

Instructor: Trent DeGiovanni

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Instructor Office hours: MWF 10:00-11:00/By appointment

Course Information: Math1100, Business Calculus is a 3-credit semester course

Textbook Mathematical Applications for the Management, Life, and Social Sciences, 12th Edition, Ronald Harshbarger and James Reynolds

ISBN: 9781337671569

Inclusive text information: The book is automatically included in tuition for the course. It can be accessed through Canvas under the “bookshelf” tab.

Prerequisite

At least a C grade in Math1050 (College Algebra) OR Math1080 (Precalculus) OR in Math1090 (Business Algebra) OR an Accuplacer AAF score of 263 or better OR an Accuplacer CLM score of 80 or better OR ACT Math score of 28 or better OR SAT Math score of 650 or better.

Course Description

Introduction to limits. Differentiation and integration of polynomial, rational, logarithmic and exponential functions. Optimization of functions, including business applications such as marginal analysis. Business applications of the derivative and integral. Brief exposure to partial derivatives and functions of several variables. (Not for students who have completed more than one semester of calculus.)

Expected Learning Outcomes

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

1. Have a basic conceptual understanding of limits.
2. Know how to differentiate and integrate polynomial, rational, logarithmic, and exponential functions.
3. Use derivatives to gather information about the shape of the curve and use that information to graph the curve $y = f(x)$, for polynomial, logarithmic, exponential and simple rational functions.
4. Understand how to use differentiation to optimize functions for business applications, such as maximizing profit examples.
5. Use integration to find area under curves and for business examples such as average value.
6. Take partial derivatives of basic functions of two variables.

Summer class information

This is an accelerated summer course, and it is normal for students to spend 20-30 hours a week on such a course. This reflects the amount of time that a student may spend on a 3 credit-hour course over the standard 16-week semester.

Lectures and links to homework and quizzes are posted under modules in Canvas for each week. A course schedule can also be found on the Canvas page. It includes when quizzes and homeworks are due and what material they cover, as well as when to watch specific lectures.

Online class expectations

Students who have signed up for this class should be aware that this is an online 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 are expected to closely follow directions when turning in assignments. This class will use Gradescope, an online grading tool. For it to work properly assignments must be a certain number of pages correctly ordered and oriented correctly. There will be a quiz the first week for students to familiarize themselves with this technology.

3. 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 June 19th via email.

Course Outline

Textbook Coverage: 9.1-9.9, 10.1-10.5, 11.1-11.5, 12.1-12.4, 13.1-13.4, 13.6-13.7, 14.1-14.2

Homework: Homework will be due twice a week, once on Monday and once on Thursday. Homework will be turned in on Canvas and needs to be uploaded as a single pdf file. Half of the grade will be based on completion, and the other half will be based on solutions to select problems. No late homework will be accepted. The lowest two homework scores will be dropped.

Quizzes: There will be six group quizzes during the semester, groups will be assigned according to student's responses to a survey the first day of class. These groups will be based on when students plan to work on quizzes and how they would prefer to communicate. For each quiz there will be a Canvas discussion, specific to your group, that will be posted in the module for the week. Students will have 24 hours to complete the quiz.

Midterm exams: Two midterm exams will be given. The first is **July 1**, and the second is **July 15**. These will consist of two components. The first is a computational component that will be a timed Canvas quiz. The second will be more conceptual and students will have 24 hours to finish this component. This will be turned in via Gradescope.

Final exam: The final exam is a comprehensive exam on July 29th. This will be the same form as the midterm exams.

Quiz Participation: Students must participate in Canvas discussions for every quiz. Students can fulfill the participation requirement by meeting with their quiz groups in another medium (Zoom, Skype, Discord, etc.). Decisions to meet in this manner must be unanimously decided on by the group, I must receive an email from **each** student in the group consenting to the times they will meet for every quiz. 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.

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 25% extra credit on the following homework assignment. Any student who finds an error in the lecture videos, solutions to homework, the textbook, etc. and posts a Canvas discussion explaining where the error is and why it is an error will receive 10% extra credit on the homework section it pertains to.

Grading weight and scale*

Participation	Homework	Quizzes	Midterms	Final
5%	15 %	15%	40%	25%

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
[100,93]	(93,90]	(90,87]	(87,83]	(83,80]	(80,77]	(77,73]	(73,70]	(70,67]	(67,63]	(63,60]	(60,0]

*The instructor has the right to modify if necessary.

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 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/>. Please also let me know if you need any additional support in this class for any reason.