

# MAC 2312: Calculus II, Spring 2023

## Online Sections 1872(Res.), 1693(UFO), 24D3(DE)

### INSTRUCTOR and TA

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**OFFIC HOURS: A Visual and Personal engagement: See Canvas Homepage for hours.**

**TEXTBOOK:** There is no required text book for this course. You may use any calculus book as reference. A free online textbook at [Openstax volume 2](#) is a good option. I encourage you to use the online Guided Learning Calculus 2 ([GLC2](#)).

**LECTURE NOTES SHELL:** You would need Lecture Notes shell as you watch the lecture videos. There are 3 options to obtain it. (see 2.f)

**Course Management System CANVAS:** is used to provide access to course materials, provide possible syllabus updates, maintain communications relevant to all students via Discussions and Announcements, provide zoom links for office hours and much more.

**HOMEWORK, QUIZZES, EXAMS (all online):** To access: use the 'Assignments' tab in Canvas or, click on each lecture images under 'Lectures' on the Canvas home page.

**UF FREE TUTORING SERVICE:** [Academic Teaching Center](#), [OAS Academic Tutoring](#), your instructor and TA's office hours.

## MAC 2312 -- ANALYTIC GEOMETRY & CALCULUS II

1. Course Calendar ..... page 3
2. Introduction
  - a. Course Description, Content ..... page 4
  - b. Prerequisites ..... page 4
  - c. Required Materials ..... page 4
  - d. Assignment Calendar ..... page 5
  - e. CANVAS ..... page 5
  - f. Lecture Videos ..... page 5
  - g. Success & Help ..... page 6
  - h. Students with Disabilities ..... page 7
  - i. Academic Honesty ..... page 7
3. Grading
  - a. Course Grade ..... page 7
  - b. Incomplete ..... page 8
  - c. Getting Started, Syllabus Quiz, ..... page 8
  - d. Videos and Lecture Quiz ..... page 8
  - e. Homework ..... page 8
  - f. Quizzes & Exams ..... page 9
  - g. Extra Credit ..... page 9
  - h. Additional Practice Problems ..... page 9
4. Testing - exams, cell phones, HonorLock ..... page 9
  - a. Semester Unit Exams ..... page 11
  - b. Final Exam ..... page 11
  - c. Makeup Policies ..... page 11
5. Formulas You Are Expected to Know ..... page 12

## MAC 2312 Online Course Calendar, Spring 2023

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Week 1(L1-3) 1/9	Class Begin L1/LQ1	L2/LQ2	L3/LQ3 HW1(L1-2)			
Wk 2(L4-6) 1/16	L4/LQ4 (MLK) Practice Quiz	L5/LQ5	L6/LQ6	HW2(L3-4) Q1(L1-4)	HW3(L5-6) MakeupReqDue	
Wk 3(L7-9) 1/23	L7/LQ7	L8/LQ8	L9/LQ9		HW4(L7-9)	
Wk4(L10-13) 1/30	L10/LQ10	L11/LQ11, L12/LQ12	L13/LQ13	Q2(L5-8)	HW5(L13)	
Wk 5(L14) 2/6	HW6(L1-13)	UE1R	Q3(L9-13) DIS1	Exam1 (L1-13)	L14/LQ14	
Wk 6(L15-17) 2/13	L15/LQ15	L16/LQ16	L17/LQ17	HW7(L14-15) Q4(L14-15)	HW8(L16-17)	
Wk 7(L18-20) 2/20	L18/LQ18	L19/LQ19	L20/LQ20 HW9(L18)	HW10(L19) Q5(L16-19)	HW11(L20)	
Wk 8(L21-23) 2/27	L21/LQ21	L22/LQ22	L23/LQ23		HW12(L21-22)	
Wk 9(L24-25) 3/6	HW13(L14-23) L24/LQ24	UE2R	Q6(L20-23) DIS2	Exam2 (L14-23)	L25/LQ25	
Wk103/13	Spring Break					
Wk11(L26-28) 3/20	L26/LQ26	L27/LQ27	L28/LQ28	HW14(L24)	HW15(L25-26) Q7(L24-25)	
Wk12(L29-31) 3/27	L29/LQ29	L30/LQ30	L31/LQ31	HW16(L27-28) HW17(L28-29)	HW18(L24-29) Q8(L26-29)	
Wk13(L32-34) 4/3	L32/LQ32	L33/LQ33	L34/LQ34	HW19(L30-31)	HW20(32-34) Q9(L29-33)	
Wk14(L35) 4/10	L35/LQ35	HW21(L30-35)	UE3R PracticeE3	Q10(L34-35) DIS3	Exam3 (L24-35)	
Wk15(L36-37) 4/17	L36/LQ36	L37/LQ37		HW22(L36-37)	HW23(Rev36-37)	
Wk16 4/24	PracticeE4 Q11(L36-37)	UE4R, DIS4	END Verify grades			Finals (L1-37)

**All quizzes & exams: open from 1AM – 11:59PM, proctored by Honorlock. Begin exam no later than 9pm EST (no later than 8pm EST for finals).**

- Exams must be taken on the day shown here. Cumulative Final exam is on Saturday, 4/29.
- Calculus 1 Review lessons: L11 (limits), L12 (L'Hospital's Rule). Mini review lessons L10, 23, 35.
- Ln-Watch lecture n video first; LQn- answer questions related to the lesson after watching the video. HW-More homework practice on material learned; Qn-Quiz have 1 day grace period.
- UEnR- Upload Exam n Review. Due on the dates specified in the calendar. No extension.
- DISn-Discussions on Exam n material: see Discussions Forum instruction page for details.
- All homework assignments are open at the beginning of the term and due at 11:59 pm on the dates specified here except for LQ, HW, PracticeE3 & PracticeE4 which have a 2-day grace period. You may always complete work early if you have other plans, but not late.
- **Due date is NOT Do date.** If you wait to submit and you run into any issues, **you will be out of luck.** Aim to submit assignments prior to the due dates and make sure submission is completed.
- If you joined the class late, you may contact your TA for extension of the first week work.

## 2. INTRODUCTION

**2a. COURSE DESCRIPTION and CONTENT.** MAC2312, Calculus II, is the 2<sup>nd</sup> semester in the three-semester calculus sequence covering basic calculus. The course begins where MAC2311 left off at integration techniques, followed by a study of infinite sequences and series, culminating with Taylor Series and applications, followed by a study of parametric equations and polar coordinates and concludes with some applications of definite integrals finding volumes.

This is an ONLINE VERSION of MAC2312 – all content is delivered online. Students view 37 online *lecture video(L)* and complete *lecture questions (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 discussion by posting questions and answers on the *Discussions Boards* in Canvas. Three *unit exams* and a *cumulative final exam* are posted in Canvas and administered through Honorlock. **There is no drop of any exams. You must take the exams on the dates 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 the review lessons L11 (limits) & L12 (L'Hospitals Rule).

Appropriate score on the ALEKS placement assessment, or UF MAC2311 with a C (2.0) or better meets the *minimum* requirement for the course. 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 UF course if you have not done so). You may switch courses on one.ufl.edu during the drop-add period.

### 2c. REQUIRED MATERIALS.

**Lecture Notes Shell:** See 2f.

**Computer access and requirements:** All assignments should be taken on a computer, not cell phone or tablet, since there may be compatibility issues with CANVAS. Be sure you are using only **Chrome** that works with Honorlock.

- **DueDate is NOT DoDate.** Internet sometimes is not reliable, a reason you should **not wait till last hours** to complete your online assignment. If your computer or internet goes 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 time to submit your work. It's **student's responsibility** to have a reliable computer, a good internet speed and connection and, to verify the work is submitted successfully *before the deadline*.

**Calculators NOT required and NOT allowed in proctored Quizzes and Exams:** Students should be able to do arithmetic without a calculator. 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 process that are not mastered through calculator skills. **No calculators** are allowed during quizzes or exams (except the basic calculator already provided in Honorlock).

**2d. ASSIGNMENT CALENDAR. (p.3)** Check the course calendar for due dates and plan your schedule accordingly. You may complete your homework early, but you **must take exams on the assigned date**. A 48-hours grace period is granted to allow students to turn in **LQ, HW, PracticeE3** and **PracticeE4** assignments 48 hours late without penalty. All other assignments must be submitted by the date indicated on the calendar. You may do more lessons and complete them early if you have plans on the due date.

**Your TA is the first person you should contact.** He is available via office hours and emails to answer your questions about the course and go over your quiz/exam. You should check ‘Chui’s Announcements’ and gradebook in Canvas regularly and consult with your TA if you have any questions about the recorded grades.

**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, whichever comes first) to contact your TA if you believe there has been a recording error and have your grade issues resolved *immediately*.

**Note:** There is no grade dispute, no reopening of missed assignments outside of this window nor at the end of the term.

**2e. CANVAS.** A UF courses management system is located [here](#). Use your Gatorlink username and password to login. All course information and course material can be accessed from this site.

**Please note:** Important course information is clearly communicated in this **syllabus** and the course **Canvas**. Due to the volume of email received by the instructor and the TA, we cannot reply to each request for this well publicized information. If you cannot find your answer in the resources above, use any of the 4 **Discussions Boards** in CANVAS to post your questions. Feel free to reply if you know the answer. **Emails** are only for personal/private questions. Please sign your name to your e-mails when you write us.

**TURN ON ALERTS** from Canvas so that you get timely course information in your UF email: Under Notifications (located under ‘Account’ on the upper left corner of Canvas), turn on “Notify Immediately” for Announcement, Discussions and Grading, etc. Click [here](#) for more information.

‘Chui’s Announcements’ is updated frequently to contain announcements made throughout the semester, listed chronologically. All official class communications will be sent via Canvas Announcements and, Students are responsible for acquiring, checking their Canvas Announcements and UF email regularly.

**2f. LECTURE VIDEOS.** The lecture videos provide the main presentation of course material. They introduce and provide examples of new course material. Access each video directly through each Lecture on Canvas Home Page under ‘Lectures’. Re-watch them if necessary.

- To stay current with the course, you must watch the lecture video weekly following 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 and answer the corresponding Lecture Questions (LQ) in Canvas and practice homework problems(HW). If you like to do it every other day, there is a 48-hours grace period. I suggest having work submitted by the due date and use the grace period for absolute emergency such as internet, computer, traveling, weather ...etc. related issues
- 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 commitment, adjust your schedule to complete the assignments earlier rather than later.**

**Lecture Notes Shell:** You may find them in the table of ‘lecture notes’ under the Course Resources. It is important that you should have a copy, this will make it easier to take notes while watching the videos and to study for quizzes/exams. There are 3 options to access these outlines: Print out each lecture, 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.

**2g. SUCCESS & FREE HELP:** Other than having a strong precalculus and calculus I background, success in MAC 2312 depends largely on your attitude and effort. **Keeping up with the 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 video and copy notes without following the thought processes involved in the lecture. For that reason, there are Lecture Questions 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, the time spent working on the material *after* watching each lecture videos). “**At a minimum**” we expect students to spend 3 hours *effectively* studying on your own (in addition to watch lecture videos) for every credit hour of the course. MAC 2312 is a 4 credit course, which means **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 like 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 study regularly, or you wait till the week of the exam 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 as you study!** We encourage you to ask questions, seek help from online office hours, Discussions boards and the [Academic Teaching Center](#) and other free UF online tutoring services. Do not let misunderstandings go unanswered.

We encourage students to work together, and an important resource to facilitate communication in an online course is the **Discussions boards** in CANVAS. You should check the Discussions boards 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 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.

**2h. STUDENTS WITH DISABILITIES.** UF welcome students with disabilities into the UF programs. Students requesting classroom accommodations must first register with the Dean of Students Office [Disability Resource Centr \(DRC\)](#) , (352-392-8565). This must be done as early as possible in the semester, so there is adequate time to make proper accommodations.

**2i. 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.

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 for any commercial purpose. Students found to be in violation may be subject to discipline under the Student Conduce Code.

**3. GRADING**

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

Practice Quiz and 37 Lecture Quizzes ( <b>drop 3</b> lowest LQ) (Prac.quiz + 34 LQ )	81 points
Online Homework Group 1 ( <b>drop 1</b> lowest) (17 HWn)	34 points
Online Homework Group 2 (5 HWn)	30 points
Upload Exam Review (4 UEnR)	40 points
Quiz ( <b>drop 1</b> lowest) (10 Qn)	100 points
<u>3 Unit Exams(100 each) &amp; 1 cumulative Final(115)</u>	<u>415 points</u>
Total:	700 points

In addition, there are extra credits opportunities (see 3g).

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

**There will be no additional curve in this course, extra assignments for individual students to improve a grade are NOT possible.**

630– 700	A	609 – 629	A –	588 – 608	B+	560 – 587	B
539 – 559	B–	518 – 538	C+	490 – 517	C *	469 – 489	C–
448 – 468	D+	420 – 447	D	350 – 419	D–	0 – 349	E

A minimum grade of C (not C –) in MAC 2312 satisfies four credits of the University General Education Mathematics requirement.

For those taking the 'S – U' option:  $S > 70\%$ ,  $U < 70\%$ .

Approval of the 'S – U' option must be approved by the registrar's office. The deadline for filing an application with the Registrar and further information on the 'S – U' option are given in the [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 posting of the grades of the assignment*. No reopening of missed assignments outside this window nor at the end of the semester.

**3b. INCOMPLETE GRADES POLICY** Students who are currently passing a course and have completed the vast majority of assignments and exams in the class but are unable to complete the course because of illness or emergency may be granted an incomplete grade of I. This 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 the finals week to be considered for an I. **A grade of I only allows you to make up your incomplete work, not redo previously completed work, nor closed work.**

### 3c. GETTING STARTED:

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

**3d. VIDEOS AND LECTURE QUIZZES** – Go to Canvas Homepage to access each lecture. Each lecture has an introductory page including the concepts to be covered, things you need to do for this lecture. Viewing the video and complete the Lecture Questions (LQ) are important aspect of the learning process. We encourage you to use the notes as well as the videos and the Discussions board to help answer these questions. After completing LQ, you are ready to practice homework problems.

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

**NOTE:** There might be minor typos in some of the videos. Post them in Discussion board if you find them.

**3e. HOMEWORK** – there are online homework as well as written homework:

1. **Online Homework** (LQn & HWn)– You may access them within each lecture on Canvas homepage or, by clicking on the Assignments tab on the left side of Canvas.
  - a. A 48-hours grace period for LQ & HW submission.
  - b. Three lowest LQ scores and one lowest HWn (in group 1) will be **dropped** to offset possible credit lost due to technical issues or simply just a bad day. (note: Practice Quiz will not be dropped)

**Note:** Canvas does not allow you to open any work you have not opened, you won't be able to study the missed homework when preparing for exams later. So be sure to do each assignment.



**Note:** You may experience trouble seeing correct math image or the minus sign in online assignments, quizzes or exams. This issue is typically due to your computer and/or network. **Be sure to read the highlighted bullets on page 10 under 'Honorlock' to avoid this issue.**

2. **Written Homework** (UEnR, upload Exam Review)– Click on UE1R for more details.
  - Scan your complete work and upload them in a **single pdf file** before due date. (Free scanning apps are available on phone or computers)

Do not try to complete all assignments in one sitting; Remember, **Due Date is NOT Do Date!** Start and submit them early so you won't miss the deadline and still have time to digest and absorb the material.

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

Contact your TA immediately if you are experiencing problems, your TA is **your first contact** in the course. You may also post questions in the Discussions boards.

**NOTE:** **If you have questions** that are not addressed in the **syllabus** nor **announcements**, then post them in any of the 3 **discussions boards or, email our TA for private/personal questions.**

**3f. QUIZZES & EXAMS.** See 4. TESTING. Do not post quiz nor exam questions in discussions boards.

**3g. EXTRA CREDIT.** You may earn up to 728 out 700 points in this class by posting Q&A in DISn, take the PracticeE3 and PracticeE4 in addition to submit homework and quizzes & exams.

### **3h. ADDITIONAL PRACTICE PROBLEMS.**

- NYTI: There are problems listed at the end of each lecture called 'Now You Try It' (NYTI). These are written by the course coordinator and 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 some of them are included in homework, so it is strongly encouraged that you work them out. **Solutions to NYTI are posted** in the 'Lecture Notes' table under Course Resources in Canvas.
- I also wrote 277 extra practice problems and the answers posted in Course Resources.

## **4. TESTING.**

There are 11 quizzes and 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 from day 1 till the due date specified in the calendar. All exams are open on the date specified in the calendar from 1 AM EST and close at 11:59PM EST or when your time is up, whichever comes first. You should start your exam no later than 9pm EST (or 8pm EST for the final exam) to ensure maximum time to work on your exam.

**Cell Phones:** Cell phones must be turned off (not on vibrate) and put far away before taking a test or quiz. Use (defined as having one physically in your hand) of a cell phone during proctored events 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 a text message to someone. Wait until after you have submitted the test/quiz to use it.

**Possible connection issues, temporary internet issues during exams:** *We offer double time on all quizzes & exams to compensate for possible internet problems, any technical issues that may arise, or the wait time to communicate with the Honorlock support.*

**Honorlock:** *Also See Course Information in Canvas. Honorlock requires Chrome to work. Please be sure to obtain Chrome and download the Honorlock Google Chrome Extension and disable Acceleration in Chrome. Check out 'Exams and Honorlock' in Exam Information in Canvas.*

We urge you to Livechat with Honorlock Support at least a few days prior to your exam to confirm your connection speed and required equipment (ex. webcam, speaker, mic) are all good. It is your responsibility to (see 3e. Online homework)

- **have a reliable internet connection with sufficient speed,** verify with Honorlock for an acceptable internet speed, and location and environment.
  - **do a 'speed check' with Honorlock before your exam.**
  - Take the 'Practice Quiz' for a test run and get familiar with Honorlock.
  - **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 tests).
  - You want to ensure you **don't have too many plugins enabled for Google Chrome.** Adblockers are a common cause of browser issues in Canvas.
  - **Clear cache and cookies and do a restart** before taking a quiz/exam. Often times issues with Canvas are a result of cache/cookies needing to be cleared out.
  - *Doing the above tasks help prevent 'unreadable math codes' in math assignments/quizzes/tests.*
  - **If your answers are not received by Canvas due to some faulty connection/equipment/math image, they are lost for good, we are not able to take anything else to replace your lost answers.**
- 
- 'Right click' on the unreadable math code if you encounter this issue, 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 quiz and exams).

Make sure you are available to take the exams at the designated date. ***Do not request a retake or, makeup any missed questions for any quiz or exam, especially due to your poor planning (such as flight delay).*** If you have committed to other plans before the semester start, you may request for makeup by the end of the 2<sup>nd</sup> week.

You will not be able to request a makeup if problems arise due to your own negligence.

- Some Honorlock agent will tell you the problem is with the exam itself when you could not see math images correctly, this is mostly not true. It mostly is because you did not follow the instruction above. Let the agent know that sometimes a 'refresh' resolves the problem. No grade adjustment, drop questions or retake will be granted.

***If you are uncertain as to the reliability of your internet service provider or internet connection, find a place to take your exam where the connection is reliable. A makeup is not possible for failed connection. Do not disconnect webcam before you have submitted your quiz/exam. Failure to do so may result in a 0.***

**4a. SEMESTER UNIT EXAMS.** Each Unit Exam will be given in Canvas consisting multiple choice questions and possibly a few fill-in-the-blank questions. Your exam score is displayed immediately after your submission. The exam is locked after the test.

**4b. FINAL EXAM.** A mandatory, cumulative final exam in Canvas will be given on the date shown in the course calendar. The exam consists of multiple-choice questions and possibly a few fill-in-the-blank questions.

**Quizzes and Exams cannot be open after submission.** You may request a 20 minute private conference with your TA to review your quiz or exam within one week after your submission and, within 24 hours after your final exam submission. You may access *past exams* under Exam Information to help studying for the finals.

**4c. MAKEUP POLICIES.** Exams must be taken on the exam date; all pre-approved make-up must be arranged prior to the exam. This is an assembly exam, and we allow students take makeup if they meet the requirements below, but we *do not allow exam re-take nor makeup after they have taken it.*

1. **Quiz/Exam Conflicts**

- a. If you have a time conflict with an exam for this class and *another ASSEMBLY exam*, and the course number for the other class is higher than 2312, you must contact the course coordinator during the *first two weeks of this term* and request to take the makeup exam. You must present documentation of the higher number course. If your other course has a lower course number than 2312 or your other exam isn't an assembly exam, please contact your instructor in that course to make arrangements. See [UF Exam Policies](#).
- b. If you are participating in a UF sponsored event or religious observance, you may make up an exam only if you make arrangements with the course coordinator *during the first two weeks of the term*. You must present documentation of a UF sponsored event.

2. **Makeup – Quiz/Exams:**

- a. If *serious* illness or other last minute *extenuating* emergency circumstances cause you to miss a quiz/exam, email TA within 24 hours and send in the appropriate documentation.
- b. There are no make-up quizzes/exams for travel issues. However, if you have committed to a travel prior to the semester start, you may request a make-up by the end of the 2<sup>nd</sup> week of classes.
- c. You may be denied a makeup if you have not completed at least 75% of all the course work thus far.**
- d. Contact your TA *immediately* if you have court order date conflict with an exam.
- e. Missing a quiz or an exam due to negligence or poor planning, however, will result in a minimum of 10% penalty.

3. **Other make ups: There are no make-ups** on any assignments nor extra credit opportunities.

All 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, Discussions or through email.

## 5. FORMULAS YOU ARE EXPECTED TO KNOW.

This course assumes that you have a sound precalculus and calculus 1 background. The following is a summary of some important concepts used in solving calculus problems. The textbook provides a more complete review of these essential topics.

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       $(a, b)$ , radius =  $r$

### Derivatives

$$\frac{d}{dx}(\sin x) = \frac{d}{dx}(\csc x) = \frac{d}{dx}(\cos x) = \frac{d}{dx}(\sec x) =$$

$$\frac{d}{dx}(\tan x) = \frac{d}{dx}(\cot x) = \frac{d}{dx}(\arctan x) =$$

$$\frac{d}{dx}(a^x) = \frac{d}{dx}(e^x) = \frac{d}{dx}(\log_a x) = \frac{d}{dx}(\ln x) =$$

### Integrals

$$\int \frac{1}{x} dx = \int e^x dx = \int a^x dx =$$

$$\int \sin x dx = \int \cos x dx = \int \tan x dx = \int \cot x dx =$$

$$\int \sec^2 x dx = \int \csc^2 x dx = \int \sec x \tan x dx = \int \cot x \csc x dx =$$

$$\int \tan^2 x dx = \int \cot^2 x dx = \int \frac{1}{a^2 + x^2} dx =$$

### Trig Identities

$$\sin^2 x + \cos^2 x = 1$$

$$\tan^2 x + 1 = \sec^2 x$$

$$1 + \cot^2 x = \csc^2 x$$

$$\sin^2 x =$$

$$\sin 2x =$$

$$\cos^2 x =$$

$$\cos 2x =$$

Know values of  $\sin x$ ,  $\cos x$ ,  $\tan x$  at  $x = 0, \frac{\pi}{6}, \frac{\pi}{4}, \frac{\pi}{3}, \frac{\pi}{2}$ ;  $\arctan(a)$  at  $a=0, 1, \sqrt{3}, 1/\sqrt{3}$ .

(know the values of the other trig. functions at these angles and know the values of all trig functions at complementary and supplementary angles of the angles above)

### Chain Rules

$$(f(g(x)))' = f'(g(x))g'(x)$$