MATHEMATICS 2400–009: CALCULUS 3, FALL 2017 SYLLABUS

Class Meetings. MTWRF 1 p.m.–1:50 p.m. MUEN D439
Instructor. Dr. Judith Packer, packer@colorado.edu
Office Hours. Mon. 4 p.m.–5 p.m., Wed. 11 a.m.-12 noon, Thurs. 4 p.m.–5 p.m., Math 227
Course Teaching Assistant. Braden Balentine
Course Learning Assistant. Max Howard

Prerequisites: To take this course, you must have earned credit for a second-semester college calculus course with a grade of C- or higher.

Textbook and WebAssign access: We will use the textbook "Calculus - Concepts and Contexts", 4th Edition, by James Stewart. You can purchase the textbook together with an access code to WebAssign (for on-line homework) directly from the publisher or from the CU bookstore. If you purchase the textbook elsewhere, make sure you also buy access to WebAssign for as many semesters as you intend to continue in the calculus sequence. You can find more information about purchasing the textbook and a WebAssign access code on the course website.

Course website: The course website for all sections of MATH 2400 is `math.colorado.edu/math2400`. See the website for exam information, homework assignments, a link to WebAssign, the course schedule, lists of instructors and TAs, and a copy of this syllabus.

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 2400 does not meet in a large lecture hall, but instead meets in small sections, which allows individual and group work in which you will be actively engaged, 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 at the board lecturing or solving problems: the rest of the time, you should expect to be working at your desk, either individually or in groups, or at the board, 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 multi-variable calculus conceptually so you can build your own approaches to solving practical problems.

About Multi-variable Calculus: In the first year of calculus, you primarily studied functions with a real number as an input and a real number as an output. In multi-variable calculus, you will study functions whose input and/or output is not a number, but is a point or vector in a two-, three-, or higher-dimensional space. The goal of the semester is to learn how to represent these functions graphically, what their applications are, and how calculus applies to these functions. We'll study both differentiation and integration on these classes of functions. Finally, we will study the connections between differentiation and integration, which look like higher-dimensional versions of the Fundamental Theorem of Calculus.

Mathematica: Mathematica is a powerful symbolic mathematical computation program. The University of Colorado at Boulder has purchased a site license for this software, so you may download this software at no charge. You can find instructions for downloading it at the following location.

`http://sitelic.colorado.edu/mathematica/`
You are required to have a laptop with Mathematica downloaded to use in class.

Use of electronic devices on quizzes and exams: Absolutely no electronic devices such as computers, tablets, laptops or cell phones will be allowed on exams or quizzes. Nor will they be needed on exams or quizzes.

Assignments and assessments: The only effective way to learn Calculus is to practice. 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 on-line 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 registered for the course by August 25, then you should already have a WebAssign login. In this case, your username is the same as your Identikey username, and your password is your Identikey password. If you registered for the course after August 25, then you will need to email math-help@colorado.edu to get a WebAssign login. Include your full name, your CU email address, your Identikey username and the course and section you are registered in.

WebAssign includes a two week trial period ending September 11, that allows you to complete your assignments even if you have not yet purchased access.

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 Thursday class meeting each week is supervised by a graduate Teaching Assistant (TA) and an undergraduate Learning Assistant (LA). On these class days you will work on projects in small groups with several of your classmates. Expect to be assigned to groups, which 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 two recitation grades will be dropped.

Written homework: You will be assigned several conceptual problems out of the textbook each week. You are expected to write up complete, legible, and logical solutions to these problems, which will be graded by your Teaching Assistant. Each problem 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 also constitutes plagiarism. All cases of plagiarized homework will be submitted to the Honor Code Board. Homework will be collected in and returned in Thursday recitations. Late homework will not be accepted, but your lowest two homework scores will be dropped. Your homework must be stapled and labeled with your section number to be counted for credit.

Quizzes and in-class activities: You will have regular quizzes and other in-class activities that will be evaluated for both correctness and participation. Your instructor will give you details about these activities.

Midterms: This course has three midterm exams and a final exam. They have already been scheduled. Calculators and cell phones will not be allowed during any portion of any exam. **Use of any electronic device at any time during the exam will be considered cheating.**

Plan your schedule now. There will be **no makeup exams** given under any circumstances. If you cannot attend an exam due to a documented emergency or illness, please see your instructor.

- Midterm 1: Monday, September 25, 5:15 pm to 6:45 pm.
- Midterm 2: Monday, October 23, 5:15 pm to 6:45 pm.
- Midterm 3: Monday, December 4, 5:15 pm to 6:45 pm.

Note that midterms **are at night and not in your regular classroom. Exam locations will be announced by each instructor in class, and will be posted on the course website.**

Final Exam: The final exam for the course is **cumulative**. It is scheduled for:

Wednesday, December 20, from 7:30 am to 10:00 am.

You may not reschedule this exam even if you have three exams on the same day (university policy only allows for the third exam of the day to be rescheduled).

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

- Midterms (45%)
- Final Exam (20%)
- WebAssign (10%)
- Written homework (10%)
- Recitation projects (5%)
- Quizzes and other in-class work (10%)

In the highly unlikely event that the university cancels the final exam, then 65% weighting for exams will be divided equally between the three midterms. The remaining 35% of the course will be weighted as stated above. In the highly unlikely event that a midterm is cancelled, the 45% weighting for midterms will be divided equally between the remaining two midterms.

Mathematics Academic Resource Center: You may seek assistance with your math questions in the Mathematics Academic Resource Center in Math 175. This is a great place to meet other students in the course and work together. You may request help from any lab tutor. Show up prepared, with your textbook and class materials. When you ask a question, begin with a clear statement of the problem, what you have already tried, and why you think it should have worked. The Center opens the first week of classes and runs through the last week of classes. The Center is open roughly during business hours and also several evenings a week. Check the schedule posted outside the room.

UNIVERSITY POLICIES AND STANDARDS

Accommodations for Disabilities: If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu. If you have a temporary medical condition or injury, see Temporary Injuries guidelines under the Quick Links at the Disability Services website and discuss your needs with your professor.

Religious Observances: 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. Please let your instructor know during the first week if you are requesting accommodations due to a religious observance.

See the campus policy regarding religious observances for full details.

Classroom Behavior Students and faculty each have responsibility for maintaining an appropriate learning environment. 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 differences of race, color, culture, religion, creed, politics, veterans status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior and the student code.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation: The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CUs Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulders Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the OIEC website.

Honor Code: All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the academic integrity policy of the institution. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at honorcode.colorado.edu.

RECOGNITION of POLICIES AND DATES
Detach, fill out, sign and date and return to your instructor

YOUR NAME: _____

SECTION: _____

I acknowledge that I have been informed that the midterm exams are scheduled for:

Midterm 1: Monday, September 25, 5:15 pm to 6:45 pm.
Midterm 2: Monday, October 23, 5:15 pm to 6:45 pm.
Midterm 3: Monday, December 4, 5:15 pm to 6:45 pm.

and that these exams are at night and not in my regular classroom. I have no schedule conflicts and can attend all of these exams.

Furthermore, I acknowledge that I have been informed that the final exam is scheduled for

Wednesday, December 20 from 7:30 am to 10:00 am.

I have no schedule conflicts and can attend the final exam.

I have read and I understand the syllabus. I understand the system that will be used to evaluate my work in this course. I have checked my enrollment in WebAssign by logging in.

I have fulfilled the prerequisites for this course in the following way:

_____ in the year 20_____

SIGN: _____

DATE: _____