

MA 121 – Fall 2022

Course Overview and Policies

Overview

The Calculus I course is split into two half-semester modules, MA 121 and MA 122. Each module is two credits with four contact hours per week. A final grade will be given at the end of the first module (approximately Oct 23). Those who pass will continue to MA 122 for the second half of the semester. Students that fail MA 121 will immediately retake the module in the second half of the semester.

Course Materials

Lecture notes for the entire course will be posted on Canvas (free of charge).

Other course materials:

1. **Required:** Access code for Gradarius (can be purchased online, instructions are posted on Canvas).
2. **Recommended:** OpenStax Calculus Vol 1 <https://openstax.org/details/books/calculus-volume-1>

Course Structure

The course is structured with two lecture hours on Monday and Wednesday (some weeks have extra lectures on Friday), a problem session (recitation) on Tuesday, and a workshop on Thursday. The work requirements include weekly multiple-choice quizzes, online assignments (Gradarius), participation in workshops, and completion of self-study projects. The goal is to help students acquire a deeper understanding of mathematics, achieve mastery of the most essential calculus skills, and acquire experience in the application of calculus techniques to problems in science and engineering.

Lectures

Lectures are where the main theoretical concepts and techniques are developed and discussed. To improve the learning experience of lectures we expect students to develop the practice of preparing in advance of lecture by reading the upcoming material in the textbook, viewing related videos available through the course site in Canvas, and answering related questions through the online assignments. Instructors will use the online response system (Poll Everywhere or similar) as a means of polling the class on questions related to the new material and gauging how well the concepts are being understood.

Problem sessions (recitations)

These are classes, where students can get additional help with mastering the material from lecture and ask questions related to the current assignments. Students should attend these classes prepared to ask specific questions of the Teaching Assistant (TA). The TA will present solutions to the posted problems on the board.

Workshops

The role of workshops is to develop problem-solving skills; a collection of best practices, methods, and reasoning skills that enable one to formulate a mathematical solution from a problem described in words. Students will collaborate in small groups on more complex open-ended problems. A typical scenario will be for students to spend about 10-15 minutes on a problem, interacting with and receiving hints from the instructor, as needed, followed by a discussion of possible solutions. Students develop a better understanding of how to apply mathematical reasoning in solving problems and acquire practice working in groups and communicating technical ideas to others. Each student hands in solutions to the problems (normally, by the end of the day when a workshop is held), which are graded on the 0-10 point.

WebEx Assignments (Gradarius)

The main goal of these exercises is to develop the routine skills necessary to carry out computations in Calculus.

You have to enter complete solutions to the assigned problems using the Gradarius interface (**even if your answer to a given problem is correct, but no work is shown, you will receive only 50 out of 100 points for the problem**). The details on how to use Gradarius are posted on Canvas.

Every WebEx assignment typically contains 10-15 problems, most of which are routine exercises reviewing topics from recent lectures. The grade is based on the accumulation of points scored throughout the course. All Gradarius exercises will be given in the *tutor mode* (Gradarius provides feedback for each solution step), usually with unlimited number of trials.

The Self-study Projects

Almost every lecture is associated with a self-study project posted on Canvas, which contains a reading assignment, several related videos, and a quiz. The goal of each project is to get students familiar with the material of the upcoming lecture. Students are supposed to study the posted materials on their own and answer the quiz questions. A more detailed description of self-study projects can be found in Canvas.

Multiple-choice Quizzes (MCQ)

MCQ will contain 2-4 multiple-choice questions. Typical duration of a multiple-choice quiz is 15-20 min. All quizzes will be administered through Canvas every Monday (except for the days when the exams are held) at 5pm.

Exams

The written exams will include questions that cover routine skills, theoretical concepts and applications. Do not expect that every exam question will match closely one or more homework or lecture problems previously practiced. Some questions will be multiple-choice and some will require a full solution. Full-solution questions require sufficient supporting work to receive full credit. Exams are closed book and closed notes; the use of electronic devices (calculators, cell phones) is strictly prohibited. All cell phones and calculators are to be stored out of sight during the exam; rules governing exam seating are to be observed. All exams are scheduled for 5:00-6:00 p.m. on Monday evenings. Room assignments posted on the registrar's website are subject to change and will be announced by email closer to the exam date.

Tentative exam dates are September 26th and October 17th, each exam is covering about 3-4 weeks of material.

Exam/Quiz Rules: All quizzes and exams are “open book”, in the sense that students are allowed to use only resources in the Canvas course page. Specifically, **no “query-based” resources are allowed**, in other words, students cannot use search engines, Chegg, Wolfram Alpha, Symbolab, etc. If students experience any technical issues during the quiz or at the moment they try to submit your solutions, the issues must be reported right away (email to lecture instructor), and not in several hours after the deadline or the next day.

Excused Absences

Missed assessments may be made up if you have a valid excuse, typically a note from the Stevens Health Service or your family physician. It is your responsibility to contact your instructor immediately if you have an excusable absence. Documentation must be presented to your instructor immediately after you return to class. If you know of a conflict in advance, contact your instructor prior in advance to arrange a for a makeup. Excuses are governed by the conditions of the Stevens Honor Code.

Undergraduate Honor System

Enrollment into the undergraduate class of Stevens Institute of Technology signifies a student's commitment to the Honor System. Accordingly, the provisions of the Stevens Honor System apply to all undergraduate students

in coursework and Honor Board proceedings. It is the responsibility of each student to become acquainted with and to uphold the ideals set forth in the Honor System Constitution. More information about the Honor System including the constitution, bylaws, investigative procedures, and the penalty matrix can be found online at <http://web.stevens.edu/honor/>

The following pledge shall be written in full and signed by every student on all submitted work (including, but not limited to, homework, projects, lab reports, code, quizzes and exams) that is assigned by the course instructor. No work shall be graded unless the pledge is written in full and signed.

“I pledge my honor that I have abided by the Stevens Honor System.”

Reporting Honor System Violations

Students who believe a violation of the Honor System has been committed should report it within ten business days of the suspected violation. Students have the option to remain anonymous and can report violations online at www.stevens.edu/honor.

Learning Accommodations

Stevens Institute of Technology is dedicated to providing appropriate accommodations to students with documented disabilities. The Office of Disability Services (ODS) works with undergraduate and graduate students with learning disabilities, attention deficit-hyperactivity disorders, physical disabilities, sensory impairments, psychiatric disorders, and other such disabilities in order to help students achieve their academic and personal potential. They facilitate equal access to the educational programs and opportunities offered at Stevens and coordinate reasonable accommodations for eligible students. These services are designed to encourage independence and self-advocacy with support from the ODS staff. The ODS staff will facilitate the provision of accommodations on a case-by-case basis.

For more information about Disability Services and the process to receive accommodations, visit <https://www.stevens.edu/office-disability-services> (Links to an external site.). If you have any questions please contact: Phillip Gehman, the Director of Disability Services Coordinator at Stevens Institute of Technology at pgehman@stevens.edu or by phone 201-216-3748.

Disability Services Confidentiality Policy

Student Disability Files are kept separate from academic files and are stored in a secure location within the Office of Disability Services. The Family Educational Rights Privacy Act (FERPA, 20 U.S.C. 1232g; 34CFR, Part 99) regulates disclosure of disability documentation and records maintained by Stevens Disability Services. According to this act, prior written consent by the student is required before our Disability Services office may release disability documentation or records to anyone. An exception is made in unusual circumstances, such as the case of health and safety emergencies.

Inclusivity

Name and Pronoun Usage

As this course includes group work and class discussion, it is vitally important for us to create an educational environment of inclusion and mutual respect. This includes the ability for all students to have their chosen gender pronoun(s) and chosen name affirmed. If the class roster does not align with your name and/or pronouns, please inform the instructor of the necessary changes.

Inclusion Statement

Stevens Institute of Technology believes that diversity and inclusiveness are essential to excellence in academic discourse and innovation. In this class, the perspective of people of all races, ethnicities, gender expressions and gender identities, religions, sexual orientations, disabilities, socioeconomic backgrounds, and nationalities will be respected and viewed as a resource and benefit throughout the semester. Suggestions to further diversify class materials and assignments are encouraged. If any course meetings conflict with your religious events, please do not hesitate to reach out to your instructor to make alternative arrangements.

You are expected to treat your instructor and all other participants in the course with courtesy and respect. Disrespectful conduct and harassing statements will not be tolerated and may result in disciplinary actions.

Mental Health Resources

Part of being successful in the classroom involves a focus on your whole self, including your mental health. While you are at Stevens, there are many resources to promote and support mental health. The Office of Counseling and Psychological Services (CAPS) offers free and confidential services to all enrolled students who are struggling to cope with personal issues (e.g., difficulty adjusting to college or trouble managing stress) or psychological difficulties (e.g., anxiety and depression). Appointments are can be made by phone (201-216-5177).

Emergency Information

In the event of an urgent or emergent concern about the safety of yourself or someone else in the Stevens community, please immediately call the Stevens Campus Police at 201-216-5105 or on their emergency line at 201-216-3911. These phone lines are staffed 24/7, year round. For students who do not reside near the campus and require emergency support, please contact your local emergency response providers at 911 or via your local police precinct. Other 24/7 national resources for students dealing with mental health crises include the National Suicide Prevention Lifeline (1-800-273-8255) and the Crisis Text Line (text “Home” to 741-741). If you are concerned about the wellbeing of another Stevens student, and the matter is *not* urgent or time sensitive, please email the CARE Team at care@stevens.edu. A member of the CARE Team will respond to your concern as soon as possible.