



Calculus II (MATH-1360-130)

Dates: June 30 - Aug 8, 2025

Location:

Students will participate in the course using Georgetown University's online learning management system called Canvas. To learn more about Canvas, please go through the Canvas Guide for Students.

Professor: Dr. Erblin Mehmetaj

Professor Contact Information: Erblin.Mehmetaj@georgetown.edu

Virtual Office Hours: Office Hours will be held over Zoom on Monday 1:30PM-2:30PM and Thursday 1:30PM-2:30PM. Still, you have to make an appointment using this [link \(Links to an external site.\)](#) if you want to see me during any of these times.

COURSE DESCRIPTION

A continuation of MATH 1350 -- Calculus I. Topics include applications of integration (area of region between curves, volume by slicing, volume by shells, length of curves, and surface area), L'Hopital's Rule, techniques of integration (integration by parts, trigonometric integrals, trigonometric substitutions, partial fractions, and improper integrals), sequences and infinite series (The Divergence and Integral Tests, Comparison Tests, Alternating Series Test, The Ratio and Root Test), power series (approximating functions with polynomials, properties of power series, Taylor Series, working with Taylor Series), and parametric and polar curves (parametric equations, polar coordinates, and calculus in polar coordinates).

COURSE LEARNING OBJECTIVES

By the end of this course, you should be able to:

1. Explore rich geometric applications of integration: computing the area of regions bounded by several curves, the volume and surface area of three dimensional solids, and the length of curves.
2. Review L'Hopital's Rule, an important tool that helps evaluate some limits that are known as indeterminate forms.



3. Introduce new techniques of integration; learn about integration by parts, trigonometric substitution, trigonometric integrals, and partial fractions; study integrals that have either infinite integrands or infinite intervals of integration.
4. Learn about sequences and series, analyze infinite series, and determine (using guidelines) whether a given series converges.
5. Explore approximating functions using polynomials, and properties and uses of Taylor series, as well as representing familiar functions in terms of Taylor series.
6. Study parametric equations to represent curves and trajectories in three-dimensional space; explore polar coordinate systems for circular geometries and investigate calculus in these settings.

COURSE READINGS

Calculus, Early Transcendentals, Third Edition, Briggs, Cochran and Gillett, Pearson (2019).

In this course, we will use [MyLab and Mastering](#), an online service for managing course assignments. It is synchronized with the textbook and comes with an electronic copy of the textbook. To access MyLab and Mastering (Access Pearson), you will need an Access Code. This Access Code can either be purchased at the bookstore or from the MyLab and Mastering website directly when logging in. A brand new hardcopy of the textbook also comes with an Access Code (but this is the more expensive option). A used copy of the textbook will not give you access to MyLab and Mastering.

COURSE ASSIGNMENTS AND GRADING CRITERIA

Graded Assignments

This course has three mid-term exams, final exam and homework assignments at the end of each module section.

Mid-term Exam 1	20%
Mid-term Exam 2	20%
Mid-Term Exam 3	20%
Homework Assignments	20%
Final Exam	20%

Grading Scheme

93 - 100 % = A

90 - 92 % = A-

87 - 89 % = B+

83 - 86 % = B

80 - 82 % = B-

77 - 79 % = C+

73 - 76 % = C

70 - 72 % = C

67 - 69 % = D+

60 - 66 % = D

Below 60 % = F

HOMEWORK POLICY

Homework will be assigned for each class using MyLab and Mastering (Access Pearson). Online homework will usually be due on Monday at 11:59PM and it will be on the sections covered the week before. After the due time is reached, the correct answers are revealed and the assignment cannot be worked on anymore. You are strongly advised to start working on the homework as soon as it is assigned, while your knowledge of the material is still fresh. This will also help you avoid missing the deadlines.

MYLAB AND MASTERING

[MyLab and Mastering](#) is an online service for managing course assignments. It is synchronized with the textbook. Homework problems will be graded automatically and you will have at most three tries for each problem. At the same time, you will get instant feedback on whether your solution is right or wrong. The correct answers will be revealed only after the due date of the assignments. To learn how to enroll in MyLab and Mastering, click on the Pearson Access tab from the Course Navigation menu and follow the instructions provided in the flyer Get Started with Pearson. Note that to access MyLab and Mastering, you will have to get an Access Code. It either came with your textbook or will have to be bought from the MyLab and Mastering web site directly when you are logging in. There is a grace period of two weeks from the start of the course when you will be able to use MyLab and Mastering without access code. You must enter your code no later than that time, or your MyLab and Mastering account will be blocked.



EXAM POLICY

There will be three exams and a final exam. The exams will take place on Zoom. Tentatively, they will take place on Tuesdays at 6:00PM (to be determined during the first week of the session). You will be required to turn your camera on and turn it in such a way that I can see your desk. No notes, books, or outside sources will be allowed. Additionally, you will have to use a scanning app on your phone to scan your exam, convert it into a single pdf file, and upload it to Canvas. You may use any scanning app. If you need a suggestion, I recommend Adobe Scan (for [Android](#) or [iOS](#)) or CamScanner (for [Android](#) or [iOS](#)).

COURSE SCHEDULE

This course begins with an Orientation and is divided into **6** modules. Below is an outline describing the course structure. Each Module will be released on a weekly basis every Sunday at 11:59 pm (ET). Students are required to move through each module in sequential order.

ORIENTATION: Opens June 30

The orientation provides an overview of the course and introduces you to your instructor and peers. You will also learn about the technology requirements and where to get support.

Week 1: Application of Integration [June 30 - July 6]

- 6.2 Regions between Curves
- 6.3 Volume by Slicing
- 6.4 Volume by Shells
- 6.5 Length of Curves
- 6.6 Surface Area

Exam 1

MODULE 2: Logarithmic and Exponential Functions [July 7 - 13]

- 4.7 L'Hopital's Rule (Review from Calculus I)
- 8.1 Basic Approaches (Part of Module 3: Covered during Week 2)
- 8.2 Integration by Parts (Part of Module 3: Covered during Week 2)

MODULE 3: Techniques of Integration [July 14 - July 20]

- 8.3 Trigonometric Integrals



8.4 Trigonometric Substitutions

8.5 Partial Fractions

8.9 Improper Integrals

Exam 2

MODULE 4: Sequences and Infinite Series [July 21 - July 27]

10.1 An Overview

10.2 Sequences

10.3 Infinite Series

10.4 The Divergence and Integral Tests

10.5 Comparison Tests

10.6 Alternating Series

10.7 The Ratio and Root Tests

Exam 3

MODULE 5: Power Series [July 28 - August 3]

11.1 Approximating Functions with Polynomials

11.2 Properties of Power Series

11.3 Taylor Series

11.4 Working with Taylor Series

MODULE 6: Parametric and Polar Curves [August 4 - August 8]

12.1 Parametric Equations

12.2 Polar Coordinates

12.3 Calculus in Polar Coordinates

Final Exam



INFORMATION ABOUT TOOLS AND TECHNICAL REQUIREMENTS

As a Georgetown student your online classroom experience will be very different but just as rigorous as your residential student experience. You can expect to:

- Communicate with your professor and classmates regularly via email, discussion boards, and other technologies available.
- Navigate the internet using a web browser (note that certain tools may require a specific browser).
- Use applications such as Microsoft Office or Google Docs to create documents and work on projects.
- Submit assignments in Canvas.
- Upload and download saved files (including text, audio, and video).
- Use a microphone to record audio.
- Use a webcam to record video.
- On exams, use a scanning app on your phone so that you can scan your exam, convert it into a single pdf file, and upload it to Canvas. You may use any scanning app. If you need a suggestion, I recommend Adobe Scan (for [Android](#) or [iOS](#)) or CamScanner (for [Android](#) or [iOS](#)).

Computer Requirements

- You will need access to a computer (Windows or Mac) and adequate Internet service to complete this course. Although you can use other devices such as smartphones and tablets for some online coursework, please note that some tools, such as Proctorio, do not work on tablets or smartphones.
- You will also need an internal or external microphone and camera to complete this course. While you can use any browser to access Canvas please note that some tools only work with certain browsers (e.g., Proctorio only works with Chrome).

The minimum requirements needed to use Canvas can be found in this [Canvas guide](#).

COURSE POLICIES AND EXPECTATIONS

Student Expectations

You are expected to complete all readings, assignments, and activities on time. Participation is essential to your success in this class. It is important to subscribe to the course discussion boards so that you receive notifications when new messages are posted.



Time Expectations

Our remote learning courses are designed to meet the same academic standards as our place-based (face-to-face) courses. Students should plan on spending approximately 20-30 hours a week on assignments, readings, projects, etc., in addition to the time spent watching the videos.

Communication Expectations

Building an inclusive climate of mutual respect and inquiry in this class:

I respect your right to be called whatever you want to be called, because I understand that for all of us, social recognition of our sense of self is key to our own integrity and flourishing. I expect everyone in the class to do the same. **In particular, if you would like to be called by a specific set of pronouns or a specific name that might not be obvious from your official school records, please let me know in any way that makes you comfortable.**

Georgetown's Trans, Non-Binary, and Gender Non-Conforming Resource Guide:
<https://lgbtq.georgetown.edu/resources/transatgu/>

Communication with Peers

You will be expected to engage with your peers via the discussion board and other required tools on a regular basis.

Communication with Professor

Please feel free to email me with your questions, concerns, and/or to schedule a time to meet over Zoom. When sending emails please remember to follow the guidelines outlined below.

- *Check the syllabus.* Before sending your email or message, be sure that your question has not already been addressed in the syllabus or announcements.
- *Be patient.* If you have a concern and send me a message, you can expect a response within 2 business days.
- *Specify subject.* Subject line should include the topic of the message and class title.
- *Greet & Close.* E-mails should begin with a formal greeting and end with you signing your name in all messages/emails.
- *Check writing.* Proofread (i.e. grammar and spelling) your message before sending.

Netiquette Guidelines

To promote the highest degree of education possible, we ask each student to respect the opinions and thoughts of other students and be courteous in the way that you choose to express yourself. Students should be respectful and considerate of all opinions.

In order for us to have meaningful discussions, we must learn to genuinely try to understand what others are saying and be open-minded about others' opinions. If you want to persuade



someone to see things differently, it is much more effective to do so in a polite, non-threatening way rather than to do so antagonistically. Everyone has insights to offer based on his/her experiences, and we can all learn from each other. Civility is essential.

ACCOMMODATIONS

Students with Disabilities

Under the Americans with Disabilities Act (ADA) and the Rehabilitation Act of 1973, individuals with disabilities have the right to specific accommodations that do not fundamentally alter the nature of the course. Some accommodations might include note takers, books on tape, extended time on assignments, and interpreter services among others. Students are responsible for communicating their needs to the [Academic Resource Center](https://academicsupport.georgetown.edu/disability/), the office that oversees disability support services, (202-687-8354; arc@georgetown.edu; <https://academicsupport.georgetown.edu/disability/>) before the start of classes to allow time to review the documentation and make recommendations for appropriate accommodations. The University is not responsible for making special accommodations for students who have not declared their disabilities and have not requested an accommodation in a timely manner. Also, the University need not modify course or degree requirements considered to be an essential requirement of the program of instruction. For the most current and up-to-date policy information, please refer to the [Georgetown University Academic Resource Center website](https://academicsupport.georgetown.edu/disability/). Students are highly encouraged to discuss the documentation and accommodation process with an Academic Resource Center administrator.

Accessibility and Inclusion

One of the central tenets of Georgetown's educational mission is *cura personalis*, a Latin phrase meaning "care of the whole person." Georgetown is committed to showing care and concern for each student by creating an inclusive and accessible learning environment that follows universal design principles to meet the needs of its diverse student body.

I am committed to creating a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.). If your name or pronoun needs to be corrected, please let me know early in the semester so that I can make the appropriate changes to my records.

ACADEMIC INTEGRITY

Students at Georgetown University are expected to maintain the highest standards of academic and personal integrity. Although most Georgetown students conduct themselves in accordance with these standards, occasionally, there are students who violate the code of conduct. Cheating harms the University community in many ways. For example, honest students are frustrated by the unfairness of cheating that goes undetected and students who cheat can skew the grading curve in a class, resulting in lower grades for students who worked hard and did their own work.

Academic dishonesty in any form is a serious offense, and students found in violation are subject to academic penalties that include, but are not limited to failure of the course,



termination from the program, and revocation of degrees already conferred. All students are expected to fully adhere to the policies and procedures of [Georgetown's Honor System](#) and to take the Honor Code Pledge.

Honor Code Pledge

In pursuit of the high ideals and rigorous standards of academic life I commit myself to respect and to uphold the Georgetown University honor system:

- *To be honest in every academic endeavor, and*
- *To conduct myself honorably, as a responsible member of the Georgetown community as we live and work together.*

Plagiarism

Stealing someone else's work is a terminal offense in the workplace, and it will wreck your career in academia, too. Students are expected to work with integrity and honesty in all their assignments. The Georgetown University Honor System defines plagiarism as "the act of passing off as one's own the ideas or writings of another." More guidance is available through the [Gervase Programs](#). If you have any doubts about plagiarism, paraphrasing, and the need to credit, check out [Plagiarism.org](#).

All submissions must be your original work. Any submission suspected of plagiarism will be immediately referred to the Honor Council for investigation and possible adjudication. All students are expected to follow Georgetown's honor code unconditionally. If you have not done so, please read the honor code material located online at the [Honor Council website](#).

SUPPORT SERVICES

Georgetown recognizes that COVID-19 has a significant impact on everyone in the Georgetown community. Georgetown offers a variety of support services for students that can be accessed online and has put together [this newsletter](#) which aims to provide you with information about well-being resources and virtual meetings that can connect you with mental health professionals on and off campus during this time. Below are some resources available to you:

- [Academic Resource Center](#)
202-687-8354 | arc@georgetown.edu
- [Counseling and Psychiatric Services](#)
202-687-6985
- [Institutional Diversity, Equity & Affirmative Action \(IDEAA\)](#)
(202) 687-4798



Title IX/Sexual Misconduct

Georgetown University and its faculty and staff are committed to supporting survivors and those impacted by sexual misconduct, which includes sexual assault, sexual harassment, relationship violence, and stalking. Georgetown requires faculty members, unless otherwise designated as confidential, to report all disclosures of sexual misconduct to the University Title IX Coordinator or a Deputy Title IX Coordinator. If you disclose an incident of sexual misconduct to a professor or staff member in or outside of the classroom (with the exception of disclosures in papers), that faculty or staff member must report the incident to the Title IX Coordinator, or Deputy Title IX Coordinator. The coordinator will, in turn, reach out to the student to provide support, resources, and the option to meet. Please note that the student is not required to meet with the Title IX coordinator and no action will be taken without the student's awareness. More information about reporting options and resources can be found on the Sexual Misconduct Website:

<https://sexualassault.georgetown.edu/resourcecenter>.

If you would prefer to speak to someone confidentially, Georgetown has a number of fully confidential professional resources that can provide support and assistance. These resources include:

- Health Education Services: Sexual Assault Response and Prevention: sarp@georgetown.edu
- Counseling and Psychiatric Services (CAPS): 202.687.6985

Additional resources are included below:

- Georgetown Self-Care Resource Guide: <https://studenthealth.georgetown.edu/health-promotion/self-care/>
- Georgetown Wellness Wheel: <https://studenthealth.georgetown.edu/hoya-wellness-wheel/>
- Georgetown Guide to Recognizing Students in Distress: <https://studentaffairs.georgetown.edu/studentoutreach/facultystaffresources/>

Title IX/Pregnancy and Parenting Accommodations

Georgetown University is committed to creating an accessible and inclusive environment for pregnant students. At any point throughout their pregnancy students may request adjustments/modifications based on general pregnancy needs or accommodations based on a pregnancy-related complication or medical need. Students may also request accommodations following labor and delivery based on a complication or medical need.

To request pregnancy modifications, please complete the [SCS Pregnancy Modification Request Form](https://forms.gle/ZBfASxui7u13A8TU6): <https://forms.gle/ZBfASxui7u13A8TU6>



More information about pregnancy modifications can be found on the Title IX Georgetown University Website: <https://titleix.georgetown.edu/title-ix-pregnancy/student-pregnancy/>

Office of the Student Ombuds (OSO)

Confidential | Independent | Impartial | Informal

The Office of the Student Ombuds (OSO) serves all undergraduate and graduate students, including SCS and BGE, on the main campus. Consider contacting the Student Ombuds when you want to talk to a caring professional about a University-related issue but don't know where to turn. The OSO is a confidential and safe space that is independent of formal university organizations or structures where students can discuss their concerns, share their experiences, ask questions and explore their options. The student ombuds can help you problem-solve, identify your goals, and empower you to think through ways to navigate complex situations. Some reasons for you to visit the office may be to address academic concerns, clarify administrative policies, discuss interpersonal conflicts, seek coaching, mediation or facilitation to handle a sensitive situation, advise you on the process to file a formal complaint if you are experiencing bias, harassment, bullying or other forms of intimidation, identify other appropriate campus resources, and allow you to safely express your frustrations and concerns.

Request an in-person or zoom appointment with the Student Ombuds by writing studentombuds@georgetown.edu or calling 202-784-1081. The OSO is located in Room 207 of the Reiss Building (across from Arrupe Hall). Find more information at <http://studentombuds.georgetown.edu>.

Georgetown Library

If you have a question for a librarian you can go to their [“Ask Us”](#) page where you will have the option to chat online, send an email, or schedule a Zoom appointment to discuss a research topic, develop a search strategy, or examine resources for projects and papers. Librarians offer an overview of and in-depth assistance with important resources for senior or master's theses, dissertations, papers and other types of research. This service is available to currently enrolled students who need assistance with Georgetown-assigned projects and papers. Please review the [Services & Resources Guide for Online Students](#) for additional information.

eResources

Students enrolled in courses have access to the University Library System's eResources, including 500+ research databases, 1.5+ million ebooks, and thousands of periodicals and other multimedia files (films, webinars, music, and images). You can access these resources through the [Library's Homepage](#) by using your NetID and password.

Learning Resources

Georgetown offers a host of [learning resources](#) to its students. Two that you might find particularly helpful in this course are the [Writing Center](#) and [Refworks](#).



- [The Writing Center](#) offers peer tutoring by trained graduate and undergraduate students who can assist you at any point in the writing process. They help at any stage of your writing process, from brainstorming to revision. Tutors can offer advice on thesis development, use of evidence, organization, flow, sentence structure, grammar, and more. The Writing Center will not proofread or edit papers; rather, they will help to improve your proofreading and editing skills to become a better writer. Appointments can be booked online through their website.
- [Refworks](#) is an online research management tool that aids in organizing, storing, and presenting citation sources for papers and projects.

Technical Support

All students have 24/7 access to Canvas technical support 24 hours a day, 7 days a week, including live chat and a support hotline at 855-338-2770. Use the 'Help' icon in the lower left of your Canvas window to view all available support and feedback options. If you're looking for help on a specific feature, check out the [Canvas Student Guide](#).

ONLINE PROCTORING [if applicable]

This online course uses Proctorio, an online proctoring solution integrated in Canvas quizzes which offers identity verification, test monitoring, and a number of other features to ensure academic integrity. Throughout an exam, Proctorio will record the testing environment, and depending on the settings of the exam students may need to provide a scan of the room. Therefore, students should select private spaces for the exam session where disruptions are unlikely and where recording devices can be enabled. At the end of the exam, Proctorio generates an automated report for the instructor flagging any suspicious behavior, such as opening up new tabs on browsers, talking to others in the room, and looking away from the screen for too long.

Students will be required to:

- Use a computer with a functioning webcam and microphone (no iPads, kindles, or mobile devices)
- Use Google Chrome browser
- Install the Proctorio extension to the Google browser
- Have a reliable internet connection
- Use a quiet private location
- Have the GU photo ID ready to show, if applicable

Students will take a practice quiz using Proctorio to test their systems and help prepare for an actual exam.

24/7 support is available via Proctorio. For additional information, please review [Proctorio's Best Practices for Students](#) and visit [Proctorio Support](#).



Syllabus

Please note: If you have challenges finding a computer that meets the technical requirements above, and/or concerns using an online proctoring tool, please speak to your instructor who will work with you to find an equivalent alternative.