Instructor: Trent DeGiovanni
E-Mail Address: degiovan@math.utah.edu
Instructor Office hours: TBD
Office hours location: Online (Zoom)
Course type: IVC
Course meetings: MWF 2:00-3:20
Course location: Online (Zoom)
Learning assistant: Emma Coates
Lab meetings: Section 022: T 2:00-2:50, Section 023: Th 3:05-3:55
Course Information:
Math1210, Calculus is a 4-credit semester course
Textbook: Calculus with Differential Equations, by Varberg, Purcell, and Rigdon (9th edition)
ISBN: 0132306336

Prerequisite
C or better in (((MATH 1050 AND 1060) OR MATH 1080 OR (MATH1060 AND Accuplacer CLM score of 80+)) OR AP Calc AB score of 3+ OR Accuplacer CLM score of 90+OR ACT Math score of 28+ OR SAT Math score of 630+.

Course Description
Functions and their graphs, differentiation of polynomial, rational and trigonometric functions. Velocity and acceleration. Geometric applications of the derivative, minimization and maximization problems, the indefinite integral, and an introduction to differential equations. The definite integral and the Fundamental Theorem of Calculus.

Expected Learning Outcomes
Upon successful completion of this course, a student should be able to:

1. Take limits of algebraic and trigonometric expressions of the form 0/0 (that simplify), non-zero number over 0, including limits that go to (positive or negative) infinity, limits that don't exist and limits that are finite.
2. Use and understand the limit definitions of derivative for polynomial, rational and some trigonometric functions; understand the definition of continuity and consequences.
3. Differentiate all polynomial, rational, radical, and trigonometric functions and compositions of those functions; perform implicit differentiation and compute higher order derivatives.
4. Use differentiation to find critical points and inflection points, the signs of the first and second derivatives, and domain and limit information to determine vertical and horizontal asymptotes. Then use all of that information to sketch the graph of $y = f(x)$.
5. Apply differentiation to optimization, related rates, linear approximation, and problems involving differentials.
6. Compute indefinite integrals and find antiderivatives, including finding constants of integration given initial conditions.
7. Compute definite integrals using the definition for simple polynomial functions. Compute definite integrals using the power rule, basic u-substitution, and the Fundamental Theorems of Calculus.
8. Apply the definite integral to compute area between two curves, volumes of solids of revolutions, arc length, surface area for surfaces of revolution, and work problems.

Attendance
This class has been designated as an IVC (interactive video conferencing) course. Course lectures will take place using Zoom. When you are attending via Zoom you ought to have video and audio on.

1 Just as you ought to return your shopping cart after grocery shopping instead of leaving it in the middle of the parking lot.
2 Occasionally turning off video for short periods and muting yourself is fine.
allows for interaction between students and for valuable feedback that may adjust the pace of lectures and clarify confusion for all students. Videos of the lectures will be uploaded of every class meeting within the week of the original lecture. You are encouraged to “attend” class (via Zoom) as opposed to relying on the uploaded lecture videos. Students are encouraged to consider an asynchronous option if their preference is for using only uploaded lecture videos.

**Mandatory online instruction periods:** All classes will be online September 28-October 10 and November 30-December 3. The class will proceed via Zoom meetings in the same fashion.

**Covid-19**

Students must self-report if they test positive for COVID-19 via coronavirus.utah.edu. Please do not come to class if you are experiencing COVID-19 symptoms. Remember to maintain social distancing at all times. Face coverings are required for students and faculty. Based on CDC guidelines, the university requires everyone to wear face coverings in shared public spaces on campus, including our classroom. As a reminder, when I wear a face covering, I am protecting you. When you wear a face covering, you are protecting me and all of your classmates. If you forget your face covering, I will ask you to leave class to retrieve it. If you repeatedly fail to wear a face covering in class, I will refer you to the Dean of Students for a possible violation of the Student Code. Note that some students may qualify for accommodations through the Americans with Disabilities Act (ADA). If you think you meet these criteria and desire an exception to the face covering policy, contact the Center for Disability and Access (CDA). Accommodations should be obtained prior to the first day of class so that I am notified by CDA of any students who are not required to wear a face covering.

**Technological requirements:**

Students who have signed up for this class should be aware that this is a hybrid course. This comes with some additional expectations to help the course run smoothly.

1. Students must have access to a scanner. Using a device to scan in images is fine. Blurry images and illegible work will not be accepted.

2. Students must have access to a webcam and microphone.

3. Students must have access to Zoom installed.

4. Students must have access to internet with adequate bandwidth to support video at a minimum for exams.

5. Students will use Gradescope to turn in assignments. This will be a linked page in Canvas. There will be a quiz 0 to help student’s familiarize themselves with Gradescope. When you submit an assignment you are asked to select the pages that problems appear on. If no page is selected for a problem, you will receive a zero for this problem.

6. It is the student’s responsibility to keep track of due dates and turn in assignments on time. Technical troubles are not an acceptable excuse for turning in assignments late. If you expect to have troubles with this class due to technical issues, such as inconsistent internet access or needing to use a VPN due to living outside of the US, it is your responsibility to inform the instructor by Tuesday September 1st via email. If issues arise during the course of the semester, it is the student’s responsibility to inform the instructor.

**Late work**

Late work will not be accepted without documentation of extenuating circumstances. If circumstances arise making it challenging to submit work (e.g. you contract Covid) due dates can be pushed back without documentation if I am informed 24 hours before the due date.

**Course communication**

All course communication will take place via Canvas or Zoom. All work will be posted for the module for the week including links to assignments, quiz files, quiz discussions, and lecture videos. It is your responsibility to regularly check the Canvas announcements for course updates. I encourage you to use

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3Everyone’s situation is dynamic and due to this it may become hard or impossible to attend lectures at some point. I would encourage you to inform me if attendance becomes a problem so we can work together to make sure you still get the most out of the course.
Canvas discussions as a place to build classroom community, form study groups, and get assistance from others or myself. Keep communications civil and make sure they comply with the student code of conduct. There will be zero tolerance for derogatory or offensive posts.

Course Outline

Textbook Coverage: 0.7, 1.1-1.6, 2.1-2.9, 3.1-3.8, 4.1-4.6, 5.1-5.6

Homework: Roughly three textbook sections are due most Thursdays at midnight. The homework will typically cover material covered up to and including the preceding Monday. There will be both recommended problems and grade problems, it is only necessary to turn in the graded problems. Homework assignments can be accessed under the assignments tab in Canvas and will also be linked in the Module for the week. Three of the graded problems will be selected for grading by the grader, each graded out of 5 points. There will also be 5 points given for completion. Homework will be turned in on Canvas and needs to be uploaded as a single pdf file. Half of the grade for the homework will be based on completion, and the other half will be based on solutions to select problems. The lowest two homework scores will be dropped.

Quizzes: There will be group quizzes roughly every week there is not an exam during the semester. For each quiz there will be a Canvas discussion, specific to your group, that will be posted in the module for the week. These quizzes will be turned in via Gradescope. Students will have 48 hours to complete the quiz and they are to be completed outside of class time. Students must turn in their own quizzes although they are encouraged to discuss the quiz with group mates. Quiz groups will be randomly assigned and will change three times during the semester. Posting questions online or asking for assistance from people who are not in your group is prohibited. If I find questions online during the semester, quizzes will become timed Canvas quizzes to be completed individually.

Midterm exams: Four midterm exams will be given. These exams will be administered via Zoom. Students must have their webcams on and directed at themselves for the duration of the exam. The exam will be released on Canvas at the beginning of the class. Students will complete the exam on their own paper. Solutions should be clearly labeled and final answers boxed when appropriate. Students will have a short period following the exam to scan their solutions and upload a single pdf file on to Gradescope. Calculators are not allowed for exams. For a week following the grading of the exam students will have the opportunity to submit regrade requests for specific questions. The exams will take place during class time on the following dates: September 14th, October 2nd, October 26th, and November 13th. Your three highest exam scores (including the “final”) will count for 15% of your grade and the lowest two exam score will count for 5% of your grade.

Final exam: The final exam is not comprehensive and is essentially a fifth midterm exam. The same policies as the midterm exams apply here. It will be on December 10th and will begin at 1:00 PM.

Quiz Participation: Students must participate in Canvas discussions with their quiz group for every quiz. To receive credit student’s must make at least one post that shares a partial solution, asks a specific part of a problem, answers a specific question asked by one of your group mates, or contributes to the discussion in another meaningful way. Students can also fulfill the participation requirement by meeting with their quiz groups in another medium (Zoom, Skype, Discord, Google Hangouts, etc.). One of the students should then upload two screenshots to the corresponding Canvas discussion for that quiz. These screenshots should be taken at the beginning and end of every meeting, clearly showing the time and every participant’s name. Quiz participation will account for a quarter of the quiz grade.

Labs: Every Thursday a Learning Assistant- (LA) directed lab section will be held. These lab sections will have smaller class sizes, consisting of working on lab worksheets in groups. The LA will be there to help guide students through the problems. The worksheets will due by midnight on the day of the lab. The lowest lab score will be dropped.

Extra credit: The first time a student comes to office hours or a scheduled outside meeting and asks a question about the content of the course they will receive 10% extra credit on the following homework assignment. Any student who finds an error in solutions to homework, solutions to quizzes, the textbook, etc. and posts a Canvas discussion explaining where the error is and why it is an error will receive 5% extra credit on the homework section it pertains to.

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4Example of a post that would not receive credit: “I got 4 for problem 2.” Example of a post that would receive credit: “I think you need to use the product rule for problem 2 since you have the product of a polynomial and exponential. I end up getting f′(2) = 4.”

5Example of a post that would not receive credit: “How do you do number 3?” Example of a post that would receive credit: “For number 3 I think you need to use integration by parts but I cannot figure out which function to choose for u does anyone have an idea?”

6Example of a post that would not receive credit: “I got 4.” Example of a post that would receive credit: “Oh I think you need to choose u = x^2 but you have to use integration by parts twice.”
Grading weight and scale*

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*The instructor has the right to modify if necessary.

Additional resources: There is free tutoring through the T. Benny Rushing Mathematics Student Center which is offered online. For more information see http://www.math.utah.edu/undergrad/mathcenter.php

The math department has a full set of lecture videos which you are welcome to use to supplement our course material. These can be found at http://www.math.utah.edu/lectures/

Student Responsibilities: All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. Students have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully and know they are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, and I will do so, beginning with verbal warnings and progressing to dismissal from and class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee. http://regulations.utah.edu/academics/6-400.php

Students with disabilities: The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Safety: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit https://safeu.utah.edu/

Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veterans status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety 801-585-2677(COPS).

Student names and pronouns: Class rosters are provided to the instructor with the students legal name as well as Preferred first name (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, group projects, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your U-ID card, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email bpeacock@sa.utah.edu to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

Student Wellness: Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student’s ability to succeed and thrive at the University
of Utah. For helpful resources contact the Center for Student Wellness at [www.wellness.utah.edu](http://www.wellness.utah.edu) or 801-581-7776.

**Veterans Center:** If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: [http://veteranscenter.utah.edu/](http://veteranscenter.utah.edu/). Please also let me know if you need any additional support in this class for any reason.

**University Counseling Center:** The University Counseling Center (UCC) provides developmental, preventive, and therapeutic services and programs that promote the intellectual, emotional, cultural, and social development of University of Utah students. They advocate a philosophy of acceptance, compassion, and support for those they serve, as well as for each other. They aspire to respect cultural, individual and role differences as they continually work toward creating a safe and affirming climate for individuals of all ages, cultures, ethnicities, genders, gender identities, languages, mental and physical abilities, national origins, races, religions, sexual orientations, sizes and socioeconomic statuses.

**Office of the Dean of Students:** The Office of the Dean of Students is dedicated to being a resource to students through support, advocacy, involvement, and accountability. It serves as a support for students facing challenges to their success as students, and assists with the interpretation of University policy and regulations. Please consider reaching out to the Office of Dean of Students for any questions, issues and concerns. 200 South Central Campus Dr., Suite 270. Monday-Friday 8 am-5 pm.