

MAC 2312: Calculus II, Summer C 2023 Online

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Office Hours – See Canvas

Prerequisites – MAC 2311 with a minimum grade of C or AP/IB/AICE credit for MAC 2311. (see 2.b)

Textbook – There is no required textbook. You may use any calculus book as reference. A free online textbook at [Openstax Volume 2](#) is a good option. I also encourage you to use the online Guided Learning Calculus 2 ([GLC2](#)).

Lecture Notes Shell – You will need lecture notes shell to take notes as you watch the lecture videos. There are three options to obtain it. (see 2.f)

Course Management System – [CANVAS](#) is used to provide access to the course materials. (see 2.e)

Homework, Quizzes, Exams – Use the Assignment tab in Canvas to access assignments and assessments.

UF Free Tutoring Service – [UF Academic Resources](#), office hours and discussions boards in Canvas.

Your TAs Are Your First Contact – They are available via office hours and emails to answer your questions about the course and go over quiz/exams with you. You should check Chui's Announcements and the Canvas gradebook regularly and consult with your TA if you have any questions. If you can't find answers to your questions in the syllabus and announcements, you may post them on any of the four discussions boards. You may email your TAs if you have private questions about the course. If you have concerns which cannot be handled by your TAs, please contact your instructor.

One Week Policy – You are responsible for verifying that your grades are accurate. You have one week after a score has been posted (or by the last Wednesday of the term, whichever comes first) to contact your TA if you believe there has been a recording error and have your grade issues resolved immediately. **There is absolutely no grade dispute at the end of the semester.**

Computer and Internet – It's **the student's responsibility** to have a reliable computer with a webcam, a stable and strong internet/Wi-Fi speed when taking an online class and, to verify your work is submitted successfully *before the deadline*.

Request for Makeup – You must contact your instructor and TA **prior to the deadline** for an extension or makeup. Contact the [Dean of Students office CARE team](#). (see 4.c)

MAC 2312 -- ANALYTIC GEOMETRY & CALCULUS II

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MAC 2312-Online Calendar, Summer C 2023

Lecture Video(L):	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1 (L1-4) 5/15	Class Begin LQ1	LQ2	LQ3, HW1(L1-2)	LQ4	
Wk2 (L5-8) 5/22	LQ5 PracticeQuiz	LQ6 HW2(L3-4)	LQ7, Q1(L1-4)	LQ8	HW3(L5-6)
Wk3 (L9-13) 5/29	LQ9	LQ10 HW4(L7-9)	LQ11 LQ12, Q2(L5-8)	LQ13	
Wk4 (L14) 6/5	HW5(L13)	HW6(L1-13) Q3(L9-13)	DIS1, UE1R	⁸ Exam1 (L1-13)	LQ14
Wk5 (L15-18) 6/12	LQ15	LQ16 HW7(L14-15)	LQ17 Q4(L14-15)	LQ18	HW8(L16-17)
Wk (L19-22) 6/19	LQ19 HW9(L18)	LQ20 HW10(L19)	LQ21 Q5(L16-19)	LQ22	HW11(L20)
Wk7(break) 6/26	Summer	Break	Week	No	Class
Wk8 (L23-24) 7/3	LQ23 HW12(L21-22)	HW13(L14-23) Q6(L20-23),	DIS2, UE2R	^{7/6} Exam2 (L14-23)	LQ24
Wk9 (L25-28) 7/10	LQ25	LQ26 HW14(L24)	LQ27	LQ28 HW15(25-26)	Q7(L24-25)
Wk10 (L29-32) 7/17	LQ29 HW16(L27-28)	LQ30	LQ31 HW17(L28-29)	LQ32 HW18(L24-29)	Q8(L26-29)
Wk11 (L33-35) 7/24	LQ33 HW19(L30-31)	LQ34	LQ35	HW20(32-34) HW21(L30-35)	Q9(L29-33) E3RevQuiz
Wk12 (L36-37) 7/31	Q10(L34-35) DIS3, UE3R	¹ Exam3 (L24-35)	LQ36	LQ37	
Wk13 8/7	HW22(L36-37) E4RevQuiz	HW23(L36-37) Q11(L36-37)	DIS4, UE4R Verify grades	⁴ Final (L1-37)	Class ends

All exams: open from 1AM – 11:59PM, proctored by Honorlock. Begin exams no later than 8pm EST (no later than 7pm EST for the final) to allow plenty of time before Canvas closes your exam.

L11 (limits), L12 (L'Hospitals' Rule) are Calculus 1 Review lessons; L10, 23, 35 are mini unit review lessons.

- This is an online class. You have the flexibility regarding when to do the work(except for the exams). All homework is open at the beginning of the term and due at 11:59 pm on the due date. No extensions*!
- All due dates in the calendar are the date the work is to be received by Canvas*. You may always complete and submit assignments early, except for the exams which must be taken on the specified date. **Due date is NOT Do date.** If you wait to submit and you run into issues, **you will be out of luck.** **Aim to have work submitted prior to its due date,** save the Due date for last minute emergency.
- **UEnR- Upload Exam n Review Due.** This is the only written assignment for the course.
- Ln-Watch lecture n video before class; LQn- answer a few lecture questions related to that lesson.
- **DISn-Discussions** (earn points) on Exam n material: see DISn in Discussions (on Canvas) for more details.
- If you joined the class late, please contact your TA for due dates extension of the first week work.
- You will have **one week** from when a score is posted to discuss grading with your TA. Verify and resolve all Canvas grade issues either within 1 week after the grade is posted or, by the last Wednesday of the term, whichever comes first (except for the final exam). **Absolutely NO grade disputes at the end of the semester.**

* There is a 48-hours grace periods for LQ, HW assignments only, (not for DISn, UEnR, quizzes & exams).

2. INTRODUCTION

2a. COURSE DESCRIPTION and CONTENT. MAC2312, Calculus II, is the 2nd semester in the three-semester calculus sequence MAC 2311, MAC 2312, and MAC 2313 covering basic calculus. The course begins where MAC2311 left off at integration techniques, followed by a study of infinite sequences and series, parametric equations and polar coordinates and concludes with applications of definite integrals finding volumes.

This is an online version of MAC2312 – all content is delivered online. Students watch 37 online *lecture videos(L)* and complete *lecture quizzes(LQ)* in Canvas. Students also complete *online homework(HW)* and *Upload* their written work for *Exam Review(UER)* in Canvas. Students are encouraged to engage in discussions by posting questions and answers on the ***Discussions Boards*** in Canvas. There are eleven *quizzes*, three *unit exams* and a *cumulative final exam*, they are posted in Canvas and administered through Honorlock. **There is no drop of any exams. You must take an exam on the date specified in the course calendar.**

2b. PREREQUISITES. MAC2312 assumes that you have essential PreCalculus skills (both Algebra and Trigonometry) as well as the calculus 1 skills necessary to succeed in this course. Students may find a short list of review materials in the last section of this syllabus as well as review lessons L11 (limits) & L12 (L'Hospitals Rule).

We encourage students to review the prerequisite material to gain a strong knowledge to succeed in calculus II. MAC2312 begins with integration chapter, you should already be competent in integrating simple functions and the use of u-substitution. We strongly recommend students who are having difficulty with these core calculus skills to review MAC2311 (or take the course if you have not done so). You may switch courses on one.ufl.edu during the drop-add period.

2c. General Education Objectives and Learning Outcomes – This course is a mathematics (M) course in the UF General Education Program. Completing this course with a minimum grade of C will satisfy the student's State Core Mathematics requirement of the UF General Education Program. Courses in mathematics provide instruction in computational strategies in fundamental mathematics including at least one of the following: solving equations and inequalities, logic, statistics, algebra, trigonometry, inductive and deductive reasoning. These courses include reasoning in abstract mathematical systems, formulating mathematical models and arguments, using mathematical models to solve problems and applying mathematical concepts effectively to real-world situations.

After successful completion of this course students will have demonstrated competency in the following Student Learning Outcomes (SLOs):

- ^ Content: Students demonstrate competence in the terminology, concepts, theories, and methodologies used within the discipline. After completing this course students will gain a knowledge of integration, series, and parametric equations.
- ^ Communication: Students communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline. Throughout this course students will communicate mathematical ideas verbally in their discussion sessions and as well as through writing on discussion quizzes and exams.
- ^ Critical Thinking: Students analyze information carefully and logically from multiple perspectives, using discipline-specific methods, and develop reasoned solutions to problems. Students will apply their knowledge to solve problems concerning topics that include, but are not limited to, techniques of integration, calculation of volumes of revolution, calculation of work and hydrostatic force, determining the convergence or

divergence of infinite series, using power series representations to evaluate functions and integrals, using the calculus of parametric equations to calculate arc length, and graphing and calculating the areas of polar curves.

2d. 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.

2e. 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, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

2f. REQUIRED MATERIALS.

- ✓ **Lecture Notes Outlines Are Required.** See 2f.
- ✓ **Computer access and requirements:** All assignments should be taken on a computer, not a cell phone or a tablet since there may be compatibility issues with CANVAS. Be sure you are using only **Chrome** that works with Honorlock (HL), a proctoring service we use to administer quizzes and exams. It's **the student's responsibility** to have a reliable computer, a stable and good internet/Wi-Fi speed. Do a speed check with HL prior to your first exam. (see section 4)
- **Textbook Not Required:** See p.1
- **Calculators Not Required Nor Permitted on Assessments:** A graphing calculator or computer program (such as [Desmos](#)) can be useful as a learning tool when used appropriately, but they are not essential. Calculus is a collection of concepts, ideas and processes that are not mastered through calculator skills. **No calculators** or any secondary devices are allowed during quizzes or exams (except the simple calculator provided in Honorlock).

2g. ASSIGNMENT CALENDAR. Check the course calendar for due dates and plan your schedule accordingly. You may do more lessons and complete assignments early if you have plans, but you must take exams on the assigned dates. A 48-hour grace period allows students to turn in lecture quizzes (LQ), homework (HW) *48 hours late*, if you plan to work on new lessons every other day as opposed to the first four days of the week. This grace period also applies to PracticeE3 and PracticeE4.

- **DueDate is NOT DoDate.** The Internet sometimes is not reliable, a reason you should **not wait till last hours** to complete your online assignments. If your computer or internet down while you try to submit an assignment, you will need additional time. If you **miss a due date**, no credit will be given for the work not submitted.
- Always allow plenty of time to submit your work. It's **the student's responsibility** verify your work is submitted successfully *before the deadline*.
- You may expect a penalty (letter grade drop) for completing fewer than 75% of your work.

2h. CANVAS. A UF courses management system is located [here](#). Use your Gatorlink username and password to login. All course information including your grade, course homepage, syllabus, lecture outlines, lecture videos, office hours, discussions forum, free help information, exam, mail tool, etc. can be accessed from this site.

TURN ON NOTIFICATION ALERTS from Canvas so that you get timely course information sent to your [ufl.edu email](#). The Notifications tab is located under Account on the upper left corner of your Canvas with your profile picture. Select 'Notify Immediately' for Announcements, Discussions and Grading. Click [here](#) for more information.

2i. E-MAIL and DISCUSSIONS – Important course information is clearly communicated in this syllabus, the MAC2312 homepage, the Announcements, and links in Canvas. Due to the volume of email received by the instructor and the TAs, we cannot reply to each email for this well publicized information.

- If you cannot find your answer in the resources above, there are four **Discussions Forums** available in CANVAS. Please use them to post questions and to supply answers to your fellow classmates.
 - Please ask math questions in Discussions.
- Use **emails** for private matters regarding the course that you can't share in Discussions.
 - Do not use emails for math questions or non-private matters.
 - Please sign your name to your emails.
- All official class communication will be sent via Announcements, or ufl.edu email account. Students are responsible for acquiring, checking their ufl.edu account regularly for any class information sent to them.

2j. LECTURE VIDEOS/NOTES. Students are responsible for watching pre-recorded lectures online. These lecture videos provide the main presentation of course material. They introduce and provide examples of new course material. You may access the videos through each lecture on Canvas Home Page under 'Lecturers'. Re-watch them if necessary.

- To stay current with the course, you must watch the lecture video *before* the schedule posted in the course calendar. Start early and stay ahead so you don't miss any due dates.
- You should watch the lectures, take notes, and answer the corresponding Lecture Questions (LQ) in Canvas and practice homework problems (HW). If you like to do lessons every other day as opposed to the first 4 days of the week, there is a 48-hour grace period. I suggest having work submitted by the specified due date and using the grace period to take care of the absolutely last-minute emergency such as an internet/computer issues, traveling, weather related emergencies.
- It's possible to **get ahead** in this class if you complete each assignment early, but you must take exams on the specified dates. **If you have other commitments, adjust your schedule to complete the assignments earlier rather than later.**

Lecture Notes Outlines: It is important that you should have a copy of the lecture outlines. This will make it easier to take notes when watching the videos. There are options to access these outlines: Print out each lecture in Canvas, purchase a printed packet from [Target Copy](#) (if you are in Gainesville, otherwise there is extra cost for shipping) or download a digital copy if you use a tablet. You may find the notes in each lecture page, and in the table of 'Lecture notes' under the Course Resources.

2k. SUCCESS: Other than having a strong precalculus and calculus I background, success in MAC 2312 depends largely on your attitude and effort. **Keeping up with watching the lecture videos is critical.** You

may find it beneficial to **work daily** on the material as opposed to saving it all for one day. It is not effective to watch videos and copy notes without following the thought processes involved in the lecture. For that reason, there is Lecture Quiz (LQ) for each lecture which you will need to submit the answer in Canvas as part of your course grade. (see 2f and 3d)

EXPECTATION: This is a very challenging course. Treating it as anything less than that is inherently unwise, both for your learning and for your grade. Be aware that much of the learning of mathematics at the university takes place *outside of the classroom* (in the case of an online class, time spent working on the material in addition to watching the lecture videos). “**At a minimum**” we expect students to spend 3 hours *effectively* studying (in addition to watch the lecture videos) for every credit hour of the course. MAC 2312 is a 4-credit course, which means you will spend **at least 12 hours per week** preparing and practicing problems for this course ***in addition to watch lecture videos***. If you are not doing as well as you would’ve liked in MAC 2312, you may need to put forth more effort. Keep in mind that the goal is to be able to apply the techniques of calculus to problems, not just reproduce the problems you see in class.

Do you know that it takes roughly 45 lecture hours in colleges vs. roughly 150 lecture hours in high school to complete a calculus course? The fact of the matter is that university calculus course goes 3+ times faster and that you probably won’t do well if you don’t watch lecture regularly or you wait till the last weeks to start preparing for the exam. Much of the learning is on you. **Therefore, it is critical that you keep pace with the course material and assignments each week**, Practice, practice and practice. Do not fall behind.

Use the resources available to you as you study! We encourage you to ask questions, seek help from online office hours, Discussions Board and the [Academic Teaching Center](#) for the free tutoring services. Do not let misunderstandings go unanswered.

We encourage students to work together on homework, and an important resource to facilitate communication in an online course is the **Discussions Board** in CANVAS. You should check the Discussions Board regularly, posting questions and answers. The effort of asking questions, communicating ideas with fellow students, as well as the practice of writing solutions, are **effective tools** in helping you better understand calculus concepts. This is YOUR forum, take advantage of it by participating in it.

Be a responsible learner! In studying calculus, you must be careful not to let a tutor, a friend or calculator ‘think’ for you. Be sure to compare the material from tutors, if you use one, with the class material and ask questions to make sure that you can work out problems completely on your own before an exam.

It’s our hope that through *focused study and practice* you will gain a true appreciation for the important concepts of calculus and their application. We want you to succeed in this class! Be positive and keep up with the course, take the initiative to *get help in time*, before you get too far behind. Students with a positive attitude who are intellectually engaged in learning the material will get the most from the course.

21. STUDENTS WITH DISABILITIES. UF welcomes students with disabilities into the UF programs. Students requesting classroom and exam accommodations must first register with the Dean of Students Office [Disability Resource Center \(DRC\)](#) , (352-392-8565). This must be done as early as possible in the semester so there is adequate time to make proper accommodations.

2m. ACADEMIC HONESTY.

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

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 an 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 [here](#).

In addition, we remind you that lecture videos, notes and GLC2 are the property of the University/faculty member and may not be distributed/shared without prior permission from the coordinator 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.

3. GRADING

3a. COURSE GRADE. Your course grade is determined by unweighted points as follows:

Practice Quiz + 37 Lecture Quizzes (LQ) (drop 3 lowest LQ)	81 points
Online Homework Group 1 (18 HWn) (drop 1 lowest)	34 points
Online Homework Group 2 (5 HWn)	30 points
Upload Exam Review (4 UEnR)	40 points
Quiz (11 Qn) (drop 1 lowest)	100 points
<u>3 Unit Exams(100 each) & cumulative Final(115)</u>	<u>415 points</u>
Total:	700 points

Your course grade will be determined by the **total points earned** according to the following scale.

A	630 and up	C	490 and up
A –	609 and up	C – *	469 and up
B +	588 and up	D+	448 and up
B	560 and up	D	420 and up
B –	539 and up	D –	350 and up
C +	518 and up	E	below 350

*Note: A grade of ‘C –’ or lower DOES NOT give University General Education credit!

For those taking the ‘S – U’ option: S[> 70%] U[< 70%]

Approval of the 'S – U' option must be done by the registrar's office. The deadline for filing an application with the Registrar and further information about the 'S – U' option is found in the undergraduate UF Catalog.

Once again, we will not review disputed points **at the end of the semester**. All grade concerns must be settled within **One Week** of the posting of the grades or by the last Wednesday of the term. **There will be no additional rounding and reopening of missed assignments. Extra assignments for individual students to improve their grades are NOT possible.**

3b. INCOMPLETE GRADES POLICY. Students who are currently passing a course with vast majority of assignments and assessments completed, 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 the [math department criteria](#). If you meet the criteria, **you must see the 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.**

3c. GETTING STARTED:

Log in to Canvas and familiarize yourself with the course **calendar**, **syllabus**, and the information in the clickable links in Canvas. Make sure you understand the course policy and what is expected of you in this course. After you have done that, you are ready to begin watch the lecture 1 video (L1), and complete its lecture questions (LQ1).

3d. VIDEOS (L) AND LECTURE QUIZZES (LQ). MAC2312 is organized into 37 lectures, each lecture has an introductory page including the concepts to be covered, things you need to do for this lecture.

Go to Canvas Homepage to access each lecture. From there, you may access a copy of the note outlines, links to the lecture videos and links to homework. Viewing the video is an important aspect of the learning process. There is a Lecture Quiz to be completed in each lecture. We encourage you to use the notes as well as the videos and the Discussions Board to get help if needed.

NOTE: At the time of the taping, we used a specific textbook. A textbook is no longer required. Please go by the 'topics' and not by any chapter numbers mentioned in the videos.

NOTE: There might be minor typos in some of the recorded videos. Post them on the Discussion Board if you find some. Thank you.

3e. HOMEWORK(HW) . Homework is given online in Canvas and, as with LQ, it must be completed by the specified due date and these dates will not be extended beyond the 48-hour grace period. There are two groups of HW. The second group of HW consists of 5 unit summary assignments, worth 6 points each.

There is online homework (HW) as well as written homework (UER):

1. **Online Homework (HW)**–You may access them by clicking the Assignment tab on the left side of Canvas.

- a. Each online homework consists of multiple-choice questions and possibly a few fill-in-the-blank questions.
 - b. Three lowest LQ scores and one lowest HW score (in HW group 1) will be **dropped** to offset possible credit lost due to technical issues or simply just a bad day. (note: the Practice Quiz will not be dropped)
 - c. You might experience trouble seeing correct math images or the minus sign when viewing math in Canvas. Be sure to **disable acceleration** in Chrome to minimize the chances of that happening. ‘Right click’ on the unreadable math image to ‘open image in a new tab’ to see the correct image on the upper left corner in the new tab. Enlarge screen-size helps seeing the minus sign correctly. Be sure to read the highlighted HonorLock instruction below.
- **Note:** Canvas does not allow you to open an assignment you have not worked on, so you won’t be able to study them if you have not attempted them before due dates. Be sure to do each assignment.
2. **Written Homework** (UER- Upload Exam Review) – check UE1R in Canvas for details. Here, you get the opportunity to practice writing out complete math solutions logically.
 - Click on ‘Upload Exam Review (**UEnR**)’ to work out problems from past exams.
 - Scan your complete solution and upload them in a **single pdf file** before due date.

Due Date is NOT Do Date! Complete your work early, don’t wait till the due date. Do not try to complete all assignments in one sitting. Contact your TA immediately if you are experiencing problems. **Personal computer/internet issues will NOT be a reason to offer any type of makeup, nor extension.**

The purpose of homework is to practice problems to understand and master the material learned. Complete them before each exam. **Completing them after exams is not helpful to your learning nor your grades.**

3f. QUIZZES & EXAMS. All quizzes and exams are proctored by Honorlock. Make a note of the exam dates 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.) See 4. TESTING.

3g. EXTRA CREDIT. Earn points via DIS in Discussions Board, PracticeE3 and PracticeE4. Up to 28 points can be added to your course grade. Since the course grade is determined by the total points you earn, you should not treat any opportunities as ‘extra’, rather, treat them as part of your course grade.

3h. ADDITIONAL PRACTICE PROBLEMS. There are problems listed at the end of each lecture, called ‘Now You Try It’ (NYTI). They are designed to emphasize important concepts and provide extra practice of the lecture material. Some of them are included in the lecture questions as well. NYTI problems are not graded, but it is strongly encouraged that you work them out. **Solutions** to NYTI are posted in the ‘Lecture Notes’ table under Course Resources in Canvas. You may also find 277 extra practice problems/answers in Course Resources if you want more problems to practice.

4. TESTING.

4a. There are eleven 30-minutes quizzes, three 90-minute unit exams and one two-hour cumulative final exam. They are given in Canvas and administered through Honorlock(HL). All quizzes are open on day one, you may complete and submit them early. Make sure you are available to take the exam at the designated date. All exams are open from 1AM and close at 11:59PM EST or when your time is up, whichever comes first. You should start your exam no later than 8PM EST to ensure maximum time for your exam.

4b. Cell Phones, Secondary Devices and Notes: Cell phones & secondary devices must be turned off (not on vibrate) and put away (not within reaching distance) before starting an assessments. Use (defined as having one physically in your hand) of a cell phone will be considered contact with another person and will be viewed as a form of academic dishonesty because I cannot be assured in such a circumstance that you have not taken a picture of the test/quiz or sent/received a text message to/from someone. Wait until after you have submitted your work to use it. The same goes for notes, do not have them nearby. This will result in an automatic grade of zero and possible disciplinary action.

4c. Possible connection issues, temporary internet issues during an exam:

We offer **double time** on all quizzes & exams to compensate for possible internet problems, or any other issues that may arise, including the wait time to communicate with the Honorlock support.

4d. Honorlock: We urge you to

- Obtain **Chrome** (Honorlock requires Chrome to work). Download the **Honorlock Google Chrome Extension**.
- **Disable Acceleration in Chrome.** (Chrome acceleration may cause Chrome to lag or crash, so it is a good idea to disable it before taking math assessments).
- Do **NOT have too many plugins enabled** for Google Chrome. Adblockers are a common cause of browser issues in Canvas.
- **Clear cache and cookies and restart your computer** before each exam/quiz. Often times issues with Canvas are a result of cache/cookies needing to be cleared out.

Doing the above tasks prior to taking a math assessment helps prevent 'unreadable math codes'.

- **Live chat** with Honorlock at least a few days prior to your first exam to do a **'speed check**, confirm your connection, speed and required equipment (ex. webcam, speaker, mic), location are all good.
- **Enlarge screen size if needed to see math (especially the 'minus' sign) clearly.**
- **If you encounter/suspect unreadable math code while doing homework, right click on the unreadable math code, then click on 'open image in a new tab' to see the correct image on the upper left corner of the new page. This option is not possible during a proctored assessment.**

If you are uncertain as to the reliability of your computer or internet service provider or internet connection, find a place (such as libraries) to take your exam where the computer and internet connection are reliable. Makeup is not possible for a failed connection.

It is your responsibility to be sure that you have a reliable Ethernet internet connection, fast enough and stable computer/internet speed. **If your answer is not received by Canvas due to your faulty connection/equipment/math image issues, they are lost for good, we are not able to offer anything else to replace your lost answers. You will not be able to request makeup if problems arise due to your negligence (ie. you have not done these steps).** Check out 'Exams and Honorlock' in Course Information in Canvas for details.

Do not disconnect webcam before you have submitted your quiz/exam. **Failure to do so can result in a 0.**

4e. SEMESTER UNIT EXAMS and FINAL EXAM. All exams will be given in Canvas. They consist of multiple-choice questions and possibly a few fill-in-the-blank questions. Your exam score is displayed immediately after your submission. The final exam is cumulative. Exams must be taken on the exam date.

- Plan your schedule so you are available to take them on the scheduled date.
- Inform any interested parties (ex. Your parents) who may be making plans for you around that time (such as purchasing plane tickets to fly home, etc.).
- Exams are locked after submission. You may request a 20-minute private conference with your TA to review your exam within one week after an exam.
- Even though you are not able to open your exams after submission, you may access many past exams (not current term) under Exam Information to study for the finals.

4f. MAKEUP POLICIES. All makeup work must be arranged prior to the exam. This is an assembly exam. We allow students makeup opportunity if they meet the requirements below, but we do not allow exam re-take after you have taken it.

1. **Exam Conflicts**

- a. If you have more than three exams on the same date, you can contact the instructor of the lowest assembly exam or non-assembly exam and make arrangements to take a makeup exam. If this course is the one to give makeup, contact your **instructor and TA by the end of the second week** to arrange for a makeup. See [UF Exam Policies](#).

2. **Makeup – Exams:**

- a. If you are participating in an official UF activity (such as music performances, athletic competition, debate, etc.) or religious observance, you may make up an exam only if you sign up for a makeup by the deadline. Email your **instructor and TA by the end of the second week** with valid documentation.
- b. Students who miss an exam due to illness or other extenuating circumstances as outlined in the [UF Attendance Policies](#) and wish to make up the exam must contact their instructor immediately (**within 24 hours of missing an exam**) through the [Dean of Students office CARE team](#) with appropriate documentation. Once we receive notice from the CARE team covering the dates during which the exam took place, the student will be signed up to take a makeup exam.
- c. Students who miss an exam due to other reasons as outlined in the UF Attendance Policies (ex. Court Order) must contact their instructor **at least a week prior** to the exam.
- d. You will be denied makeup if you have not **completed at least 75%** of any of the course work thus far and have not completed all prior quizzes and exams.
- e. **Missing a quiz or exam** –due to **negligence**, however, will result in a minimum of 10% penalty on their makeup.

3. **Other Makeup:**

- a. **There is no makeup** on assignments, quizzes as they are open on the first day, there is a 48-hour grace period for the assignments and a certain number of these assignments and assessments are dropped at the end of the semester.
- b. **There is no makeup** on extra credit opportunities.

All approved makeups must be completed by the **last Monday** of the semester **before the final exam**.

Note: Information in this syllabus is subject to change. Any changes will be clearly announced in Announcements in Canvas.

5. FORMULAS.

This course assumes that you have a sound precalculus and calculus I background. The following is a summary of some important concepts used in solving calculus problems.

COMPLETING THE SQUARE $x^2 + ax + b = (x + \frac{a}{2})^2 + (b - (\frac{a}{2})^2)$

LAW OF EXPONENTS $a^{n+m} = a^n a^m$ $a^{n-m} = \frac{a^n}{a^m}$ $(a^m)^n = a^{mn}$

PROPERTIES OF logarithms $\log_b |xy| = \log_b |x| + \log_b |y|$

$$\log_b \left| \frac{x}{y} \right| = \log_b |x| - \log_b |y|$$

$$\log_b |a^m| = m \log_b |a|, \quad \log_b |x| = \frac{\ln |x|}{\ln b}$$

PARABOLA $y = f(x) = ax^2 + bx + c$

CIRCLES $(x - a)^2 + (y - b)^2 = r^2$

Vertex $x = -\frac{b}{2a}, y = f(-\frac{b}{2a})$

Center $(a, b), \text{ radius} = r$

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Differentiation Rules

General Formulas

1. $\frac{d}{dx} [c] = 0$

2. $\frac{d}{dx} [cf(x)] = c'f(x)$

3. $\frac{d}{dx} [f(x) \pm g(x)] = f'(x) \pm g'(x)$

4. $\frac{d}{dx} [x^n] = nx^{n-1}$

5. $\frac{d}{dx} [f(x)g(x)] = f(x)g'(x) + g(x)f'(x)$

6. $\frac{d}{dx} \left[\frac{f(x)}{g(x)} \right] = \frac{g(x)f'(x) - f(x)g'(x)}{[g(x)]^2}$

7. $\frac{d}{dx} [f(g(x))] = f'(g(x))g'(x)$

Exponential and Logarithmic Functions

$$8. \frac{d}{dx} [e^x] = e^x$$

$$10. \frac{d}{dx} [\ln |x|] = \frac{1}{x}$$

$$9. \frac{d}{dx} [a^x] = a^x \ln a$$

$$11. \frac{d}{dx} [\log_a x] = \frac{1}{x \ln a}$$

Trigonometric Functions

$$12. \frac{d}{dx} [\sin x] = \cos x$$

$$14. \frac{d}{dx} [\tan x] = \sec^2 x$$

$$16. \frac{d}{dx} [\sec x] = \sec x \tan x$$

$$13. \frac{d}{dx} [\cos x] = -\sin x$$

$$15. \frac{d}{dx} [\cot x] = -\csc^2 x$$

$$17. \frac{d}{dx} [\csc x] = -\csc x \cot x$$

Inverse Trigonometric Functions

$$18. \frac{d}{dx} [\sin^{-1} x] = \frac{1}{\sqrt{1-x^2}}$$

$$20. \frac{d}{dx} [\tan^{-1} x] = \frac{1}{1+x^2}$$

$$22. \frac{d}{dx} [\sec^{-1} x] = \frac{1}{x\sqrt{x^2-1}}$$

$$19. \frac{d}{dx} [\cos^{-1} x] = -\frac{1}{\sqrt{1-x^2}}$$

$$21. \frac{d}{dx} [\cot^{-1} x] = -\frac{1}{1+x^2}$$

$$23. \frac{d}{dx} [\csc^{-1} x] = -\frac{1}{x\sqrt{x^2-1}}$$

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Trigonometric Identities

Right Triangle Trigonometry

$$\bullet \sin \theta = \frac{\text{opp}}{\text{hyp}}$$

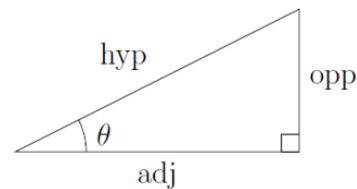
$$\bullet \cos \theta = \frac{\text{adj}}{\text{hyp}}$$

$$\bullet \tan \theta = \frac{\text{opp}}{\text{adj}}$$

$$\bullet \csc \theta = \frac{\text{hyp}}{\text{opp}}$$

$$\bullet \sec \theta = \frac{\text{hyp}}{\text{adj}}$$

$$\bullet \cot \theta = \frac{\text{adj}}{\text{opp}}$$



Trigonometric Functions of Important Angles

θ	radians	$\sin \theta$	$\cos \theta$
0°	0	0	1
30°	$\pi/6$	$1/2$	$\sqrt{3}/2$
45°	$\pi/4$	$\sqrt{2}/2$	$\sqrt{2}/2$
60°	$\pi/3$	$\sqrt{3}/2$	$1/2$
90°	$\pi/2$	1	0

Pythagorean Identities

- $\sin^2 x + \cos^2 x = 1$
- $\tan^2 x + 1 = \sec^2 x$
- $1 + \cot^2 x = \csc^2 x$

Double Angle Identities

- $\sin(2x) = 2 \sin x \cos x$
- $\cos(2x) = \cos^2 x - \sin^2 x$

Half Angle Identities

- $\sin^2 x = \frac{1 - \cos(2x)}{2}$
- $\cos^2 x = \frac{1 + \cos(2x)}{2}$

Common Integration Formulas

1. $\int f'(g(x))g'(x) dx = f(g(x)) + C$
2. $\int u dv = uv - \int v du$
3. $\int x^n dx = \frac{x^{n+1}}{n+1} + C, n \neq -1$
4. $\int \frac{1}{x} dx = \ln|x| + C$
5. $\int e^x dx = e^x + C$
6. $\int a^x dx = \frac{a^x}{\ln a} + C$
7. $\int \ln x dx = x \ln x - x + C$
8. $\int \sin x dx = -\cos x + C$
9. $\int \cos x dx = \sin x + C$
10. $\int \sec^2 x dx = \tan x + C$
11. $\int \csc^2 x dx = -\cot x + C$
12. $\int \sec x \tan x dx = \sec x + C$
13. $\int \csc x \cot x dx = -\csc x + C$
14. $\int \tan x dx = \ln|\sec x| + C$
15. $\int \cot x dx = \ln|\sin x| + C$
16. $\int \sec x dx = \ln|\sec x + \tan x| + C$

$$17. \int \csc x \, dx = -\ln |\csc x + \cot x| + C = \ln |\csc x - \cot x| + C$$

$$18. \int \sec^3 x \, dx = \frac{1}{2} (\sec x \tan x + \ln |\sec x + \tan x|) + C$$

$$19. \int \csc^3 x \, dx = -\frac{1}{2} (\csc x \cot x + \ln |\csc x + \cot x|) + C$$

$$20. \int \frac{dx}{\sqrt{a^2 - x^2}} = \sin^{-1} \left(\frac{x}{a} \right) + C$$

$$21. \int \frac{dx}{a^2 + x^2} = \frac{1}{a} \tan^{-1} \left(\frac{x}{a} \right) + C$$

$$22. \int \frac{dx}{x\sqrt{x^2 - a^2}} = \frac{1}{a} \sec^{-1} \left(\frac{x}{a} \right) + C$$