# MATH2250 - Calculus I for Science and Engineering

## 1. Course Information

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**Website: http://faculty.franklin.uga.edu/giliev**

**Book (Open Source):** OpenStax Calculus 1 and CLP-1: Differential Calculus

## 2. Prerequisites

Students are expected to have a solid foundation in high-school algebra and trigonometry, equivalent to that offered in the MATH 1113 precalculus course, in order to enroll in the course.

## 3. Course Goals

Students will develop computational fluency with differentiation and integration. Students will learn to model and solve optimization problems using derivatives. Students will also be introduced to the basics of integration and learn related methods of solving integrals.

## 4. Course Delivery

This semester the material for this course will be delivered through a mix of online and face-to-face meetings, as permissible. My focus throughout will be to maintain the health and safety of all involved, while also maintaining the academic standard.

Asynchronous videos will be posted on the course website while real-time online video sessions will held through Zoom. Any face-to-face meetings will be held in the classrooms designated in Athena. Any changes to these plans will be communicated via email.

## 5. Technological Requirements

Due to the highly irregular and dynamic nature of this semester, it will be essential that you have access to a reliable internet connection.

Throughout the semester, you will be required to view online videos, be able to attend online lectures and office hours, and submit your written work digitally.

## 6. Attendance Policy

Students are expected to attend class regularly. Failure to do so will negatively impact your learning experience and your overall performance in the course assessment. If you have any planned or excused absences (medical or emergency), please get in touch with me as soon as possible.

## 7. Academic Honesty

In this class, we maintain a cooperative culture of honesty. This means that you are responsible for your own honesty, and for reporting the academic honesty violations of others. As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: `www.uga.edu/honesty`. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

It is perfectly acceptable to work on homework problems in groups in this course. However, the help you should get from your fellow students should enable you to complete the problem on your own. Recruiting another student to complete the homework for you, or to simply provide answers to the problems, is a violation of the honesty policy.

**You should never submit any work that you are unable to support independently!**

## 8. Principal Course Assignments

**This course has a substantial workload.** Student responsibilities include:

- Attendance to all scheduled class meeting times.
- Weekly quizzes based on the previously covered material.
- Solving problems via the online `WebWork` interface
- Two midterm examinations
- One final exam, three hours in length.

It has been shown that working as part of a study group has been beneficial to learning and retaining studied material. **Form a group early** and make use of all of the available resources, including office hours.

For this class, we're using a web-based homework system called `WebWork`. The login link is

$$\text{https://webwork2.math.uga.edu/webwork2/Math2250\_Iliev\_S21/}$$

Your username comes from your uga.edu email address. If your email address is `jones@uga.edu`, then your username is `jones`. Your password is your nine-digit 810 number, without spaces.

When you first login to `WebWork`, you'll see three buttons on the left. Use the "Change Email" and the "Change Password" button to set your preferred identification. Then try "Begin Problem Sets" to see how the system works. You can select a set and print it out in PDF format to work out the problems on paper if you like. Your problems will be the same when you login again to enter the answers.

## 9. Grading Policy

Your overall grade is computed according to the following breakdown:

(1) 30% for your quiz scores
(2)  5% for your `WebWork` scores
(3) 30% for the midterm tests
(4) 35% for the final exam.

After grades are calculated for each student using these weights, the instructor will rank the students by average and determine thresholds for grades of A, B, C, D, and F. As a guideline, these will be around 90%, 80%, 70%, and 60%, respectively. Though improvement and other circumstances are taken into account in deciding thresholds for letter grades, students with a higher numerical average almost always receive higher letter grades than those with lower numerical averages.

As further guidelines, the standards for each letter grade are as follows:

**A**: The student has computational mastery of the course material and errors are very rare. They can set up and solve non-routine word problems. The student understands the theoretical aspects of the course and can apply the main theorems of the course, such as the Intermediate Value Theorem or Mean Value Theorem. The student shows effective communication skills in writing up problem solutions, explains them clearly, and draws correct conclusions from them.

**B**: The student has computational expertise, but may make occasional errors. They can set up and solve standard word problems, and understand the theoretical basis of the course well enough (for instance) to distinguish between differentiability and continuity. The students technical communications in writing up solutions are mathematically coherent, but the explanations are sometimes unclear or confusing.

**C**: The student demonstrates basic computational skills, has some conceptual understanding of the meaning of the derivative and integral, and can do most routine word problem. The students technical communications are only approximately correct, but the explanations show understanding of the situation.

**D**: The student can do routine calculations, including a moderate chain rule application, and can find the equation of the tangent line, but struggles to set up a routine word problem. The students technical communications address the assignments, but may not allow you to solve the problem in practice.

## 10. Make-up Examinations

If you are absent from a scheduled exam, and your absence is excused (with supporting medical or legal documentation), I will work with you to schedule a make-up exam at the earliest possible time.

## 11. Disclaimer

The course syllabus is a general plan for the course; **deviations may be necessary and will be communicated appropriately in class or via email.**