# Mathematics 2300: Calculus 2, Section 14, Fall 2022 Syllabus

**Class Meetings.** MTWThF at 3:35 – 4:25.
**Location.** CLRE 301.
**Instructor.** Andrew Meier.
**Office Hours.** MTW(F) 2:20 – 3:20.
**Office.** MATH 218.
**Course Teaching Assistant.** Woodcock.
**Course Learning Assistant.** TBA.

## Course Information:

**Prerequisites:**
MATH 1300 or MATH 1310 or APPM 1345 or APPM 1350 (minimum grade C-). Credit not granted for this course and APPM 1360.

**Textbook and WebAssign Access:**
We will use the textbook "Calculus - Concepts and Contexts", 4th Edition, by James Stewart.

We try hard to find the option that is least expensive for students. If you are taking any other courses with Cengage textbooks, you need only pay once for your online homework system (WebAssign) subscription. If you are a returning student to the calculus sequence, either in the MATH or the APPM calculus sequence, you do not need to repurchase the subscription.

The required material for the course is a Cengage subscription, available at the bookstore, or directly from the publisher. See [https://www.cengage.com/coursepages/webassign_canvas2](https://www.cengage.com/coursepages/webassign_canvas2) for more info.

- The subscription includes WebAssign access, and the ebook.

- The subscription includes textbooks for any Cengage course at the University that you are enrolled in for the semester

- The subscription includes auxiliary texts (e.g., student solutions manuals)

- The subscription includes access to WebAssign and the e-book in perpetuity, in particular, it is not necessary to re-purchase a subscription for MATH 2300 or MATH 2400 if you already have purchased one for MATH 1300.

- The subscription includes an optional one-semester free rental for a hard-copy of the textbook; there is an additional nominal fee for round-trip shipping.

You may purchase a binder-ready (loose-leaf) copy of the textbook from Cengage for a nominal fee, or may purchase a hard copy through any other source of your choosing but make sure it includes access to online homework, Enhanced WebAssign (EWA). Failure to do so may require you to purchase stand-alone WebAssign access.

**Required Equipment and Software:**

- **Smart phone (or tablet) and scanner app:** So that you can submit written assignments online as a single PDF file, you should download a scanner app for your smart phone or your internet-connected tablet, if your smart phone or tablet does not already have one. Many of these apps are available for free, such as CamScanner. You must have this device accessible both in class and out of class.

- **Calculators and other technology:** You must have a device that is capable of graphing functions and doing numerical integration. You do not need to purchase a graphing calculator. We will be using Mathematica periodically for graphs and computations, which you can download for free through the University's subscription or use the cloud version at https://www.wolframcloud.com. Your TA will send you more information on this. **Absolutely no such devices will be allowed on exams.**

- **Top Hot App:** Top Hat is a free software that I will use for attendance and warm-up activities. Please ensure that you have Top Hat downloaded and that your name matches that which appears on official university records.

- **Other:** You will receive more information about software that will be used for in-class activities and projects. This software will be free to you, either open source or through the University's subscription.

**Note:** If the university determines at some point during the semester that all classes must switch to remote, then you may be required to have additional equipment, such as a working webcam.

**Canvas:**
See our course's Canvas https://canvas.colorado.edu for up-to-date course information, exams, homework assignments, a link to WebAssign, the course schedule, lists of instructors and Graduate Teaching Assistants, a copy of this syllabus, and links to additional resources.

# Course Structure:

Research shows that people learn mathematics best when they are actively participating. In other words, you learn by doing, not by watching. Therefore, MATH 2300 does not meet in large sections, but instead meets in small sections, which allows individual and group work in which you will be actively engaged with solving problems, making discoveries and understanding connections. This course and the book we are using are designed for a classroom which does not follow a traditional lecture format. Do not be surprised if your instructor often spends only half a class period lecturing or solving problems: the rest of the time, you should expect to be working at your desk or online, either individually or in groups, presenting your work.

In this vein, you will be expected to read a section in the book before it is discussed in class. Lectures are intended to highlight aspects of the text, not to replace it. In this course you will learn a number of useful formulas, though their mastery is not the primary purpose of calculus any more than correct spelling is the primary purpose of literature. Our goal is to have you learn how to understand calculus conceptually so you can build your own approaches to solving practical problems.

We will use a variety of recitation projects and in-class activities where you will collaborate in small groups to discover, extend, and apply calculus concepts.

**Course Content:**
This course is a continuation of MATH 1300. Topics we will cover include techniques of integration, improper integrals, applications of integration, sequences and series, power series, Taylor series, differential equations, parametric equations and polar coordinates.

**Calculators and Other Technology:**
You are required to have an electronic device that can access the internet, so a smart phone, laptop, or tablet with a webcam and microphone for in-class activities and online assessments. You are required to bring it to class. The device you use should be capable of graphing functions so you will need a graphing application, including the free app Desmos.

**Absolutely no such devices will be allowed on exams. Nor will they be needed on exams.**

**Mathematics Academic Resource Center:**
The Mathematics Academic Resource Center (MARC) is a free service provided by the Department of Mathematics that offers students additional support for their CU Mathematics courses.

The MARC is staffed by graduate students (G), undergraduates (U), and Learning Assistants (respective course number). Tutors are trained to help assist with specific questions. They are not able to work through homework assignments. The MARC is extremely busy before assignments are due, so make a habit of visiting the MARC well before assignments are due, have some coffee and tea (freshly brewed by MARC staff!), and start a conversation with our wonderful tutors.

# Assignments and Assessments:

The only effective way to learn Calculus is to do lots and lots of problems. Besides working on problems in class every day, you will have assignments and assessments in this course to enhance your skills and understanding.

**Online homework:**
WebAssign is an online system for doing homework. When you log on, you are given problems that you solve on paper and then enter the answers. These problems are generally straightforward or computational, and you can repeat them multiple times until you get the correct answer. The philosophy behind this is that instantaneous feedback is more effective than waiting days for a grade, and that doing a problem over if it's wrong is better than simply seeing the right answer. Because problems are graded by a computer, there are occasional technical issues, but we believe the trade-off is worthwhile. WebAssign can be accessed through the link on the main course webpage.

If you added the course before 10:00am on Friday, August 19, then you are already enrolled in our WebAssign course. If you added the course after this time, or if you have switched sections, then contact Jeff Taylor at math-help@colorado.edu so he can enroll you in WebAssign or switch your WebAssign access to the correct section. Include your first and last name, your CU email address, your IdentiKey username, and the course and section number you are enrolled in. You can find your WebAssign Assignments by clicking on the following link: https://www.webassign.net/colorado/login.html.

The first assignment is due early in the first week of class, so do not wait! There is a **two-week trial period** in the beginning of the semester during which all enrolled students may use WebAssign without an access code.

There will be a WebAssign assignment for each topic we cover, assigned when we begin that material. Please check the due dates regularly, as you are responsible for getting the assignments done on time. No late WebAssign will be accepted and no extensions will be granted. However, we will allow you to miss 10% of the WebAssign problems for the semester with no penalty, so you don't need to panic if you miss a problem here and there.

You may email your instructor to ask about a WebAssign problem, but when you do, make sure to include "MATH 2400" in the subject line, give a clear statement of the problem you are trying to solve, say what you have already tried and why you think it should have worked. Ask your instructor for their particular policy regarding emailing questions.

**Thursday Projects:**
The recitation is every Thursday and is supervised by a graduate Teaching Assistant (TA) and an undergraduate Learning Assistant (LA). In recitation you will work on projects with your classmates. Expect to be assigned to groups (in person or in Zoom breakout rooms, depending on your class section). These groups will be changed frequently. The TA and LA will be present during recitations to facilitate your work on the projects, but the goal is for you (and your group-mates) to **work through, and complete these projects on your own** as much as possible. Your LA and TA will be making sure that you participate in your group's explorations and discoveries. Your grade is partially based on participation, so *participate*. Missed projects cannot be made up: if you

miss a Thursday recitation, you will receive a zero for that project. However, your lowest three recitation grades will be dropped.

### Written Homework:
You will be assigned several conceptual problems each week. These problems are a variety of problems from the textbook, along with supplemental problems. You are expected to write up complete, legible, and logical solutions to these problems, which will be graded by your Teaching Assistant. Your work should be scanned as a single PDF file and submitted via Canvas by 11:59pm on the due date (Thursdays). **Late homework will not be accepted**, but your lowest two homework scores will be dropped.

Your solutions should be written using complete sentences to explain your steps. You may work together on homework to understand the problems and even to solve them (in fact, we recommend it). However, when you write up your solutions, this should be done independently, and in your own words. Thus, it is your own language and your own work. If you are wondering if you crossed the line, ask yourself, "Could I start over and redo this on my own, and would it basically look like this?" If not, then you are submitting someone else's work (plagiarism). Copying homework solutions from the internet, such as from Chegg or other similar websites, also constitutes plagiarism. Posting questions to Chegg is also an Honor Code violation.

**Homework Honor Code Policy:** If you are found to be in violation of the Honor Code on homework, the first infraction will result in a grade of zero on that homework. The second infraction will result in a <u>full</u> letter grade deduction on your semester grade (e.g., from a B+ to a C+). The third infraction will result in an F for the course. All infractions will be reported to the Honor Code Board.

### Weekly Work:
Each week you will receive a weekly work grade of 0 to 10 points based on your performance in your MTWF class. These 10 points are distributed in three categories:

- [1 point] Attendance (recorded through Top Hat) for the MTWF classes. You will either receive 1 point if you've attended each class for that week or 0 points otherwise.

- [2 points] A weekly written assignment. This will be graded on completion. I only expect a few sentences. The prompt for the week can be found at my website: andrewpaulmeier.com

- [7 points] A quiz given during the last 15 minutes of class on Fridays.

Honor Code compliance is expected for weekly-work. Your lowest two weekly-work grades will be dropped.

### Exams:
There will be 3 midterm exams given outside for class and a 2.5-hour comprehensive final exam given during the final exam period. For in-person sections, the exams will be proctored in person. For remote sections, the exams will be proctored on Canvas using Proctorio. Absolute no computing/graphing technology will be allowed on exams, nor will they be needed. **Use of any outside resources at any time during the exams will be considered cheating.** Exams cannot be made up or rescheduled. Please verify that you have no time conflicts with these exams before enrolling in this class.

**Midterm 1:** Monday, September 19 from 5:45-7:15pm in rooms TBD

**Midterm 2:** Monday, October 17 from 5:45-7:15pm in rooms TBD

**Midterm 3:** Monday, November 14 from 5:45-7:15pm in rooms TBD

**Final Exam:** Saturday, December 10 from 7:30-10:00am in rooms TBD, comprehensive

**Exam Honor Code Policy:** If you are found to be in violation of the Honor Code on exams, the first infraction will result in a <u>full</u> letter grade deduction on your semester grade (e.g., from a B+ to a C+) or an F for the course (depending on the severity of the infraction). The second infraction will result in an F for the course. All infractions will be reported to the Honor Code Board.

**Grades:** The grade distribution will be calculated based on the following weightings:

- Midterms (45%)

- Final Exam (20%)

- WebAssign (10%)

- Written homework (10%)

- Recitation projects (5%)

- Weekly work (10%)

**Note 1:** The allowed number of drops in these categories can be used for low grades or missed assignments. However, the intended purpose of these drops is to alleviate the stress on your grade due to unpredictable non-academic circumstances (such as illness, family emergencies, or technical issues). Thus, do your best work so that you can reserve your drops for unpredictable non-academic circumstances.

**Note 2:** To compensate for students having occasional bad days, the weighting of the midterms will be distributed as follows: 10% for your lowest midterm score, 15% for your second lowest midterm, and 20% for your highest midterm. These weights will only be assigned after all three midterms have been given. Until that time, each midterm will weigh 15%.

**Note 3:** If you miss exactly one midterm, your missed midterm score will be replaced by your final exam score and will weigh 10%. This replacement accommodation can only be applied to exactly one midterm. If you miss the final exam for any reason, you must petition for an incomplete. There is no guarantee that a petition for an incomplete will be approved.

**Note 4:** In the highly unlikely event that the university cancels the final exam, the weighting will be 65% for the three midterms combined, and the weighting for the other coursework will remain 35% as stated above. In the unlikely event that a midterm is cancelled, the weighting will be 45% for the two remaining midterms combined.

# University Policies and Standards

**CLASSROOM BEHAVIOR**

Both students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote or online. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. For more information, see the policies on classroom behavior and the Student Code of Conduct, and the Office of Institutional Equity and Compliance.

**REQUIREMENTS FOR COVID-19**

As a matter of public health and safety, all members of the CU Boulder community and all visitors to campus must follow university, department and building requirements and all public health orders in place to reduce the risk of spreading infectious disease. CU Boulder currently requires COVID-19 vaccination and boosters for all faculty, staff and students. Students, faculty and staff must upload proof of vaccination and boosters or file for an exemption based on medical, ethical or moral grounds through the MyCUHealth portal.

The CU Boulder campus is currently mask-optional. However, if public health conditions change and masks are again required in classrooms, students who fail to adhere to masking requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct and Conflict Resolution. For more information, see the policy on classroom behavior and the Student Code of Conduct. If you require accommodation because a disability prevents you from fulfilling these safety measures, please follow the steps in the "Accommodation for Disabilities" statement on this syllabus.

If you feel ill and think you might have COVID-19, if you have tested positive for COVID-19, or if you are unvaccinated or partially vaccinated and have been in close contact with someone who has COVID-19, you should stay home and follow the further guidance of the Public Health Office (contacttracing@colorado.edu). If you are fully vaccinated and have been in close contact with someone who has COVID-19, you do not need to stay home; rather, you should self-monitor for symptoms and follow the further guidance of the Public Health Office (contacttracing@colorado.edu).

**ACCOMMODATION FOR DISABILITIES**

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website. Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition, see Temporary Medical Conditions on the Disability Services website.

**PREFERRED STUDENT NAMES AND PRONOUNS**

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the

name that appears on the class roster is the student's legal name.

## HONOR CODE
All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the Honor Code may include, but are not limited to: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution (honor@colorado.edu); 303-492-5550). Students found responsible for violating the Honor Code will be assigned resolution outcomes from the Student Conduct & Conflict Resolution as well as be subject to academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found on the Honor CodeHonor Code website.

## SEXUAL MISCONDUCT, DISCRIMINATION, HARASSMENT AND/OR RELATED RETALIATION
CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, protected-class discrimination and harassment, and related retaliation by or against members of our community on- and off-campus. These behaviors harm individuals and our community. The Office of Institutional Equity and Compliance (OIEC) addresses these policies, and individuals who believe they have been subjected to misconduct can contact OIEC at 303-492-2127 or email cureport@colorado.edu. Information about university policies, reporting options, and support resources can be found on the OIEC website.

Please know that faculty and graduate instructors have a responsibility to inform OIEC when they are made aware of any issues related to these policies regardless of when or where they occurred to ensure that individuals impacted receive information about their rights, support resources, and resolution options. To learn more about reporting and support options for a variety of concerns, visit Don't Ignore It.

## RELIGIOUS HOLIDAYS
Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance.

See the campus policy regarding religious observances for full details.