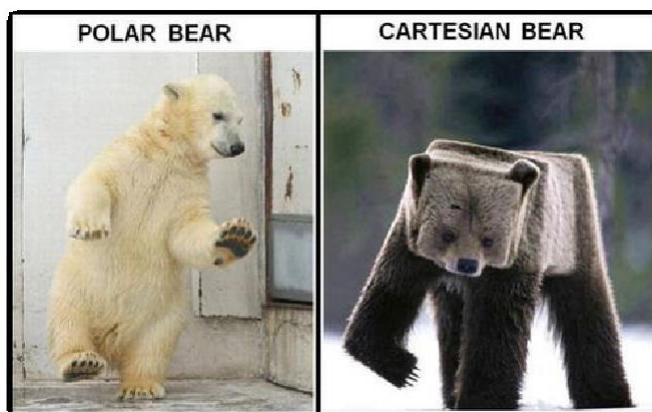


Calculus III



Math3C 43980 Summer 2021 June 21 – July 23 College of Alameda

Course Catalog Description

5 units, 5 hours lecture (GR)

Instructor: TBD

Prerequisite: Math 3B

Acceptable for credit: CSU, UC

Partial Differentiation: Jacobians, transformations, multiple integrals, theorems of Green and Stokes, differential forms, vectors and vector functions, geometric coordinates, and vector calculus. 1701.00

AA/AS area 4b; CSU area B4; IGETC area 2.

C-ID MATH 230

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Materials

This is a Zero Textbook Cost course. As such, all of our materials (including textbook, Slack workspace, Mathematica license, and Canvas learning management system) are available, for no extra cost to students, online.

It is IMPERATIVE that you are prepared to frequently, consistently, and reliably access a computer and the internet.

Technology Requirements

Since this is a hybrid course, you will need to be **very familiar** with navigating online technologies.

CANVAS: You will need to use the learning management system Canvas. Assignments will be submitted and graded via Canvas; lectures, reading

assignments, and grades will all be accessed via Canvas. Sign in to the Peralta Portal to check out Canvas.

SLACK: You will need to use the team collaboration tool Slack. It's fun, intuitive, and helpful. We will use Slack for instant messaging, file storage, and informal communication. Slack is nice because you can easily search communications and share screen shots/pics. Slack is free to use; more information about Slack is available on Canvas.

More Requirements

ATTENDANCE: As stated in the Academic Regulations, Policies & Standards for the College of Alameda (COA), students "are expected to be in class, prepared for instruction, at the designated class starting time."

QUIZZES: Frequently, there will be an opportunity to earn class participation points in the form of a quiz. Almost all quizzes will be "open neighbor" because I want to encourage you to work with and learn from each other. I also want to check in with you about your understanding of the material and give you feedback on your progress in the class so far. Quiz topics will be announced in advance. The dates of quizzes are posted in the schedule in Canvas. There are **no make-up quizzes**, but only the highest ten scores are counted towards your grade.

HOMEWORK: Homework consists of reading assignments, written exercises, class notes posts, practicing Mathematica commands, and video watching. Points are available for submitting written exercises and posting class notes to Slack. Submit the written exercises *in groups or solo*. Due dates and more info on submitting these assignments are available on Canvas. **No late assignments** are graded.

EXAMS: There will be four exams (including the final). All dates for exams are listed on the schedule. There are **no make-up exams**. You may not reschedule an exam.

There will be two versions of the final exam (cumulative and non-cumulative). You can replace a midterm score with your score on the cumulative final exam. If you are satisfied with your midterm exam scores, then simply take the non-cumulative final exam. If you miss exactly one midterm, take the cumulative final and your score on the final will replace your score on that midterm. If you miss more than one midterm, your absences are impacting your ability to succeed in the course and I recommend you consider withdrawing from the class. Absence from the final exam without a valid excuse results in an "F" symbol being entered in your record.

MATHEMATICA: Did you ever want to learn about combining computers and

math? In this course, we will learn how to do just that! Be willing to **learn** a little bit about using the technical computing system Mathematica. Some class sessions will be held in computer labs so that we can practice using Mathematica. Most exams will include a question that you will answer using Mathematica: you will be given a prompt (graph something, integrate something, etc.) and you will demonstrate that you can answer the prompt using Mathematica on a laptop or at a computer. College of Alameda has paid for student licenses, so every student in this course can download and use Mathematica on a personal computer at no cost to the student. In computer labs on campus, there are also several computers with Mathematica installed. Students are encouraged to practice in these labs freely and frequently. Find more Mathematica info on Canvas.

Assessment Activities

Quizzes 10 quizzes @ 20 pts/quiz 200 points

Homework 20 hw @ 10 pts/hw 200 points

Exams 4 exams @ 150 pts/exam 600 points

EXTRA CREDIT!!!

There are a few extra credit assignments
available. See Canvas for more info.

A Note About This Online Class

How are you going to learn material online? Here's how:

- (1) Complete the homework assignments *each week*. **This is not a self-paced course.** If you skip a few weeks, it will be nearly impossible for you to catch up. Because deadlines will help you learn the material, in this course we have deadlines. Adhere to them.
- (2) Complete all of the homework assignments - not just the ones that you will turn in for credit. Reading assignments and video watching assignments are also assigned. Do them.
- (3) Engage online and in-class - the more you talk about math, the easier it is to master. Participate.
- (4) This hybrid class uses several technologies: Slack (for instant messaging and other informal communications), Canvas (for submitting and grading assignments), and Mathematica (for plotting graphs and computing integrals and derivatives).

Evaluation Scale

Your overall letter grade is determined by total points earned (not percentage of points). Let x represent your total number of points.

$$A: 880 < x$$

$$B: 780 < x < 879.9$$

$$C: 680 < x < 779.9$$

$$D: 500 < x < 679.9$$

$$F: x < 499.9$$

Student Learning Outcomes

- Apply Stokes' Theorem, Green's Theorem, and Gauss' Theorem
- Plot graphs of multivariable functions and vector fields.
- Find extrema of multivariable functions with constraints.

Academic Accommodations

“If you have a disability which may require classroom or test accommodations, please contact Programs and Services for Students with Disabilities (DSPS) in Room D117 or call DSPS at 510-748-2328. You will need to provide written documentation of your disability. If you think you have a disability but currently have no documentation, DSPS may be able to help you. If you already have an accommodation notification from DSPS, please submit it to the instructor immediately. All information will be kept confidential.”

Academic Dishonesty

The College follows the legal opinion set forth by the California Community Colleges' legal department which limits the consequences of an act of academic dishonesty to a failing grade on the activity, assignment, or test involved. For more information on student standards of conduct, discipline procedures, and due process, please see District Policies and Procedures.

<p>How to succeed in this course</p> <hr/>	<p>For a “Satisfactory” Grade</p> <ul style="list-style-type: none">• Be active on Slack: post questions, post comments, and stay connected.• Practice using Mathematica.• Watch the online video examples and come to almost all of the in-class lectures.• Submit most of the homework assignments (at least 70%).• Look over the exam study guides.	<p>For a “Good” or “Excellent” Grade</p> <p>Do the other items PLUS:</p> <ul style="list-style-type: none">• Be very active on Slack: Post questions, offer answers, and make suggestions about what might help your learning.• Actively read the reading assignments; get help when you don't understand the examples. Explore Mathematica - find ways to use it in your other courses, too.• Take notes on the examples I do in the videos: I'm showing you how they should be solved. Take notes in class even if it isn't your day to post notes.• Submit almost all of the homework assignments; if you get behind, come see me as soon as possible• Practice, practice, practice! and do extra credit.
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Week		Material Covered
1	Q0	Intro, 12.1
		12.2, 12.3
	Q1	12.3, 12.4
		12.5, 12.6
	Q2	13.1, 13.2
2		13.2, 13.3
	Q3	13.4
		Exam 1
		14.1
	Q4	14.2, 14.3
		14.4
	Q5	14.5
3		14.6
	Q6	14.7
		14.8
		Exam 2
		15.1, 15.2
		15.3, 15.4
4		15.9, 15.6
	Q7	15.7, 15.8
		Exam 3
		16.1
	Q8	16.2, 16.3
		16.4, 16.5
5 (FINALS WEEK)		16.6
	Q9	16.7
		16.8
	Q10	16.9
		<i>FINAL EXAM</i>