

Mathematics 1100: Business Calculus
Fall 2020

Instructor: Aaron Fogelson

Class Time and Place: Mondays and Wednesdays 11:50am-1:10pm
On Canvas and Zoom.

Office Hours: To be announced.

Email address: fogelson@math.utah.edu

Class Web Page: Canvas <https://utah.instructure.com/courses/636676>

Zoom Handle: <https://utah.zoom.us/j/5326331507>

Accessibility & Support: The preferred way to contact me is by email to the email address above. I look at email frequently during daylight hours and will try to respond quickly. I will hold office hours via Zoom; the times will be announced in class. You can also ask for a Zoom meeting with me, by emailing me.

Textbook: Mathematical Applications for the Management, Life and Social Sciences, 12th Edition, by Harshbarger & Reynolds, ISBN 13: 978-1-337-62534-0.

This book is being sold to student through the inclusive access program, so as to reduce the price of the book. An email will go out to all Math1100 students prior to the first day of class with information on what Inclusive Access is and instructions on how to access their digital course materials. Essentially, students will be billed for the book along with their tuition, and they won't need to do anything else to get access to the online book with this option. Students have the option to OPT OUT, but the default is to opt in. If a student opts out during the first two weeks of class, they will not be charged for the book. If they opt out, the student will be responsible to purchase/rent/borrow the book elsewhere. Through the Inclusive Access Program, students will receive a digital copy of the book. The cost for Math1100 access is around \$40.00. If a student wishes to order a hard copy of the book, they can talk to Shane Girton (U of U Bookstore) and a copy of the book can be special ordered. Lastly, if the Marriott Library is open, there are copies of the book at the Reserve Desk in the Marriott Library that you can check out for three hours at a time. This is a free option for students.

Course Type: Interactive Video Conferencing (IVC - synchronous online)

Class Time and Place: Connect to Zoom through CANVAS, 11:50 am –1:10 pm, MW

Course Information: Math 1100, Business Calculus is a 3-credit semester course.

Prerequisite: At least a C grade in Math1090 (Business Algebra) OR Math1050 (College Algebra) OR in Math1080 (Precalculus) OR Math1210 (Calculus 1) OR an Accuplacer score of 80 on the College Level Math (CLM) test OR at least an ACT Math score of 28 OR at least SAT Math score of 630.

Important Note: The mathematics department DOES enforce prerequisites for all undergraduate courses. If you were able to register for this class based on your enrollment in the prerequisite course last semester and you did not receive the minimum grade in that course to enter this class, then you will be dropped from this class on Friday of the first week of classes. If you are in this situation, it is in your best interest to drop yourself from this class and enroll in a class for which you have the prerequisites before you are forcibly dropped.

Official Drop/Withdraw Dates: The last day to drop classes is **Friday, September 4**, the last day to withdraw from this class is **Friday, October 16**. Please check the academic calendar for more information pertaining to dropping and withdrawing from a course. Withdrawing from a course and other matters of registration are the student's responsibility

Zoom, Canvas Requirements: Students are expected to be computer literate and Canvas and zoom navigation skills are expected. Knowledge and navigation of Canvas and zoom is critical to access all features and resources of this course. For technical assistance, review the [Canvas Getting Started Guide for Students](https://tlt.utah.edu/) and/or contact TLT, <https://tlt.utah.edu/>

Course Description: In Math 1100 Business Calculus, students will gain a background of calculus topics that will be important in future business classes. Topics include differentiation, maximization and minimization of functions, marginal analysis and the optimization of constrained functions, integration and applications. Not for students who have completed more than one semester of calculus. Math1100 is a 3-credit semester course and satisfies the University's QR requirement (QR refer to both the QA and QB requirements).

Course Materials: Lecture notes, links to recorded class lectures, homework assignments, quizzes, and exams will be posted on Canvas

Class Schedule & Important Dates

Exam Dates: There will be three midterms held via Zoom during regular class time. The dates will appear on the course outline/schedule that is posted on Canvas. The final exam is scheduled for Monday December 7, 10:30 am – 12:30 pm and will be held via Zoom.

Holidays: There will be no class on Monday, September 7 (Labor Day) and November 26-29 (Thanksgiving break).

Expected Learning Outcomes:

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.
7. Write verbal descriptions of their mathematical reasoning in complete sentences.

Grading: Grades will be calculated as follows: Homework (15%), Quizzes (15%), Midterm (20%), Midterm (20%), Midterm (10%), Final Exam (20%). There will be three midterms. Your lowest midterm score will count for 10% of your grade and your top two midterms scores will each count for 20% of your grade.

Grading Scale: The grade scale is: A [93-100], A- [90-93), B+ [87-90), B [83-87), B- [80-83), C+ [77-80), C [73-77), C- [70-73), D+ [67-70), D [63-67), D- [60-63), E [0-60).

Homework: I will collect homework on Wednesdays of each week. All of the homework assigned from sections covered in the previous few days is due at that time.

- Each section of homework will be worth ten points. For example, if you have three sections of homework assigned, then that homework set is worth a total of 30 (raw) points.
- You will get half credit if you DO every problem. I will NOT be grading for correctness for this half of the grade, so it is your responsibility to make sure you understand the problems and their solutions. This is basically motivation for you to do the homework because that is the only way to survive a math class. (Please notice that there is no way to get an A in this course if you choose not to do any of the homework. On the other hand, turning in all of the homework can help our grade substantially.)
- The other half of the points for each homework set will be given for correct and neat solutions, with all work shown. The grader will grade a few problems on each homework set to check for correctness. We will not tell you ahead of time which problems will be graded for correctness.
- The homework is to be turned in by the beginning of class on Wednesdays through Canvas or Gradescope, I will let you know which on the first day of class. Students are encouraged to start homework the day that material is covered in class, since working on homework nightly helps you identify things to ask about and be ready for the next day's class.
- I will accept 10 late homework **sections**, up to two weeks late, throughout the semester for full credit. I will not accept homework more than two weeks late. I accept these late homework sections to allow for illness, oversleeping, hectic schedules, etc. Do not ask for special favors with regard to the homework policy, unless the circumstances are extraordinarily severe, because my response will not be in your favor. Also, it is not necessary nor recommended that you tell me why your homework is late. This policy is meant to be flexible enough to cover all reasons.

Weekly Quizzes: There will be weekly in-class (via Zoom) quizzes, every Wednesday, except for test weeks. I reserve the right to start the quiz at any time during the Wednesday class period. The quiz will cover the material covered in the previous week. Quiz questions will be taken from textbook examples, class examples, assigned problems or problems very much like those problems. There will be no make-up quizzes. No exceptions. If you're late to class or miss class and thus miss the quiz for any reason whatsoever, you will have to use that as one of your dropped quiz scores. There will be roughly 10-12 quizzes throughout the semester. Your lowest three quiz scores will be dropped. Before Wednesday class, students should print out or hand-copy a template to write answers on. These will be made available in Canvas the day before the quiz. During quizzes, students are required to have their cameras on. At the end of the quiz, students will scan their work and upload it either to Canvas or Gradescope, the grading website. Student may ask questions of their instructor through the Chat feature in Zoom

Midterms: There will be three one-hour midterm exams throughout the semester, and the dates will be fixed, according to the course outline/schedule that is on our class web page. They will be during normal class time and will be held via Zoom. During exams, students are required to have their head, hands, and workspace be visible. Students may make one page of notes and may use it during exams. Each student should make their own notes. They should not use notes from other students or other sources. At the end of the exam, students will scan their work and upload it either to Canvas or Gradescope. Students should also scan and upload their page of notes. Student may ask questions of their instructor through the Chat feature in Zoom

Final Exam: The final exam for this class is comprehensive and will occur via Zoom during the regularly scheduled final exam time given by the University, Monday December 7, 10:30 am – 12:30 pm. Please put this date in your calendar now, as there will be no opportunity for a later or make-up final exam. For each exam, students may make one page of notes and may use it during the exam. Each student should make their own notes. They should not use notes from other

students or other sources. At the end of the exam, students will scan their work and notes and upload them either to Canvas or Gradescope. Student may ask questions of their instructor through the Chat feature in Zoom

Calculators: You may find it helpful to have a graphing calculator for your own personal use. However, **if I allow** calculators on exams or quizzes, I will only allow scientific calculators (no graphing or programmable calculators will be allowed ever). Most of the time, you will not have use of a calculator on exams and quizzes. This will be discussed more in class with each quiz and test.

Technical requirements: For both quality learning and proctored testing, students are required to have access to the following equipment:

1. A strong internet connection with sufficient bandwidth (in order to participate in IVC classes, access course materials, and take exams);
2. A webcam on your computer or camera on your phone (this is required for taking quizzes and exams in Zoom; it is recommended for IVC lecture classes);
3. A scanning device which is different than the device you are using for your webcam (smartphones can be used as scanning devices);
4. A microphone (used for online meetings).
5. A printer is recommended, but not required, so that you can print out templates for quizzes and exams ahead of time. If you do not have a printer, you will need to make and use hand-written versions. You must copy these exactly, but they are designed to be fast and straight forward to create by hand.

Attendance & Punctuality: Students are expected to attend the synchronous online portion of the class on Mondays and Wednesdays (MW) and to have my posted notes for that class at hand. (Classes will be recorded, but students benefit most when present during the live class.) Quizzes and exams will be given in class and due in class on Wednesdays. You need to be present in the online class in Zoom to participate in these assessments. A certain number of quizzes will be dropped in order to accommodate for illness and other absences (See Late/Absent policy later in the syllabus.) Students who are not attending the MW lecture live are expected to review the material before the next class.

Students are expected to participate in the IVC portion of class through Zoom, with audio and visual enabled. This expectation is made because it improves learning and the classroom environment. If students need to turn off cameras and/or microphones, this is allowed. It is polite if you will be doing so for long periods to inform your instructor. Also note, even though microphones are enabled, **they should be muted when not in use.**

U of U Learning Support:

- Math Center Online Tutoring, (Paid for by Your Student Fees)
<https://www.math.utah.edu/undergrad/mathcenter.php>
- The Learning Center, 3 free tutoring sessions, \$5 after that, learning consultations
<https://learningcenter.utah.edu/>
- Student Success Advocates <https://ssa.utah.edu/events.php>

General Help: Here is information from the University about logistics in light of COVID-19. There is also information about financial assistance, counseling, the food pantry and much more. <https://coronavirus.utah.edu/#students>

Equipment Help: The UofU has a laptop and mobile hotspot loan program. Laptops and mobile hotspots can be mailed to current U students on a first-come, first-served basis. You can find out more information about this program through this link: <https://union.utah.edu/covid-19/>

Communication

All course materials, such as lecture slides, assignments, solutions, grades, etc. will be posted on the Course Canvas site <https://utah.instructure.com/courses/636676> Class announcements will be done via Canvas email through the Canvas server. You will be responsible for any information contained in them as well as the information announced in class. It is your responsibility to log in and check Canvas every day for posted announcements and assignments. It is your responsibility to regularly check your Canvas email. Also, regularly check your Umail, because this is the only to communicate privately with you, e.g., regarding a grade or assignment.

I will put your grades online on Canvas. I do my best to update grades on a regular basis and to keep everything accurate. However, I advise you to check your grades often to make sure there were no data entry mistakes.

Feel free to contact me by email for questions at fogelson@math.utah.edu, I will do my best to answer emails promptly. I would like to encourage you to email me only if it is something personal that requires individual attention, if instead you have questions about logistics of the class, course material and assignments, and anything else your classmates may wonder about as well, please post a question on the Discussions Board instead. This way the information is shared quickly to the entire class, and each of you can benefit from seeing other classmates' questions.

Incompletes: According to university policy, to be considered for an incomplete, a student must have 20% or less of the course work remaining and be passing the course with a C or better. You must request an incomplete grade and I will consider giving that grade only under exceptional circumstance.

Academic Code of Conduct: Students are encouraged to review the Student Code for the University of Utah: <https://regulations.utah.edu/academics/6-400.php>. In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students must adhere to generally accepted standards of academic honesty, including but not limited to refraining from cheating, plagiarizing, research misconduct, misrepresenting one's work, and/or inappropriately collaborating. A student who engages in academic misconduct as defined in Part I.B. may be subject to academic sanctions including but not limited to a grade reduction, failing grade, probation, suspension or dismissal from the program or the University, or revocation of the student's degree or certificate. Sanctions may also include community service, a written reprimand, and/or a written statement of misconduct that can be put into an appropriate record maintained for purposes of the profession or discipline for which the student is preparing.

Incidents of academic misconduct (e.g. cheating, plagiarizing, misrepresenting one's work, and/or inappropriately collaborating on exams) will be subject to penalty per Section V of Policy 6-400, the Student Code. Incidents of academic dishonesty on homework assignments will result in a minimum penalty of a full letter-grade reduction and up to a failing grade (E) for the course. Incidents of academic dishonesty on exams will result in a minimum penalty of a failing grade (E) for the course, and the incident(s) will be referred to the dean of your major-department college for possible further sanction.). You may also view the Chemistry Department's Code of Conduct at this link.

Inclusivity Statement: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status,

and other unique identities. gender, sexuality, disability, age, socioeconomic status, ethnicity, race, culture, and other unique identities. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Discrimination and Harassment: 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 Office of the Dean of Students, 270 Union Building, 801-581-7066. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS). Please see Student Bill of Rights, section E <http://regulations.utah.edu/academics/6-400.php>. I will listen and believe you if someone is threatening you.

Names/Pronouns. Canvas allows students to change the name that is displayed AND allows them to add their pronouns to their Canvas name. Class rosters are provided to the instructor with the student's legal name as well as "Preferred first name" (if previously entered by you in the Student Profile section of your CIS account, which managed can be managed at any time). 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 or on assignments. Please advise me of any name or pronoun changes so I can help create a learning environment in which you, your name, and your pronoun are respected. If you need any assistance or support, please consult with LGBT Resource Center. https://lgbt.utah.edu/campus/faculty_resources.php

English Language Learners. If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development. These resources include: the Writing Center (<http://writingcenter.utah.edu/>); the Writing Program (<http://writing-program.utah.edu/>); the English Language Institute (<http://continue.utah.edu/eli/>). Please let me know if there is any additional support you would like to discuss for this class.

Undocumented Student Support. Immigration is a complex phenomenon with broad impact—those who are directly affected by it, as well as those who are indirectly affected by their relationships with family members, friends, and loved ones. If your immigration status presents obstacles to engaging in specific activities or fulfilling specific course criteria, confidential arrangements may be requested from the Dream Center. Arrangements with the Dream Center will not jeopardize your student status, your financial aid, or any other part of your residence. The Dream Center offers a wide range of resources to support undocumented students (with and without DACA) as well as students from mixed-status families. To learn more, please contact the Dream Center at 801.213.3697 or visit dream.utah.edu.

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.

Wellness Statement. 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.

Student Success Advocates: The mission of Student Success Advocates is to support students in making the most of their University of Utah experience (ssa.utah.edu). They can assist with mentoring, resources, etc. Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact a Student Success Advocate for support (<https://asuu.utah.edu/displaced-students>).

The Americans with Disabilities Act: 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 & Access, 162 Olpin Union Building, 801-581-5020. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability & Access.

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, veteran's status or genetic information. If you or someone you know has been harassed or assaulted on the basis of your sex, including sexual orientation or gender identity/expression, you are encouraged to report it to the University's Title IX Coordinator; Director, Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or to 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 police, contact the Department of Public Safety, 801-585-2677(COPS).

Campus 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 safeu.utah.edu

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. More information about the counseling center, including ways to contact them, can be found here: <https://counselingcenter.utah.edu/>.

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. Their phone number is 801-582-7066.

Syllabus subject to change: This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas.