MAC 2313 ONLINE CALCULUS 3, FALL 2024 (Asynchronous)

SYLLABUS/CALENDAR

Instructor Contact Information:

• **Dr. Missy Shabazz (Course Coordinator)**

Office hours: Monday P5 (11:45 - 12:35), Wednesday P7 (1:55 - 2:45), Thursday P6(12:50 - 1:40) by Zoom

Email: shabazzm@ufl.edu

Teaching Assistant Contact Information:

• **Lezhi Liu**

Email: lliu1@ufl.edu

The course homepage is located in e-Learning Canvas. The information for office hours can be found on Canvas.

IMPORTANT: While taking this class online, you MUST take the exams/quizzes with Honorlock on the dates shown on the course calendar and you MUST have steady internet access.

Week	Day	Date	Lecture	
	F	23	1	3-D Rectangular System
1	M	26	2	Vectors
	W	28	3	Dot Product
	F	30	4	Cross Product
2	M	2		Labor Day
	W	4	5	Lines and Planes
	F	6	6	Quadratic Surfaces
	F	6	1-5	Quiz 1 (L1-L5)
3	M	9	7	Vector Valued Functions
	W	11	8	Arc Length and Curvature
	F	13	9	Motion in Space
4	M	16	10	Functions of Several Variables
	M	16	6-9	Quiz 2 (L6- L9)
	W	18		Exam 1
	F	20	11	Limits and Continuity
5	M	23	12	Partial Derivatives
	W	25	13	Tangent Planes and Linear Approximations
	F	27	14	The Chain Rule
	F	27	10-13	Quiz 3 (L10-L13)
6	M	30	15	Directional Derivatives and Gradients
	W	2	16	Gradients and Tangent Planes
	F	4	17	Maximum and Minimum Values
7	M	7	18	Lagrange Multipliers
	T	8	14 - 18	Quiz 4 (L14-18)
	TH			Exam 2

	F	11	19	Double Integrals over Rectangles
8	M	14	20	Double Integrals over General Regions
	W	16	21	Change of Coordinates
	F	18		Homecoming
9	M	21	22	Change of Variables in Multiple Integrals
	W	23	23	Double Integrals in Polar Coordinates
	F	25	24	Triple Integrals in Rectangular Coordinates
10	M	28	25	Triple Integrals in Cylindrical Coordinates
	M	28	19 - 24	Quiz 5 (L19 - L24)
	W	30	26	Triple Integrals in Spherical Coordinates
	F	1	27	Vector Fields
11	M	4	28	Line Integrals
	M	4	25 - 26	Quiz 6 (L25 - 26)
	W	6		Exam 3
	F	8	29	Fundamental Theorem of Line Integrals
12	M	11		Veteran's Day
	W	13	30	Green's Theorem
	F	15	31	Parametric Surfaces
13	M	18	32	Surface Integrals
	M	18	27 - 30	Quiz 7 (L27 -30)
	W	20	32	Surface Integrals
	F	22	33	Stokes' Theorem
Thanksgiving Break				
14	M	2	34	Divergence Theorem
	W	4		Review
	W	4	31-34	Quiz 8 (L31 -L34)
	F			Reading Day

1. INTRODUCTION

1a <u>**COURSE CONTENT:**</u> MAC 2313 is the third semester in the calculus sequence and it gives a thorough introduction to multi-variable calculus. The course is divided into four modules.

- Module 1 (Lectures 0–8) Geometry of Space & Vector Functions

- Module 2 (Lectures 9–16) Differentiation of Functions of Several Variables

- Module 3 (Lecture 17–22) Multiple Integration

- Module 4 (Lectures 23–30) Vector Calculus including line integrals, surface integrals, Green's Theorem, Stokes' Theorem, and the Divergence Theorem

1b <u>**PREREQUISITES:**</u> MAC 2312 with a minimum grade of C.

To be successful in this course, you should have mastery of precalculus algebra and trigonometry. Students should be able to do arithmetic without a calculator. It is assumed that students are proficient in standard Calculus 1 and 2 topics, including limits, continuity, differentiation, and integration techniques.

<u>**General Education Objectives and Learning Outcomes**</u> 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, and 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.

Content: Students demonstrate competence in the terminology, concepts, theories, and methodologies used within the discipline. After completing this course students will be able to employ strategies in solving problems involving trigonometric functions and their inverse functions, trigonometric equations, right triangle trigonometry, and various trigonometric formulas (e.g., laws of sine and cosine, sum difference, multiple angles, product-to-sum), and verifying trigonometric identities. (Content for Gen Ed Math, assessed through homework, quizzes, and exams)

Communication: Students communicate knowledge, ideas, and reasoning clearly

and effectively in written and oral forms appropriate to the discipline. Throughout this course students will formulate and solve mathematical models using trigonometric functions and their inverses, right triangle trigonometry, trigonometric equations, and trigonometric formulas (laws of sine and cosine, sum difference, multiple angles, product-to-sum) and will communicate mathematical solutions clearly and effectively. (Communication for Gen Ed Math, assessed through homework, lecture and 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. In this course, students will reason in abstract mathematical systems, and they will develop solutions to mathematical models using trigonometric functions and their inverse functions, right triangle trigonometry, the laws of sine and cosine, and various other trigonometric formulas (sum difference, multiple angles, product-to-sum) to solve problems. They will also develop and solve mathematical models of real-world word problems involving trigonometric functions. (Critical Thinking for Gen Ed Math, assessed through homework, quizzes, and exams)

1c <u>**REQUIRED MATERIALS**</u> :

Textbook: There are no required textbooks for this course. For anyone who wishes to study from a textbook, we suggest this free online textbook Openstx Calculus Volume 3. Additionally, you may find any edition of the Calculus textbooks by Stewart, or Rogawski, helpful.

Computer access and requirements: A reliable internet and a computer are required. All assignments should be taken on a computer, not cell phone or tablet, since there may be compatibility issues with Canvas. The recommended browser for this online course is Chrome and DO NOT use Safari and Internet Explorer.

NO CALCULATORS are allowed on quizzes or on exams. A graphing calculator and Wolframalpha are useful as a study and learning tool when used appropriately, but are not essential. Graphing in 3-dimensional space can be challenging sometimes. We recommend online graphing calculators, GeoGebra or CalcPlot3D, to help you at the beginning of learning 3D graphs. Remember that Calculus is a collection of ideas that are not mastered through calculator skills.

1d <u>**E-LEARNING CANVAS:**</u> All course information including lecture outlines, lecture videos, office hours, and exam information is posted on CANVAS.

All grades are posted in the CANVAS gradebook. You are responsible for verifying that those grades are accurate. **You have <u>one week</u> after a score has been posted to contact your instructor to resolve any grade concerns.** We will not consider any grading disputes nor make any grades adjustment at the end of the semester.

TURN ON NOTIFICATIONS in your Canvas account so that you can receive timely alerts in your UF email. See the instructions for Canvas Notification settings.

1e <u>**LECTURES:**</u> The lecture videos provide the main presentation of course material, and are accessed through the Canvas modules. To stay current with the course, we recommend watching the videos daily following the schedule posted on the course calendar. You should watch the lectures and answer the corresponding Lecture Questions before attempting homework. You may post questions on the course discussion board if you need clarification of a topic.

Lecture notes outlines: You can download and print them out from each lecture page in Canvas. Or you have an option to purchase the printed outlines from the

Target Copy Center. It is important that you have a hard copy of the lecture notes in order to follow the lectures easier when watching the videos.

1f <u>**GETTING HELP:**</u> Instructor's office hours will be posted in Canvas and they are held through Zoom conferences. In addition to instructor's office hours, the following resources are available. the following aids are available online.

- The Math Lab in Little 215 is open for drop-in assistance for the students who are on campus from Monday through Friday. It is staffed by mathematics graduate students and undergraduate assistants.
- The Teaching Center Math Lab is a tutorial service staffed by trained math and science students to provide help with your calculus questions and homework. You can also request free one-on-one tutoring.
- Office of Academic Support offers free one-on-one and small group tutoring sessions to any UF students.
- U Matter, We Care provides students in distress with support and coordination of the wide variety of appropriate resources. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. Remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.
- UF Counseling Center provides information and helps students who are experiencing test-related stress and anxiety or having any other concerns.

1g <u>**SUCCESS**</u> in MAC 2313 depends largely on your attitude and effort.

- **Keep up with the lecture videos** and do not fall behind. You may find it beneficial to work daily on the course material.
- **Complete assignments** on time. Get an early start on all assignments. If you get stuck, watch the lecture again and/or attend office hours for timely help. Do not let questions go unanswered.

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

We want you to be successful! Remember that you are the only person who can walk the path to your success. Your instructor is there for you, but you need to stay on top of what's going on in class and take the initiative to reach out when you need help.

1h <u>**STUDENTS WITH LEARNING DISABILITIES:**</u> Students requesting class and exam accommodations must register with the Disability Resource Center(DRC) by providing appropriate documentation. A DRC accommodation letter must be sent to Dr.

Shabazz at least three business days before a scheduled exam/quiz in order to receive exam accommodations. Students with disabilities should follow the DRC procedure as early as possible in the semester since the accommodations are not retroactive.

1i <u>ZOOM PRIVACY ISSUES:</u> The exam/module review sessions may be audio-visually recorded for students in the session 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 session and participate verbally are agreeing to have their voices recorded.

If you are not willing to consent to have your voice recorded during session, 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.

1j <u>DIVERSITY, EQUITY, AND INCLUSION:</u> 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.

1k <u>ACADEMIC HONESTY:</u> 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 UF Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. We are bound by university policy to report any instance of suspected cheating to the proper authorities. In addition, we remind you that lectures given in this class are the property of the University/faculty member and may not be may not be used for any commercial purpose. Students found to be in violation may be subject to discipline under the Student Conduct Code.

2. TESTING

2a <u>**EXAMS:**</u> There will be three 90-minute unit exams and one 2-hour final exam. The exams will be given in Canvas and administered through Honorlock.

- Each exam consists of multiple choice and fill-in-the-blank questions.

- Each exam opens for a 12-hour period (from noon 12:00PM to 11:59PM) on the exam date shown in the course calendar. We recommend starting your test no later than 10PM (no later than 9:30PM for the final exam) since all exams are closed at 11:59PM.

- You can use up to 10 sheets of scratch paper for each unit exam and 15 sheets for the final exam.

2b <u>**IMPORTANT EXAM POLICIES:**</u> MAC 2313 requires that students take online exams through Honorlock on the listed dates. Students with conflicts, including scheduled working hours or traveling, must make advance arrangements to be present at the test.

UF will rely on a Test-In-Place plan this semester for online proctored exams. Each student is expected to use their place of residence – whether on or off campus – for scheduled online exams. To successfully complete an online proctored exam, students need a quiet space with adequate lighting, no distractions and a strong internet connection.

The following applies to all exams:

(1) Students are responsible for material covered in lectures and assignments.

(2) Prior to test start, you will need the following:
- working web camera and microphone
- stable internet connection
- Google Chrome browser and Honorlock Chrome extension

(3) Bring only the following while taking an online exam with Honorlock: Government issued photo ID (or Student Gator One ID) with a legible signature and blank scratch paper (up to 10 sheets).

(4) The following items/actions are not permitted:
- No writing visible on desk or on walls. Make sure music/televisions are not playing in the background.
- No websites other than Canvas and the Honorlock proctoring extension should be used or open while taking a proctored exam.
- Close all other programs and/or windows on the testing computer prior to logging into the proctored test environment.
- Communication or receiving assistance from others is not permitted during a proctored assessment.

- Using a phone or any other electronic device, other than your test-taking device, is not permitted. Headphones or smart watches are not permitted.
- Remain visible in the web camera during the entire duration of the exam.
- Leaving the room during the testing period is not permitted.
- Dual monitors are not permitted.

See Section 3g for the Makeup Policies.

3. GRADING

Assignments	
Xronos Homework	15%
Lecture Quizzes	10%
Quizzes	15%
3 semester exam scores (15% each)	45%
Final exam	15%
Total:	100%

A	90% - 100%	C	67% - 72.9%
A− .	87% - 89.9%	C⁻*	64% - 66.9%
B+	84% - 86.9%	D+	62% - 63.9%
B	80% - 83.9%	D .	57% - 61.9%
B−	76% - 79.9%	D⁻	56% - 56.9%
C+	73% - 75.9%	E less than	or below 56%

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

*NOTE: A grade of C− DOES NOT give Gordon Rule or General Education credit!

3b LECTURE QUESTIONS: There are 32 sets of lecture questions (LQ) on Canvas given on the material of the lectures. They are untimed, open book and open notes. You have 3 attempts for each assignment. Students are expected to work individually on these assignments. The two lowest LQ grades will be dropped at the end of the semester.

3c HOMEWORK ASSIGNMENTS: In this course we will utilize the online platform Xronos which is developed by the math department at UF. Online homework assignments will be assigned for each lecture and they are suggested to be completed by the dates shown on the course calendar. The two lowest online homework grades will be dropped at the end of the semester.

IMPORTANT: You MUST access Xronos via Canvas **Assignments** tab every single time for each Xronos homework assignment. If you do not – your homework grade will not be synced back to Canvas gradebook, and therefore, you will not receive credit for the problems you solve.

Do not try to complete an assignment in one sitting; start early instead of waiting until the due date to avoid missing the deadline.

Remember that the **Due Date** is not the **Do Date**. DO NOT wait until the last hour to complete your assignment since internet sometimes is not reliable, and no extension will be offered due to tech issues.

3d QUIZZES: Eight quizzes will be given on Canvas and the lowest quiz grade will be dropped at the end of the semester. You must make yourself available for about an

hour on the quiz date and you have 50 minutes to complete the quiz. The clock starts ticking once you open a quiz and it will be closed after 50 minutes. No aids will be allowed for quizzes and you should not take a quiz with other people.

DO NOT wait until the last minute to submit your quiz and we will NOT extend time for computer issues.

3e EXAMS: All exams are given online in Canvas and proctored by Honorlock. Your exam grade will be available in Canvas gradebook within three days after the exam. The exams are locked after submission except during the 1-day unlocked period. Your instructor will send an email and inform the class about the unlocked period.

3f EXTRA CREDIT: You may earn additional points in the following ways:

• Syllabus quiz : After reading the course syllabus carefully, you have a chance to earn up to 5 bonus points by completing the syllabus quiz on Canvas before the deadline. Students understand and agree to follow our course policies when submitting this quiz.

• Exam preparation (12 points): A practice exam will be available on Canvas a few days before each test. You can earn up to 10 bonus points (based on the accuracy of your submission) by completing it on Canvas before its due date. Practice exams can be used to evaluate your readiness for the coming exam.

• Other extra credit assignments will be announced on Canvas.

3g <u>**MAKE-UP POLICIES:**</u> We do not consider <u>traveling or lack of internet access</u> as a valid excuse for a make-up.

• **Make-up Exams:** If you are participating in an official UF activity (such as music performances, athletic competition or debate), you must contact the course coordinator <u>at least one week prior to the event</u> and you must present documentation. A make-up exam will be given soon after the exam date.

If illness or other extenuating circumstances cause you to miss an exam, contact the course coordinator immediately (no later than 24 hours after the exam) by email. Then, as soon as possible after you return to classes, bring/send the appropriate documentation to the course coordinator.

• **Missing an exam** – There is a 10% penalty for missing an exam due to negligence.

• **Quizzes:** There are no make-ups, unless,

1) you are participating in an official UF activity, for which you must bring your documentation to the course coordinator during the first three weeks of the semester. 2) you miss due to illness or other extenuating circumstances. You must contact the course coordinator immediately (within 24 hours of missing a quiz) by email, and bring/send the appropriate documentation to the course coordinator as soon as you return to classes.

• **For religious observance** – You must sign up with the course coordinator by **Friday, September 6th** if you will miss an exam or a quiz due to religious observance. A make-up will be arranged.

• **Lecture Questions and Xronous HW:** no make-ups unless you have a legitimate reason stated in the UF attendance policies and you must contact the course coordinator within 24 hours of missing an assignment.

Note that <u>there are 2 drops on LQ, Xronos assignments, and one Quizz.</u> For issues with technical difficulties for Canvas, please contact the UF Help Desk or call (352) 392-HELP(4357). Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from the Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail the course coordinator within 24 hours of the technical difficulty if you are eligible for a make-up.

• **Lecture Questions late submission:** An LQ assignment can be submitted late with a 25% penalty for each day beyond the due date.

• **Extra Credit Assignments:** no make-ups on any extra credit assignments

3h ONE WEEK POLICY: All grades are posted in the Canvas gradebook. You are responsible for verifying all grades are accurate. You have one week after a score is available to discuss any grade concerns with your instructor. There is no grades dispute after one week.

3i INCOMPLETE: A student who has completed a major portion of the course with a passing grade but is unable to complete the final exam or other course requirements due to illness or emergency may be granted an incomplete, indicated by a grade of "I". This allows the student to complete the course within the first six weeks of the following semester. The student must contact the course coordinator to sign the incomplete grade contract, and must provide documentation of the extenuating circumstances preventing him or her from taking the final exam. The grade of "I" is never used to avoid an undesirable grade, and does not allow a student to redo work already graded or to retake the course. See the official incomplete grade policy for details.

4. ONLINE COURSE EVALUATION

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

This syllabus is subject to change. You will be notified if any changes are made.