# Calculus with Analytic Geometry I MAC 2311 Lecture MTRF P3 11:00-12:15PM LIT 235

4 Credit Hours Summer (C) 2024

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Office Hours: TBD

#### **Prerequisites**

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

# Course Description

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

A minimum grade of C (not C-) in MAC 2311 satisfies the four credits of general education requirement and also satisfies the pure math portion of the state Writing/Math requirement.

#### **Coures Goals**

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

# 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 limits, differentiation, and integration of functions.
- 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 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, evaluation of limits, differentiation of functions using the definition of the derivative and differentiation rules, implicit differentiation, logarithmic differentiation, linear approximations, related rates, curve sketching, antidifferentiation, Riemann sums, areas under curves, and u-substitution.

## Required Materials

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

# E-Learning Canvas:

E-learning Canvas, a UF course management system, is located at elearning.ufl.edu. Use your Gatorlink username and password to login. All course information including your grades can be accessed from this site. You are responsible for verifying that your grades are accurate. You have one week after a score has been posted to contact your instructor if you believe there has been a recording error. There is no grade dispute at the end of the semester.

# Post-Lecture Problems

Part of your grade will be calculated based upon completion of post-lecture problems. These will usually be assigned on Canvas after the lecture and due at the end of that day. It will be a total of 5% of your grade. The five lowest-scored problems will be dropped.

# Online Homework

In this course we will be using the online platform Xronos which is free of charge and will be explained during class. Online homework assignments will be assigned daily and must be completed by the specified due date. It will be a total of 15% of your grade. The four lowest-scored assignments will be dropped.

#### Quizzes

Quizzes will be given (almost) every week at the end of Friday's lecture (exceptions being the first week and week of exams). Quizzes will be about material from the week before. You will be given approximately 15 minutes to complete each quiz. It will be a total of 20% of your grade. The two lowest-scored quizzes will be dropped.

#### Exams

There will be 3 exams this semester, divided by topics. The exams will be given in-class and be worth 20% of your grade **EACH**, totaling to 60%.

#### Make-up Policy

For exams and quizzes, notify me in advance (48 hours in advance preferably) with supporting documentation if possible, and we will work something out. The two lowest quizzes will be dropped at the end of the semester.

There are no make-ups for Xronos assignments and post-lecture problems, but the lowest few will be dropped.

### Incomplete

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

## Grading

Post-lecture problems: 5%

Xronos Homework: 15% Discussion Quizzes: 20%

Exams: 60%

## **Grading Scale**

90.00-100 A	87.00-89.99 A-	84.00-86.99 B+	80.00-83.99 B
77.00-79.99 B-	74.00-76.99 C+	67.00-73.99 C	64.00-66.99 C-*
60.00-63.99 D+	57.00-59.99 D	54.00-56.99 D-	0-53.99 E

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

#### Free Help

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

- The CLAS Teaching Center hosts a math center in Little Hall 215, which is open for drop-in assistance with homework Monday through Friday from 11:00 to 3:15. It is staffed by mathematics graduate students and undergraduate assistants. Please note that this space is not designed for intense one-on-one tutoring, but rather as a resource for quick questions and explanations. You should not expect the staff to help you if you have not at least begun your homework and have specific questions. Moreover, they absolutely will not assist you with quizzes or any other such work.
- The Teaching Center also has one-on-one tutoring staffed by trained math and science students to provide help with your calculus questions and homework. Tutors will be glad to provide guidance on specific problems after you have attempted them on your own. You may want to attend different hours to find tutors with whom you feel most comfortable. You can also request free one-on-one tutoring. More information can be found on their website (https://academicresources.clas.ufl.edu/) under the "Tutoring" tab.

# Students with Learning Disabilities

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

# Diversity and Inclusion

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

# Academic Honesty Guidelines

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

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

# In-Class Recording

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

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

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

#### **Evaluations**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <a href="https://gatorevals.aa.ufl.edu/students/">https://gatorevals.aa.ufl.edu/students/</a>. 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 <a href="https://ufl.bluera.com/ufl/">https://ufl.bluera.com/ufl/</a>. Summaries of course evaluation results are available to students at <a href="https://gatorevals.aa.ufl.edu/public-results/">https://gatorevals.aa.ufl.edu/public-results/</a>.

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