calculus by **doing** calculus. Each in-class lesson consists of approximately 50-60 minutes of lecture followed by approximately 50-60 minutes of group work. Students will be given worksheets with applications and practical exercises related to the new material and will work through these exercises in small groups. Worksheets MUST be turned in at the end of each class. **Students are expected to be present for the entire class to receive credit for the worksheet/homework** (lecture and small group) and to engage with each other when working in small groups. Missing class or leaving early will result in a 0 for that worksheet.

Worksheet Assignments (total 15%):

For each section of the textbook, students will receive a worksheet during the group work portion of class. Students should make use of LA group work sessions to work together on these worksheets. Worksheets are turned in at the end of each class and will be uploaded to Gradescope via Canvas and graded by the course grader. Missing class or leaving early will result in a 0 for that worksheet.

Pre-worksheet Quiz (total 2%):

For each textbook section, students will be given a pre-worksheet (found in the appropriate module). The pre-worksheet contains mostly prerequisite reminders and requires you to read material in the textbook before we cover it in the next lecture. A pre-worksheet quiz can be found in the appropriate Canvas module and will be due at the start of the next class. **You do not need to turn in the actual pre-worksheet** as questions for the quiz are taken DIRECTLY from it. Therefore, you should complete the pre-worksheet before attempting the quiz. You will have two attempts, 15 minutes each attempt, and the best score will be kept.

Mastery Exams (total 57%):

There will be six mastery exams over the course of the semester. Each question will be aimed at demonstrating mastery of a skill on the list of "Mastery Question Types." For each question, you will receive a grade of **M**, mastered, **P**, progressing, or **X**, not assessable. These results will be recorded as 5, 1, or 0 respectively in your Canvas Gradebook. No books, notes, or calculators are allowed during the exams.

More details about the grading system will be given in a separate document. Your mastery exam grade will be the percentage of Mastery Topics that you have mastered by the end of the semester.

Cumulative Final Exam (total 26%):

The final exam will be given on Saturday, April 26, 2025 from 10:30 AM - 1 PM, in conjunction with all other sections of Calculus I. No books, notes, or calculators are allowed during the final. The final exam is cumulative, and there will be a review packet and live review sessions to help students prepare.

Additional Assigned Textbook Problems

Assigned textbook problems can be found in each Canvas module. Students are expected to work on these problems on their own. Additional textbook problems are not turned in BUT should be worked through in order to learn the material and be successful on exams.

To be clear, all worksheets are turned it at the end of class. All pre-worksheet quizzes are due at the start of the lecture covering that material. Late assignments are graded as a 0 unless you have a documentable reason.

Code of Academic Integrity

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#).

Attendance Policy Statement

Students are expected to attend all their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations, or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances, and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence,

ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

Regular attendance during lectures, LA sessions, and LA office hours is expected. To minimize disruption to the learning environment, you are requested to arrive on time and not leave until the end of class. Additionally, you must be in attendance to receive the worksheets for each lecture and therefore, poor attendance will negatively affect your worksheet grade.

Religious Accommodation Policy Statement

In accordance with the rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs regarding admissions, registration, class attendance, and the scheduling of examinations and work assignments. University Regulation 2.007, Religious Observances, sets forth this policy for FAU and may be accessed on the FAU website at www.fau.edu/regulations.

Any student who feels aggrieved regarding religious accommodations may present a grievance to the executive director of The Office of Civil Rights and Title IX. Any such grievances will follow Florida Atlantic University's established grievance procedure regarding alleged discrimination.

Time Commitment Per Credit Hour

For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of out-of-class student work for each credit hour. Equivalent time and effort are required for Summer Semesters, which usually have a shortened timeframe. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time and effort.

Course Grading Scale

Letter Grade	Letter Grade
A	90 - 100%
A-	88 - 89%
B+	85 - 87%
B	80 - 84%
B-	77 - 79%
C+	75 - 76%
C	70 - 74%

Letter Grade	Letter Grade
D	55 - 69%
F	Below 55

Tentative mastery exam (ME) dates

ME # 1 1/29/25

ME # 2 2/12/25

ME # 3 2/26/25

ME # 4 3/19/25

ME # 5 4/02/25

ME # 6 4/16/25

Final Exam 4/26/25

If the exam dates need to be moved, new dates will be announced during class and via Canvas Announcement.

Grade Distribution

In Class Worksheets	15%
Pre-worksheet Quizzes	2%
Mastery Topics	57%
Final Exam	26%

Grade Appeal Process

You may request a review of the final course grade when you believe that one of the following conditions apply:

- There was a computational or recording error in the grading.
- The grading process used non-academic criteria.
- There was a gross violation of the instructor's own grading system.

[University Regulation 4.002](#) of the University Regulations contains information on the grade appeals process

Policy on Make-up Tests, Late work, and Incompletes

Late Assignments Policy

Students are responsible for arranging to make up work missed due to a legitimate excuse, such as family funerals, military obligations, court-imposed legal obligations, religious observation, or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily within 48 hours. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence. Any excusable absence must be documented by a verifiable source, and the instructor must be notified AT LEAST ONE WEEK prior to the test date.

Pre-worksheet and Worksheet assignments that are late without documentable reason will be graded as a zero. Please communicate with your instructor within 48 hours of the due date and a makeup arrangement date MAY be set (at the discretion of the instructor). If communication occurs more than 48 hours after the due date, no arrangement will be made, and the score will remain zero.

Exam Make-up Policy

If a student misses a test due to an emergency, the instructor must be notified WITHIN 24 HOURS after the test, and written verifiable documentation is required. Students will not be penalized for absences due to participation in University-approved activities provided they notify their instructor and make appropriate arrangements well in advance of any test. Similarly, reasonable accommodations will be made for students participating in a religious observance. Travel plans are NOT emergencies. Exams missed without approved documentation will receive a grade of 0 (zero).

Incomplete Grade Policy

The University policy states that a student who is passing a course but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete (I). The assignment of the I grade is at the discretion of the instructor but is allowed only if the student is passing the course.

Artificial Intelligence Preamble

FAU recognizes the value of generative AI in facilitating learning. However, output generated by artificial intelligence (AI), such as written words, computations, code, artwork, images, music, etc., for example, is drawn from previously published materials and is not your own original work.

FAU students are not permitted to use AI for any course work unless explicitly allowed to do so by the instructor of the class for a specific assignment. [**\[Policy 12.16 Artificial Intelligence\]**](#)

Class policies related to AI use are decided by the individual faculty. Some faculty may permit the use of AI in some assignments but not others, and some faculty may prohibit the use of AI in their course entirely. In the case that an instructor permits the use of AI for some assignments, the assignment instructions will indicate when and how the use of AI is permitted in that specific assignment. It is the student's responsibility to comply with the instructor's expectations for each assignment in each course. When AI is authorized, the student is also responsible and accountable for the content of the work. AI may generate inaccurate, false, or exaggerated information. Users should approach any generated content with skepticism and review any information generated by AI before using generated content as-is.

If you are unclear about whether or not the use of AI is permitted, ask your instructor before starting the assignment.

Failure to comply with the requirements related to the use of AI may constitute a violation of the [**Florida Atlantic Code of Academic Integrity, Regulation 4.001.**](#)

Proper Citation: If the use of AI is permitted for a specific assignment, then use of the AI tool must be properly documented and cited. For more information on how to properly cite the use of AI tools, visit <https://fau.edu/ai/citation>

Policy on the Recording of Lectures

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject.

Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited.

Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

AI Language Specific To This Course

AI Prohibited: The use of AI to assist in any work assigned in this specific course is prohibited.

Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual therapy, group therapy, and crisis services, to name a few - offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

Student Support Services and Online Resources

- [Center for Learning and Student Success \(CLASS\)](#)
- [Counseling and Psychological Services \(CAPS\)](#)
- [FAU Libraries](#)
- [Math Learning Center](#)
- [Office of Information Technology Helpdesk](#)
- [Center for Global Engagement](#)
- [Office of Undergraduate Research and Inquiry \(OURI\)](#)
- [Science Learning Center](#)
- [Speaking Center](#)
- [Student Accessibility Services](#)
- [Student Athlete Success Center \(SASC\)](#)
- [Testing and Certification](#)
- [Test Preparation](#)
- [University Academic Advising Services](#)
- [University Center for Excellence in Writing \(UCEW\)](#)
- [Writing Across the Curriculum \(WAC\)](#)

FREE MATH TUTORING

The MLC provides the following FREE tutoring for all FAU students in their math courses:

- **ONLINE:** Please see <https://www.fau.edu/mlc/remote/> for available days/times and links to online tutoring. All tutoring is drop-in (no appointments are needed) and is available via Zoom.
- **IN PERSON:**
 1. Drop-in tutoring in the MLC GS211 during all hours of operation
 2. Monday – Thursday: 10am – 5pm
 3. Friday: 10am – 4pm
 4. Small group tutoring by appointment is available (check the MLC webpage for instructions)

Please go to <https://www.fau.edu/mlc/> for more information OR email mlc@fau.edu should you need further information or have questions.

Course Topical Outline

Dates	Material Covered - Wednesday	Material Covered - Friday
Week 1: 1/6 – 1/10	Syllabus, Calculus Concept Inventory, 2.1	2.2 - 2.3
Week 2: 1/13 – 1/17	2.5	2.6
Week 3: 1/20 – 1/24	2.7	2.8
Week 4: 1/27 – 1/31	ME #1	3.1 - 3.2
Week 5: 2/3 - 2/7	3.3	3.4
Week 6: 2/10 - 2/14	ME #2	3.5
Week 7: 2/17 - 2/21	3.6	3.9
Week 8: 2/24 - 2/28	ME #3	4.1
Week 9: 3/3 - 3/7	Spring Break - no class	Spring Break - no class
Week 10: 3/10 - 3/14	4.3	4.5
Week 11: 3/17 - 3/21	ME #4	4.2, 4.4
Week 12: 3/24 - 3/28	4.7	4.9
Week 13: 3/31 - 4/4	ME #5	5.1
Week 14: 4/7 - 4/11	5.2	5.3 - 5.4
Week 15: 4/14 - 4/18	ME #6	5.5
Week 16: 4/21 - 4/25	Reading Day - no class	

Final Exam: Saturday, April 26, 2025 from 10:30am - 1pm

Location: TBD

Title IX Statement

In any case involving allegations of sexual misconduct, you are encouraged to report the matter to the University Title IX Coordinator in the Office of Civil Rights and Title IX (OCR9). If University faculty become aware of an allegation of sexual misconduct, they are expected to report it to OCR9. If a report is made, someone from OCR9 and/or Campus Victim Services will contact you to make you aware of available resources including support services, supportive measures, and the University's grievance procedures. More information, including contact information for OCR9, is available at <https://www.fau.edu/ocr9/title-ix/>. You may also contact Victim Services at victimservices@fau.edu or 561-297-0500 (ask to speak to an Advocate) or schedule an appointment with a counselor at Counseling and Psychological Services (CAPS) by calling 561-297-CAPS.