

**MAC 2312: Calculus with Analytic Geometry II**  
 Spring 2021      Credit Hours: 4  
 Dr. Caelan Wang      Office Hours: MWF 1:30 - 2:30pm via Zoom

**Teaching Assistant Information**

Name	Office Hours	Email	Sections
Mario Midence Oronex	TBA	nc12mmid@ufl.edu	14755, 28717, 14811, 28768
Rishabh Sarma	TBA	rishabh.sarma@ufl.edu	14731, 28771, 14754, 28773
Richard Krogman	TBA	richard.krogman@ufl.edu	14844, 28800, 14845, 28807

**Class Times**

Sections	Day	Period	Time
14755, 28717, 14811, 28768	MWF	3	9:35am - 10:25am
14731, 28771, 14754, 28773	MWF	4	10:40am - 11:30am
14844, 28800, 14845, 28807	MWF	5	11:45am - 12:35pm

**Discussion Section TAs and Times**

Section	Day	Period	Time	Teaching Assistant
Sections 14755 & 28717	T	2	8:30am - 9:20am	Mario Midence Oronex
Sections 14811 & 28768	T	3	9:35am - 10:25am	Mario Midence Oronex
Sections 14731 & 28771	T	3	9:35am - 10:25am	Rishabh Sarma
Sections 14754 & 28773	T	4	10:40am - 11:30am	Rishabh Sarma
Sections 14844 & 28800	T	6	12:50pm - 1:40pm	Richard Krogman
Sections 14845 & 28807	T	7	1:55pm - 2:45pm	Richard Krogman

**NOTE:** All times given in this syllabus and in the course are in the US Eastern Time Zone.

**Prerequisites:** MAC 2311 credit with a C (2.0) or better.

**Course Description:** MAC 2312 is the second in the three-semester sequence MAC 2311, MAC 2312, and MAC 2313 covering basic calculus. Intended topics will include integration techniques, volume of solids, infinite series, and parametric and polar equations.

A minimum grade of C (not C-) in MAC 2312 satisfies the 4 credit hours of general education requirement and also satisfies the pure math portion of the state Writing/Math requirement.

### **Student Learning Outcomes (SLO):**

#### I Content

- Master the techniques of the integration.
- Introduce the infinite sequences and series and the concepts of convergence.
- Develop the techniques of tests for convergence.
- Introduce power series.
- Introduce parametric equations and polar coordinates.

#### II Critical Thinking

- Apply techniques of integration and critical thinking effectively to solve applied problems including volumes of solids and volumes of revolution.
- Construct series representations of functions using the geometric series model and the Taylor theorem.
- Using series representation to approximate function values, perform integration and approximate definite integrals.
- Apply the Fundamental Theorem of Calculus to the evaluation of arc length of parametric equations, evaluate tangent lines to parametric equations and finding area enclosed in a polar region.

#### III Communication

- Communicate mathematical findings clearly and effectively using written and/or graphic forms.

These SLOs are assessed through participation, weekly discussion quizzes, homework assignment, three semester exams and final exam.

**Required Material:** There are no required textbooks for this course. We will make use of a free online textbook available at [Openstax Calculus Volume 2](#).

You will need regular access to a computer/device, webcam, and the internet in order

to complete the required assessments and attend the required meetings for this course. In particular, you must have a device that supports the latest version of Zoom (used for class meetings and discussions) and Google Chrome (used for exams). If any of those materials are unavailable to you see the section on Free Help/Resources and/or contact your instructor. Personal computer/device issues will NOT be an excuse to miss class meetings and/or assessments.

**E-Learning Canvas:** [E-Learning Canvas](#) is a UF course management system where all course information will be posted. Use your Gatorlink username and password to login. Your grade, course homepage, syllabus, lecture outlines, office hours, exam information, 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 TA 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.

**Zoom:** The class meetings of the online sections, ALL discussions, and office hours with your instructor or TA will be facilitated through the use of Zoom. As a UF student you already have a UF Zoom account created for you using your Gatorlink login and password. You will NEED to use this account to access any of the Zoom meetings in this course. In order to attend each class meeting and discussion meeting you will be required to register for each collection of meetings once (once for class meetings and once for discussion).

Proper use of the hand raise feature and chat is expected when the instructor or TA is talking/presenting so you do not interrupt the lecture/discussion.

**Communication:** All communication between student and instructor and between students should be respectful and professional. All official class communications will be sent only via Canvas Inbox messages. Students are responsible for acquiring, checking their Canvas Inbox and email accounts regularly.

I will check and respond to Canvas Inbox messages and emails on all business days between 9am to 4:30pm, and I aim to respond to all messages within 2 business days.

**Wellbeing:** If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, I strongly encourage you to seek support. The [Counseling and Wellness Center](#) provides a list of on-campus and local resources to support various populations.

**Diversity and Inclusion:** It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed

as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, religion, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In particular, I will gladly honor your request to address you by an alternate/ preferred name or gender pronoun. Please advise me of this preference early in the semester so I may make appropriate changes to my own records.

**Classes:** Classes on Monday, Wednesday, and Fridays will take an interactive lecture format. Students in face-to-face sections will attend class in person, and students in online sections will access class via Zoom. Recordings of class will be made available after class. However, you are expected to attend all classes and there will be questions asked during class that are worth participation points.

**iClicker Cloud:** [iClicker Cloud](#) is free for all UF students. We will use this technology to facilitate some in-class questions. Please make sure you have it installed and configured BEFORE the first day of classes. UF has detailed [training resources](#) that will help you do it. **iClicker remotes will NOT work for the in-class questions.**

**Virtual Class Statement: Sessions are to be recorded.** Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

**Discussion Sections:** Discussion sections meet once a week on Tuesdays. These meetings give you a valuable opportunity for discussing and practicing 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.**

Your main resource for your discussion section is your TA. 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. All grade concerns must be raised within one week of receiving the score.**

**All discussions will be conducted via Zoom, even if you signed up for a face-to-face section.**

**Grading:** The grading scheme for this course is the following. Details about each type of

assessment are discussed later in this syllabus.

- Participation: 10%
- Homework (Xronos & Canvas): 10%
- Discussion Quizzes: 10%
- Midterm Exam Average (3 mid-term exams): 45%
- Final Exam: 25%

Your grade will be calculated according to the scale below.

### 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](#).

**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.**

**Participation:** Attendance in class both in lecture and discussion section is highly encouraged. Students who come to class and participate are more likely to do well in the course. Participation will be a total of 10% of your grade. It is split evenly into your in-class participation and the weekly reflections. **The iClicker program is synced with Canvas, so you will only be able to receive credit for iClicker questions if you are attending the class section you signed up for in the UF system.**

During each class, there will be in class questions for you to work on, and you can submit your responses using iClicker cloud, either the desktop version or the app. Simply attempting these questions will get you 90% of your class participation credit - answering them correctly will get you full credit.

On the Friday of each week, a weekly discussion forum assignment will become available to you to reflect your learning of that week.

**Homework:** For homework in this course we will be using both Canvas and the on-line platform Xronos. Homework due dates are listed in the schedule at the end of this

syllabus. They must be completed by the specified due date/time. The lowest two homework grades will be dropped.

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:** There will be weekly quizzes (except for the first week) during your discussion. 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 them. Each discussion quiz will be on the material learned in the past week.

**Midterm Exams:** There will be 3 midterms throughout the semester.

These exams are assembly exams and will take place in the evening, from 8pm-10pm. They will be available through Canvas using the Honorlock proctoring system. Availability of the exams and how to access them will be announced well in advance of each exam. Any questions should be directed to the course instructor. Calculators and electronics are not allowed on the midterm exams. Collaborations are not allowed on midterm exams.

Midterm exam dates are as follows:

- Exam 1: Friday, Feb 19
- Exam 2: Friday, March 19
- Exam 3: Monday, Apr 12
- Make-up Exam for all three midterm exams: Wednesday, Apr 21

**Final Exam:** We will have a cumulative final exam is on **Monday, Apr 26, at 12:30pm - 2:30pm**. Make a note of this now and please inform any interested parties (e.g. your parents) who may be making plans for you around that time. Calculators and electronics are not allowed during the final exam. Collaborations are not allowed on the final exam.

**Honorlock:** We will be using the Honorlock system to proctor exams this semester. More details about it will be found on the Canvas site.

**Make-up Policy:** All make-up work must be arranged with your instructor.

- **Exam Conflicts:**  
[The Undergraduate Catalog](#) states: "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:** If you are participating in a UF sponsored event or religious observance, you may make up an exam only if you make arrangements with your instructor at least ONE WEEK PRIOR to the event. You must present documentation of a UF sponsored event. Make-up midterms will happen on Dec 9, 2020. **If illness or other extenuating circumstances cause you to miss an exam, contact your instructor (no later than 24 hours after the exam) by email. Then, as soon as possible after you return to campus, bring the appropriate documentation to him in Little Hall during office hours. You will be allowed to take a makeup exam.**
- **Make-up class participation points:** There are no make-ups. Missed work with valid and documented reasons may be excused.
- **Make-up Reflections:** There are no make-ups.
- **Make-up Online Homework:** There are no make-ups.
- **Make-up Discussion Quizzes:** There are no make-ups.

**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. More information can be found at [CLAS Academic Advising Center](#). 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.

**Additional Resources:** 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 Teaching Center](#) is a tutorial service staffed by trained math and science students to provide help with your calculus questions and homework. They are operating online this semester and information pertaining to obtaining help and understanding the layout of this semester can be found on their website. They have drop-in tutoring which is more informal and free one-on-one tutoring available by appointment. The Teaching Center Math Lab also provides videos of reviews and sample test problems. They regularly hold reviews for exams. 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.
- 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 from the [Department of Mathematics](#). See "Academics - Mathematics Tutors".

- [Aid-A-Gator](#) under the Office for Student Financial Affairs has resources available to help those students who need funding for unanticipated travel, additional technology requirements, or other needs that are related.
- UF gives all students free access to the Eduroam system. Other internet connectivity options are available as well. If you are not on campus and have issues with internet connectivity and/or do not have regular access, please see the Aid-A-Gator website as well as the document outline some possibly connectivity solutions at [Connectivity on Campus](#).

**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.

**Students with Accessibility Needs:** Students requesting class and exam accommodations must first register with the [Dean of Students Office Disability Resource Center \(DRC\)](#). 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.

**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 [Student Honor Code and Student Conduct Code](#).

In addition, we remind you that lectures given in this class are the property of the University/faculty member and may not be taped without prior permission from the instructor and may not be used for any commercial purpose. Students found to be in violation may be subject to discipline under the Student Conduct Code.

**Evaluations:** Students are encouraged 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 [GatorEvals](#). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals or in their Canvas course menu under GatorEvals. Summaries of course evaluation results are available to students at [GatorEvals Public Data](#).



### Important Spring 2021 Academic Dates and Deadlines

Classes Begin	Monday, January 11
Late Registration	Monday, January 11 - Friday, January 15 (11:59pm)
Drop Deadline (last day for full refund)	Friday, January 15 (11:59pm)
<b>Withdrawal with 25% Refund</b>	Friday, February 5
<b>Withdrawal Deadline</b>	Friday, Apr 9 (11:59pm)
Classes End	Wednesday, Apr 21

### Holidays

Martin Luther King, Jr. Day Monday, January 18

Note: Information in this syllabus is subject to change. Changes will be communicated in class or on the Canvas course site.

**Reflections are due weekly at 11:59pm every Sunday night from Jan 17 to Apr 18.**

## JANUARY 2020

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
11 Introduction	12 Discussion	13 U-substitution and Integration by Parts	14	15 Integration by Parts <b>Due: Homework 0</b>
18 Holiday	19 Discussion Quiz 1 on last week's material	20 Trig Integrals 1	21	22 Trig Integrals 2 <b>Due: Homework 1</b>
25 Trig Substitution 1	26 Discussion Quiz 2 on last week's material	27 Trig Substitution 2 <b>Due: Homework 2</b>	28	29 Partial Fractions 1

## FEBRUARY 2021

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1 Partial Fractions 2 <b>Due: Homework 3</b>	2 Discussion Quiz 3 on last week's material	3 Improper Integrals	4	5 Techniques of Integration <b>Due: Homework 4</b>
8 Volume of Revolution 1 <b>Due: Homework 5</b>	9 Discussion Quiz 4 on last week's material	10 Volume of Revolution 2 <b>Due: Homework 6</b>	11	12 Application of Integrals 1
15 Application of Integrals 2 <b>Due: Homework 7</b>	16 Review (must attend to receive Discussion Quiz 5 credit)	17 Review	18	19 <b>Exam 1</b> <b>Due: Homework 8</b>
22 Sequences	23 Discussion Quiz 6 on last week's material	24 Series	25	26 Summing Series <b>Due: Homework 9</b>

## MARCH 2021

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1 Integral Test	2 Discussion Quiz 7 on last week's material	3 Direct Comparison <b>Due:</b> Homework 10	4	5 Limit Comparison <b>Due:</b> Homework 11
8 Alternating Series	9 Discussion Quiz 8 on last week's material	10 Root Test and Ratio Test <b>Due:</b> Homework 12	11	12 Series Techniques <b>Due:</b> Homework 13
15 Power Series <b>Due:</b> Homework 14	16 Review (must attend to receive Discussion Quiz 9 credit)	17 Review <b>Due:</b> Homework 15	18	19 <b>Exam 2</b> <b>Due:</b> Homework 16
22 Power Series Representations 1	23 Discussion Quiz 10 on last week's material	24 No Class	25	26 Power Series Representations 2
29 Taylor/Maclaurin Series 1	30 Discussion Quiz 11 on last week's material	31 Taylor/Maclaurin Series 2 <b>Due:</b> Homework 17		

## APRIL 2021

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
				2 Taylor/Maclaurin Series 3 <b>Due:</b> Homework 18
5 Parametric Equations	6 Discussion Quiz 12 on last week's material	7 Calculus of Parametric Curves <b>Due:</b> Homework 19	8	9 Review <b>Due:</b> Homework 20
12 <b>Exam 3</b> <b>Due:</b> Homework 21	13 Review (must attend to receive Discussion Quiz 13 credit)	14 Polar Coordinates	15	16 Polar Area
19 Final Review <b>Due:</b> Homework 22	20 No Discussion	21 Final Review <b>Due:</b> Homework 23		
26 <b>Final Exam</b>				