

# Calculus with Analytic Geometry I

MAC 2311 Lecture

MWF P3 9:35-10:25

CAR 100

4 Credit Hours

Spring 2023

Instructor: Dr. Alexander York

Office: LIT437

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Office Hours: TBD

Teaching Assistants	Office	Office Hours	Email
TBD	TBD	TBD	TBD

Class Number	Section Number	Time	Location	TA
TBD	TBD	TBD	TBD	TBD

**Prerequisites** Appropriate score on the ALEKS placement assessment, or MAC 1147 (or its equivalent, both MAC 1140 and MAC 1114) with a C (2.0) or better.

**Course Description** MAC 2311 is the first in the three-semester sequence MAC 2311, MAC 2312, and MAC 2313 covering basic calculus. Intended topics will include functions and inverse functions, limits, continuity, differentiation of algebraic and trigonometric functions; applications of derivatives; integration and the fundamental theorem of calculus; applications of definite integrals.

**General Education Requirement** A minimum grade of C (not C-) in MAC 2311 satisfies four credits of general education mathematics requirement.

<https://undergrad.aa.ufl.edu/general-education/gen-ed-program/subject-area-objectives/>

**Courses Goals** This course will introduce students to the ideas of limit, derivative and integral for functions of a single variable. Upon completion, students will be able to understand the theory as well as applications. The course will prepare students for MAC2312.

**Required Materials** There are no required textbooks for this course. We will make use of a free online textbook available at [Openstax Calculus Volume 1](#). Also, in this course we will use the online platform Xronos which has been developed at UF and is supported by the Office of the Provost and the College of Liberal Arts and Sciences. Xronos is only accessible through Canvas. More details will be given in class.

**E-Learning Canvas:** E-learning canvas, a UF course management system, is located at [elearning.ufl.edu](http://elearning.ufl.edu). Use your Gatorlink username and password to login. All course information including your grade, course homepage, syllabus, lecture outlines, office hours, test locations, mail tool, discussion forum, free help information, etc. can be accessed from this site.

You are responsible for verifying that your grades are accurate. **You have one week after a score has been posted to contact your instructor if you believe there has been a recording error. There is no grade dispute at the end of the semester.**

**Please note:** Important course information is clearly communicated in this course guide, the MAC 2311 homepage and links in Canvas, and announcements in lecture and discussion. Due to the volume of email received by the instructor and TAs, we cannot reply to each request for this well publicized information. If you cannot find your answer in the resources above, there is also a **Discussion Forum** available in Canvas. Please use this to post questions and to supply answers to your fellow students.

#### **E-mail**

All communication between student and instructor as well as between students should be respectful and professional. All official class communications will be sent only to the ufl.edu addresses. Students are responsible for checking their email accounts regularly and acquiring any class information sent to their ufl.edu account. Please be sure to sign your name to your e-mails.

#### **Lectures**

Students are expected to come to each lecture prepared. That means reading and understanding each lectures material in the online book as well as taking appropriate notes in class and asking questions both in and out of class as needed. Outlines to the course lectures notes (with different examples) are available in PDF format on Canvas. You are encouraged to make use of the resources available to you in order to help you succeed in this course.

#### **Discussion Sections**

Discussion sections meet once a week on either Tuesday or Thursday. These meetings give you a valuable opportunity for open discussion of the lecture material and assigned problems in a smaller class setting. **Attendance in discussion is required as it is where assessment of your skills will take place.** However, one period per week is generally not adequate to answer all questions. Be sure to take advantage of the opportunities outside of class for additional help.

Your main resource is your discussion leader. They will be available during office hours (or by appointment) to answer your questions about the course material. Your TA is responsible for grading and recording all quiz scores. You must retain all returned papers in case of any discrepancy with your course grade. As mentioned above, **you should check Canvas regularly and consult with your TA if you have any questions about recorded grades for quizzes. All grade concerns must be taken care of within one week of receiving the score.**

If you have concerns about your discussion class which cannot be handled by your TA please contact your instructor.

#### **Class Participation**

Attendance in class both in lecture and discussion section is highly recommended. Students who come to class and participate are more likely to do well in the course. Participation will be a part of your grade and will be calculated based upon completion of post-lecture quizzes. It will be a total of 5% of your grade.

Further, following university policy, you may expect a penalty (additional lost points) for attending fewer than 75% of your classes.

#### **Online Homework**

In this course we will be using the online platform Xronos which is free of charge and will be explained during class. Online homework assignments will be assigned daily and must be completed by the specified due date. There will be a total of three dropped homework grades at the end of the semester.

All assignments will have posted due dates and these due dates will not be extended under any circumstance.

Personal computer issues, will NOT be a reason to offer any type of extension.

**Discussion  
Quizzes**

With exception of the first week of classes, there will be weekly quizzes during your discussion, based on the homework. Quizzes make up a total of 10% of your grade. The quizzes will be administered by your TA and any questions about the grades should be directed to your TA.

**Tests**

Mid-term exam dates are as follows:

TBD

Final, TBD

There will be three (paper and pencil) mid-terms throughout the semester. The midterms will consist of two parts. Part 1 will be multiple choice questions. Part 2 will consist of free response problems.

**These exams are assembly exams and will take place in the evening during examination periods, from 8:30 to 10:00pm.**

The FINAL EXAM will take place on TBD. Make a note of this now and please inform any interested parties who may be making plans for you around that time (such as purchasing plane tickets, travel plans, etc.).

**Make-up Policy**

**UF Attendance Policies** - UF has outlined acceptable reasons for absence from or failure to participate in classes at <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.

Following these guidelines students are allowed a reasonable amount of time to make up the missed assessments from during class time. In our course this **only** covers assembly exams and discussion quizzes. The class policy is outlined for both assembly exams and discussion quizzes below.

**Exam Conflicts - UF during Term Assembly Exam Policy** - (<https://catalog.ufl.edu/UGRD/academic-regulations/examination-policies/>):

“Exams may be held Monday - Friday from 8:20-10:10PM (periods E2-E3) for the fall and spring terms. If other classes are scheduled during an exam time, instructors must provide make-up class work for students who miss class because of an assembly exam. If two exams are scheduled at the same time, assembly exams take priority over time-of-class exams. When two assembly exams conflict, the higher course number takes priority. Instructors giving make-up exams will make the necessary adjustments.”

If MAC 2311 is the lower course number, students must inform their instructor in person at least ONE WEEK in advance of the exam date so that appropriate accommodations can be made. Otherwise it may not be possible to reschedule.

**Make-up Exams** - Students who miss an exam due to illness, severe family emergency, and/or severe weather as outlined in the UF Attendance Policies and wish to make up the exam must contact their instructor through the Dean of Students office CARE team at <https://care.dso.ufl.edu/instructor-notifications/> with appropriate documentation. Once the instructor receives notice from the CARE team covering the dates during which the exam took place the student will be signed up by their instructor to take a makeup exam.

Students who miss an exam due to other reasons as outlined in the UF Attendance Policies (e.g. special curricular requirements, religious holidays, official university activities, etc) must contact their instructor either through email or in person at least ONE WEEK in advance of the exam.

All makeup exams will take place at the end of the semester on TBD.

**Make-up Discussion Quizzes** - Students who miss a discussion quiz due to illness, severe family emergency, and/or severe weather as outlined in the UF Attendance Policies and wish to make up the quiz must contact their instructor through the Dean of Students office CARE team at <https://care.dso.ufl.edu/instructor-notifications/> with appropriate documentation. Once the instructor receives notice from the CARE team covering the dates during which the quiz took place the student will be able to attend to make up a discussion quiz.

Students who miss a discussion quiz due to other reasons as outlined in the UF Attendance Policies (e.g. special curricular requirements, religious holidays, official university activities, etc) must contact their instructor either through email or in person at least ONE WEEK in advance of the quiz.

Quiz makeups will take place the following days of the Spring 2023 semester during Periods 6 and 7 (12:50-2:45PM): TBD.

In addition, two discussion quiz grades will be dropped at the end of the semester.

**Make-up Xronos HW** - There are no make-ups as a certain number of these assignments are dropped at the end of the semester.

**Make-up class participation points** - There are no make-ups as a certain number of these assignments are dropped at the end of the semester.

## **Incomplete**

Students who are currently passing a course but are unable to complete the course because of illness or emergency may be granted an incomplete grade of I which will allow the student to complete the course within the first two weeks of the following semester. See the policy on <http://www.math.ufl.edu/fac/incompletes.html>. If you meet the criteria, you must see your instructor before finals week to be considered for an I. An I only allows you to make up your incomplete work, not redo your work.

## **Grading**

Xronos Homework: 10%

Discussion Quizzes: 10%

Participation: 5%

Midterm Exam Average (3 mid-term exams): 50%

Final Exam: 25%

Your grade will be calculated according to the scale below. Scores within 0.5% of the next cutoff will round up.

### Grading Scale

90-100 A	87-90 A-	84-87 B+	80-84 B
77-80 B-	74-77 C+	67-74 C	64-67 C-*
60-64 D+	57-60 D	54-57 D-	0-54 E

\***Note** A grade of C- DOES NOT give Gordon Rule or General Education credit!

For those take the S-U option: 67-100 S 0-67 U

Approval of the S-U option must be obtained from your instructor. The deadline for filing an application with the Registrar and further restrictions on the S-U option are given in the Undergraduate Catalog.

For a complete explanation of current policies for assigning grade points, refer to the UF undergraduate catalog:

[catalog.ufl.edu/ugrad/regulations/info/grades.aspx](http://catalog.ufl.edu/ugrad/regulations/info/grades.aspx)

**NOTE: We will not review disputed points at the end of the semester. All grade concerns must be settled within one week of the return of the paper.**

### Free Help

In addition to attending your discussion section regularly and visiting your discussion leader, lecture, or the course coordinator, during their office hours, the following aids are available.

- The Math Help Center in Little 215 is open for drop-in assistance with homework Monday through Friday from 10:40 to 3:50. It is staffed by mathematics graduate students and undergraduate assistants. Please note that this space is not designed for intense one-on-one tutoring, but rather as a resource for quick questions and explanations. You should not expect the staff to help you if you have not at least begun your homework and have specific questions. Moreover, they absolutely will not assist you with quizzes or any other such work.
- The Teaching Center Math Lab, located in SE Broward Hall, is a tutorial service staffed by trained math and science students to provide help with your calculus questions and homework. Tutors will be glad to provide guidance on specific problems after you have attempted them on your own. You may want to attend different hours to find tutors with whom you feel most comfortable. You can also request free one-on-one tutoring.

The math lab also offers a more structured tutoring program for MAC 2311, called **supplemental instruction**. A tutor, assigned specifically to MAC 2311, provides weekly help sessions. More details will be provided in lecture.

In addition, the Broward teaching center tutors hold reviews on the evenings before each exam. They also provide videos of review and sample test problems. Check the webpage, <https://academicresources.clas.ufl.edu/tutoring/>, for a map of the location, tutoring hours, and test review dates and locations. **All students are encouraged to use the teaching center.**

- Office of Academic Support offers free one-on-one and small group tutoring sessions to an UF students. See <http://oas.aa.ufl.edu/tutoring.aspx> for details.
- Textbooks and solutions manuals are located at reserve desks at Marston Science Library.
- Private Tutors: If after availing yourself of these aids, you feel you need more help, you may obtain a list of qualified tutors for hire at [www.math.ufl.edu](http://www.math.ufl.edu). Search "tutors".
- The Counseling Center has some informative information on developing math confidence. Go to <http://www.counseling.ufl.edu/cwc/DevelopingMath-Confidence.aspx> for information on math confidence and information on joining the Academic Confidence Group.

### **Calculators**

Calculators are **NOT** permitted on exams and discussion assignments. Please avoid using a calculator on homework as it will not help you prepare for the exams.

### **Cell Phones**

Use (defined as having one physically in your hand) of a cell phone during a test or quiz will be considered contact with another person and will be viewed as a form of academic dishonesty because we cannot be assured in such a circumstance that you have not taken a picture of the test/quiz or sent a text message to someone. Thus, do not touch your cell phone during a test or quiz. **Wait until after you have left the room and are finished with the test/quiz to use it.**

### **Music Players**

iPods and other music players are not to be used during class (including while taking tests and quizzes). Having one out during a test or quiz will result in a grade of zero and possible disciplinary action.

### **Students with Learning Disabilities**

Students requesting class and exam accommodations must first register with the Dean of Students Office Disability Resource Center (DRC), <https://disability.ufl.edu/get-started/>. That office will provide a documentation letter via email to your instructor. This must be done as early as possible in the semester, **at least one week before the first exam**, so there is adequate time to make proper accommodations.

### **Diversity and Inclusion**

The Mathematics Department is committed to diversity and inclusion of all students. We acknowledge, respect, and value the diverse nature, background and perspective of students and believe that it furthers academic achievements. It is our intent to present materials and activities that are respectful of diversity: race, color, creed, gender, gender identity, sexual orientation, age, religious status, national origin, ethnicity, disability, socioeconomic status, and any other distinguishing qualities.

## **Academic Honesty Guidelines**

All students are required to abide by the Academic Honesty Guidelines which have been accepted by the University. The academic community of students and faculty at the University of Florida strives to develop, sustain and protect an environment of honesty, trust, and respect. Students are expected to pursue knowledge with integrity. Exhibiting honesty in academic pursuits and reporting violations of the Academic Honesty Guidelines will encourage others to act with integrity. Violations of the Academic Honesty Guidelines shall result in judicial action and a student being subject to the sanctions in paragraph XIV of the Student Code of Conduct. The conduct set forth hereinafter constitutes a violation of the Academic Honesty Guidelines (University of Florida Rule 6C1-4.017).

The Mathematics Department expects you to follow the Student Honor Code. We are bound by university policy to report any instance of suspected cheating to the proper authorities. You may find the Student Honor Code and read more about student rights and responsibilities concerning academic honesty at the link [www.dso.ufl.edu/sccr/](http://www.dso.ufl.edu/sccr/).

## **In-Class Recording**

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040.

## **Evaluations**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

## **Important Spring 2023 Academic Dates and Deadlines**

Classes Begin	Monday, January 9
Late Registration	Monday, January 9 - Friday, January 13 (11:59pm)
Drop Deadline (last day for full refund)	Friday, January 13 (11:59pm)
Add Deadline	Friday, January 13 (11:59pm)
<b>Withdrawal with 25% Refund</b>	Friday, February 3
<b>Withdrawal Deadline</b>	Friday, April 14 (11:59pm)
Classes End	Wednesday, April 26

### Holidays

MLK Jr. Day	Monday, January 16
Spring Break	Saturday, March 11 - Saturday, March 18



## Weekly Schedule

<b>Week 1</b>			
1/9	Monday	X	Introduction (Syllabus, Online Review)
1/11	Wednesday	L1	The Limit of a Function
1/13	Friday	L1	The Limit of a Function

<b>Week 2</b>			
1/16	Monday	X	MLK Jr. Day - NO CLASSES
1/18	Wednesday	L2	Calculating Limits Using Limit Laws; Squeeze Theorem
1/20	Friday	L2	Calculating Limits Using Limit Laws; Squeeze Theorem

<b>Week 3</b>			
1/23	Monday	L3	Continuity: definitions, examples, Intermediate Value Theorem
1/25	Wednesday	L4	Limits at Infinity; Horizontal Asymptotes
1/27	Friday	L5	Derivatives and Rates of Change

<b>Week 4</b>			
1/30	Monday	L5	Derivatives and Rates of Change
2/1	Wednesday	L6	The Derivative as a Function
2/3	Friday	L6	The Derivative as a Function

<b>Week 5</b>			
2/6	Monday	X	Review for Exam 1
2/8	Wednesday	L7	Derivatives of Polynomials and Exponential Functions
2/10	Friday	L8	The Product and Quotient Rules

<b>Week 6</b>			
2/13	Monday	L9	Derivatives of Trigonometric Functions
2/15	Wednesday	L10	The Chain Rule
2/17	Friday	L10	The Chain Rule

<b>Week 7</b>			
2/20	Monday	L11	Implicit Differentiation
2/22	Wednesday	L11	Implicit Differentiation
2/24	Friday	L12	Derivatives of Logarithmic Functions; Logarithmic Differentiation

<b>Week 8</b>			
2/27	Monday	L13	Applications of Rates of Change
3/1	Wednesday	L14	Related Rates
3/3	Friday	L14	Related Rates

<b>Week 9</b>			
3/6	Monday	X	Review for Exam 2
3/8	Wednesday	L15	Linear Approximations and Differentials
3/10	Friday	L16	Maximum and Minimum Values; Fermat's Theorem; Critical Points

<b>Week 10</b>			
3/13	Monday	X	Spring Break - NO CLASSES
3/15	Wednesday	X	Spring Break - NO CLASSES
3/17	Friday	X	Spring Break - NO CLASSES

<b>Week 11</b>			
3/20	Monday	L17	The Mean Value Theorem
3/22	Wednesday	L18	How Derivatives Affect the Shape of a Graph
3/24	Friday	L18	How Derivatives Affect the Shape of a Graph

<b>Week 12</b>			
3/27	Monday	L19	Indeterminate Forms and L'Hopital's Rule
3/29	Wednesday	L20	Summary of Curve Sketching
3/31	Friday	L20	Summary of Curve Sketching

<b>Week 13</b>			
4/3	Monday	L21	Optimization Problems
4/5	Wednesday	L21	Optimization Problems
4/7	Friday	L22	Antidervatives

<b>Week 14</b>			
4/10	Monday	X	Review for Exam 3
4/12	Wednesday	L23	Areas and Distances
4/14	Friday	L24	The Definite Integral

<b>Week 15</b>			
4/17	Monday	L25	The Fundamental Theorem of Calculus
4/19	Wednesday	L26	The Net Change Theorem
4/21	Friday	L27	The Substitution Rule

<b>Week 16</b>			
4/24	Monday	L27	The Substitution Rule
4/26	Wednesday	X	Review for Final Exam

TBD	TBD	F	Final Exam
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Note: Information in this syllabus is subject to change. Any changes will be clearly announced in class or through e-mail.