

Math 1210-013, Spring 2016

Instructor	Drew Johnson djohnson@math.utah.edu Office: JWB 306
Class Information	Monday, Wednesday, and Friday, 1:25-2:45pm AEB 320 This is a semester long, 4 credit course: 70 minutes three days a week.
Final Exam Time	Thursday, April 28, 2016. 1:00 – 3:00 pm Arrange your schedule to be there! If you have an unavoidable conflict, talk to me as soon as possible!
Lab Sections	Section 014 12:55-1:45, JFB B-1 Section 015 2:00-2:50, LCB 215
Lab Instructor	Janina Letz letz@math.utah.edu
Text	Calculus with Differential Equations, Ninth Edition, by Varberg, Purcell, and Rigdon. ISBN: 0-13-230633-6.
Other Materials	You will need a scientific calculator for use on the exams and quizzes (NO graphing, programmable, or cell phone calculators will be allowed). You can use any calculator on the homework, but be sure you know how to do it with only a scientific calculator. Graphing paper is highly recommended for the assignments that ask you to sketch graphs.
Additional Resources	Kelly MacArthur's Calculus Lecture videos and notes: http://www.math.utah.edu/lectures/math1210.html Other resources and links will be posted on Canvas.
Canvas	You can view your grades and important course information on Canvas. You will be responsible for any announcements sent through Canvas for this course , so please check your settings to be sure you are properly notified.
Tutoring Lab	T. Benny Rushing Mathematics Student Center (basement between JWB and LCB), Room 155. Mon-Thurs: 8 am--8 pm, Fri: 8am--6pm. They are also offering group tutoring sessions. If you're interested, inquire at the Tutoring Lab. http://www.math.utah.edu/ugrad/tutoring.html There is also a computer lab, with free math and physics printing.
Private Tutoring	University Tutoring Services, 330 SSB (they offer inexpensive tutoring). There is also a list of tutors at the Math Department office in JWB233.
Grading	The grades will be computed as follows: WeBWork or other homework: 8% Quizzes: 8% Lab Assignments: 14% Midterms: 45% Final Exam: 25%
WeBWork	WeBWork is an online math homework system. The purpose of using it in this course is to give you the opportunity to practice with instant feedback.
Lab Assignments	Lab assignments will be posted on Canvas a few days before the Thursday Lab so that you can get started early if you want. On Thursday, the Lab Instructor will be there to guide

	you and answer questions about the lab assignment.
Quizzes	In class quizzes, along with the topic they are covering, will be announced at least one class period in advance. The purpose of quizzes is to vary the learning activities in the classroom and give you a chance to get frequent feedback. There may be some individual quizzes and some group quizzes. At least the two lowest quiz scores will be dropped.
Midterms	There will be three midterms. You can view the dates on Canvas. Your best two midterms will be worth 17.5%, and your lowest one will be worth 10%. There are typically no exam retakes.
Final Exam	The final will be comprehensive.
Grading Scale	Based on your scores, you are guaranteed a grade at least as good as the standard cutoffs. Depending on the difficulty of the tests, etc., the cutoffs may be more generous. A (93-100), A- (90-92), B+ (87-89), B (83-86), B- (80-82), C+ (77-79), C (73-76), C- (70-72), D+ (67-69), D (63-66), D- (60-62), E (0-59).
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 (CDS), 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and me to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to CDS.
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. You 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, collusion, fraud, theft, etc. Students should read the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from 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
Prerequisites	At least a C grade in Math1050 (College Algebra) AND Math1060 (Trigonometry) OR in Math1080 (Precalculus) or an Accuplacer score of 95 on the College Level Math test or at least a 3 on the AB Calculus AP exam
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: <ul style="list-style-type: none"> • 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. • Use the limit definitions of derivative and definite integral for polynomial, rational and some trigonometric functions; understand definition of continuity. • Differentiate all polynomial, rational, radical, and trigonometric functions and compositions of those functions; perform implicit differentiation and compute higher order derivatives. • Use differentiation to find stationary, singular and inflection points, as well as domain and limit information to determine vertical and horizontal asymptotes, and then use all of that information to sketch the graph of a curve, $y = f(x)$. • Apply differentiation to optimization and related rates problems. • Compute indefinite and definite integrals, using the power rule and basic u-substitution and the Fundamental Theorems of Calculus. • Apply the definite integral to compute area between two curves, volumes of solids of revolutions, arc length, surface area for surfaces of revolution and center of mass.