

Instructor: Andy Thaler

Office: [JWB](#) 206

Office Hours: M: 9:30-10:30 a.m.; W: 3:30-4:30 p.m. or by appointment

Email: thaler “at” math.utah.edu

Lecture Meeting Times: MTWF from 10:45-11:35 in [ST](#) 205

Course Website: www.math.utah.edu/thaler

Lab Instructor: Edward Vernarsky

Office: [LCB](#) loft (4th floor of LCB)

Office Hours: M: 1:30-2:30 p.m.; H: 9-10 a.m. in [WEB](#) 1622

Email: vern “at” math.utah.edu

Lab Meeting Times: H either from 10:45-11:35 in [LCB](#) 323 or from 11:50-12:40 in [JWB](#) 308

Textbook: *Calculus: Concepts and Contexts, 4th edition*, by James Stewart. It is strongly recommended that you read the sections of the textbook that will be discussed in lecture before coming to class. This will help you understand the content that will be covered. I understand that it may not always be possible to read the book before class—in this case, I strongly encourage you to read the textbook after the lecture.

Prerequisites: “C” or better in ((MATH 1050 AND MATH 1060) OR MATH 1080) OR AP Calc AB score of 3 or better OR Accuplacer CLM score of 95 or better OR ACT Math score of 28 or better OR SAT Math score of 630 or better OR Department Consent

Course Description: Differential and integral calculus with a focus on engineering applications and projects: functions and models; rates of change in science and engineering, limits and derivatives; related rates; derivatives and shapes of graphs; optimization; Newton’s method; definite integrals, anti-differentiation and Fundamental Theorem of Calculus; techniques of integration; numerical and symbolic integration with software; arclength, area and volumes via integration.

Homework: In general, homework assignments will be given on a weekly basis (usually given on a Tuesday and due the following Tuesday). It is imperative that you show your work on homework problems, as this will help you present the solutions in an organized, accurate fashion, as well as give me the opportunity to award partial credit. If insufficient work is shown, full credit will not be awarded. The primary goals of the homework are: (1) to help you understand calculus concepts; (2) to give you practice at logically working through problems; (3) to help you learn the mechanics of calculus; (4) to help me assess where difficulties with goals (1)-(3) arise. **NO LATE HOMEWORK WILL BE ACCEPTED.** That is, the homework needs to be turned in to me on the due date by 12:30 p.m. Your lowest two homework scores will not be included in the computation of your final grade. **DISCLAIMER:** If your work

is not stapled, I am not responsible for lost sheets. Also, my grader and I will not be able spend exorbitant amounts of time trying to understand sloppy write-ups, so please write your solutions neatly.

Practice Problems: A great way to study for exams (and to have fun on weekends) is to do some of the problems in the book that were not assigned as homework problems. In particular, I strongly suggest you work through the diagnostic quizzes on pages xxiv-xxviii of the textbook during the first week or so of class. These problems are excellent review exercises and will benefit you greatly throughout the course since the concepts involved in these problems will frequently appear this semester.

Labs: Weekly labs will be held for this course. Attendance at labs is required, and will be taken into account when computing the lab component of the grade. The labs are designed to reinforce the concepts you are learning in class—the primary method used to that end will be weekly lab worksheets. These worksheets will be comprised of so-called *complete problems*. A complete problem is a problem that requires the following 4 tasks of the student:

1. reading and understanding of problem objectives;
2. translation of objectives into the appropriate mathematization;
3. selection and execution of correct methods and transformations;
4. interpretation of results and communication to others how/if a solution/result satisfies problem objectives.

Ultimately, the problems are supposed to expose you to interesting applications of calculus as well as encourage you to work in groups while solving these problems. The lab TA will be available during the labs and office hours (see above) to help guide you through these problems.

Quizzes: Quizzes will typically be given every other week. More or fewer quizzes may be given, subject to the discretion of the instructor. Quizzes will typically be given during the lab section on Thursdays. The purpose of the quizzes is threefold: (1) to help you assess your understanding of the material before the exam; (2) to help me assess your understanding of the material before the exam; (3) to give you practice solving problems in an exam-like environment. Your lowest quiz score will not be included in the computation of your final grade.

Exams: There will be three midterm exams and a final exam. The final exam will be comprehensive. The first exam will take place on **Friday, February 7**; the second exam will take place on **Friday, March 7**; the third exam will take place on **Friday, April 11**. The exams will be given during the normal class time. The final is scheduled for **Monday, April 28, from 10:30 a.m.-12:30 p.m.** in our normal classroom (ST 205).

Calculators: Calculators are not allowed on quizzes or exams. You may use a calculator on your homework; however, I suggest you perform most calculations and graphing by hand for practice purposes.

Grades: There may be opportunities for extra credit given only in association with homework, quizzes, and exams. Your grade will be computed with the following weights:

Homework: 15% Lab: 20% Quizzes: 10% Exams: 30% Final: 25%

The grading scale will be as follows (where usual rounding techniques are used, e.g., 92.53% will be rounded up to 93%, whereas 92.4% will be rounded to 92%):

	87-89 B+	77-79 C+	67-69 D+	
93-100 A	83-86 B	73-76 C	63-66 D	0-59 E
90-92 A-	80-82 B-	70-72 C-	60-62 D-	

Tutoring: The [T. Benny Rushing Mathematics Center](#) (located in the basement of [LCB](#)) offers free drop-in tutoring for students at the U. This is a wonderful resource! The hours of operation are Monday-Thursday 8-8 and Friday 8-6. You can also find information about private tutors there.

ADA Statement: “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, 801-581-5020. CDS will work with you and the instructor to make arrangements for accommodations.” (<http://disability.utah.edu/>)

Important Dates

Wednesday, January 15: Last day to drop classes

Monday, January 20: Martin Luther King Jr. Holiday–No class

Tuesday, January 21: Tuition due

Friday, February 7: First exam

Monday, February 17: Presidents’ Day Holiday–No class

Friday, February 28: Last day to withdraw from classes

Friday, March 7: Second exam

Sunday, March 9: Daylight Savings Time begins (clocks move forward one hour)

Monday-Friday, March 10-15: Spring Break–No class

Friday, April 11: Third exam

Wednesday, April 23: Last day of class

Monday, April 28: Final exam from 10:30 a.m.-12:30 p.m.

Tuesday, May 13: Grades available