

MATH 407: ADVANCED CALCULUS COURSE SYLLABUS

VIRGINIA COMMONWEALTH UNIVERSITY

FALL 2021

SECTION 003

Modality Online Synchronous
Meeting times: TR 2:00 - 3:15 pm
Meeting location: <https://vcu.zoom.us/j/95551336835>

Instructor:

Brent Cody
Office: Harris Hall 4110
Email: bmccody@vcu.edu
Personal Website: <http://www.people.vcu.edu/~bmccody/>

Office hours:

Held at my personal Zoom link: <https://vcu.zoom.us/j/3488900042>
T 11:00am - 12:00noon and F 1:00pm - 2:00pm

Course content:

The course will focus on writing mathematical proofs of results involving differential and integral calculus. Topics to be covered include: natural, rational and real numbers, the Completeness Axiom, sequences and infinite series, power series, limits, sequences of functions, uniform convergence, continuity, differentiation and integration.

Textbook:

Required textbook Elementary Analysis: The Theory of Calculus, 2nd Edition
by Kenneth A. Ross
Springer, 2013

This textbook is **available in pdf format to all VCU students free of charge** via SpringerLink@VCU Libraries. To obtain a copy, click the link below, login and then search for “elementary analysis the theory of calculus”.

<https://www.library.vcu.edu/>

Assessment:

The usual 10-point grading scale will be used to determine course grades (90–100 is an A, 80–89 is a B, etc.). The graded assignments for the course are broken up into four categories as follows.

Homework	20%
Group Quizzes	10%
Midterm Exams	40% (20% each)
Final Exam	30%
Total	100%

Homework, together with a group quiz assignment, will be due every two weeks on Canvas. Exams will be administered through Canvas and must be taken within the windows of time listed below.

Midterm Exam 1 is on Thursday, September 30 from 2:00 - 3:15pm

Midterm Exam 2 is on Thursday, November 11 from 2:00 - 3:15pm

The **Final Exam** is on Thursday, December 16 from 12:30 - 3:20pm

Grading and makeup policies:

Homework	Late homework will be accepted the next day but will receive a 10% penalty. No homework will be accepted 24 hours after the due date. The lowest homework score will be dropped.
Graded Discussions	Late graded discussions will not be accepted. Your lowest score on a graded discussion will be dropped.
Midterm Exams	Makeup midterms will not be given. But your lowest midterm exam score will be replaced by your score on the final exam.
Final Exam	If you miss the final exam due to an emergency or because of extenuating circumstances, you (or a designated person) will need to contact me via email within 24 hours. A make-up final exam <i>might</i> be granted. This will be at the discretion of me and will require that you provide official documentation for your absence.

Expectations:

“For a student of mathematics to hear someone talk about mathematics does hardly any more good than for a student of swimming to hear someone talk about swimming. You can’t learn swimming techniques by having someone tell you where to put your arms and legs; and you can’t learn to solve problems by having someone tell you to complete the square or to substitute $\sin u$ for y .” —Paul Halmos

The only way to truly learn mathematics is to be actively engaged with it yourself. I therefore expect you to watch all lecture videos, complete all assignments to the best of your ability, and ask questions either in class, during office hours or in the course discussion forum. It is important that you stay up-to-date with the material being covered in the course; please make use of office hours or course discussion forums if anything covered in class is not clear. If the scheduled office hours do not work for you, send me an email to schedule a different time.

In addition to watching the 2 hours and 30 minutes of lectures each week, I expect that you will spend at least 7-9 hours per week <u>outside of class</u> working on this course.
--

Important Dates:

Monday, August 30 Last day to drop a course
Friday, November 5 Last day of class and last day to **withdraw** with a mark of “W”.
For other important dates visit: <https://academiccalendars.vcu.edu/>.

University syllabus statement:

Students should visit <http://go.vcu.edu/syllabus> and review all syllabus statement information. The full university syllabus statement includes information on safety, registration, the VCU Honor Code, student conduct, withdrawal and more.

Requesting Accommodation:

The university recognizes that some students who previously did not need Section 504 Academic Accommodations, and who have a qualifying condition or disability, may need support or assistance during the return to campus process. A modified approach for the temporary and more permanent need for accommodation has been developed and implemented to provide students with full access to programs and activities related to their academic majors. Because every case is different, student requests are evaluated on a case-by-case basis. Please share your need for an accommodation with the [Student Accessibility and Education Nondiscrimination Policy Office \(SAEO\)](#), or for MCV Campus students, the [Division for Academic Success](#), after you have worked directly with your faculty member.

Once students have completed the registration process, they should schedule a meeting with their instructor(s) and provide their instructor(s) with an official accommodation letter. Students should follow this procedure for all courses in the academic semester.

Health and well-being:

Navigating the anticipated stressors of daily life can often be challenging enough. When unexpected stressors emerge or when we are faced with uncertainty, it can be tough to know how to cope. Try out some of these [tips and resources for health and wellness](#) to see if they are the right fit for you. Symptoms or Diagnosis: If an on-campus student identifies symptoms, has tested positive for COVID-19 or has come into contact with someone diagnosed with COVID-19, that student should contact University Student Health Services. At that point, isolation should begin and contact tracing will be performed by Student Health Services. Symptoms will be monitored and the student should refer to a medical provider if symptoms worsen or be released from isolation after 14 days, if symptom-free.

Nondiscrimination policy:

VCU is committed to providing a safe, equitable and inclusive environment for all its employees, patients and students. Discrimination or discriminatory harassment is not only unlawful, it is harmful to the well-being of our university community. Our university's core values, specifically those related to diversity and inclusion, have withstood many difficult situations and trying times, and they will not falter now. Reports of discrimination, bullying, harassment and/or stereotyping of persons of color or those impacted by COVID-19 or otherwise, will not be tolerated. Be assured that VCU will make every effort to address and prevent the occurrence of unlawful discrimination and, if necessary, take prompt and appropriate action to remedy and prevent its recurrence. Every member of our community is asked to:

- Become familiar with the university's policies on [Preventing and Responding to Discrimination](#) and [Duty to Report and Protection from Retaliation](#) in the VCU Policy Library.
- Consult with [Equity and Access Services](#) or [VCU Human Resources](#) for additional guidance on how to file a report of discrimination.
- Contact the [Office of Institutional Equity, Effectiveness and Success \(IES\)](#) on how to address and maintain a culture of inclusion.
- Encourage individuals who may need an ADA accommodation for a known or newly acquired disability, to contact the ADA/504 Coordinator in [ADA Services](#).
- Bookmark and share information on university or community agencies that offer support or services, such as [VCU's Counseling Services](#) or [Ombudsperson](#).
- Explore training and educational opportunities on diversity and inclusion at [IExcel Education](#) and through the Office of Institutional Equity, Effectiveness and Success.
- Offer nonjudgmental support and empathy to those affected by current events and this health crisis.

Personal statement:

I want you to know that I am grateful for your presence and input in our classrooms (whether in person or online). I appreciate and welcome you regardless of your immigration status, country of origin and/or citizenship, race, ethnicity, religious affiliation, gender/sex, gender identity, sexual orientation, age, or dis/ability. Thank you for enriching our world, sharing your vital experience, and contributing to the diversity that makes our intellectual community vibrant and evermore creative!

Tips for Success:

- When taking online and hybrid courses, your self-motivation and self-pacing are absolutely critical. For this course, you should plan to work on this course about 7-9 hours per week (in addition to watching lecture videos). Be sure to plan your time accordingly.
- Make yourself a calendar with all of your due dates across ALL of your courses. Plan for when you will work on each one for completion in advance of the due dates.

- Make sure you note any “online” courses that still have a required meeting time (such as a Google Meet or Zoom session).
- Plan Ahead!! Study as you go instead of at the last minute!