

Math 1320, Engineering Calculus II

Summer 2018. MTWRF 8:30-9:30. WEB 1250

Instructor: Hannah Hoganson

Email: hoganson@math.utah.edu

Office: JWB 306

Office Hours: Monday 10-11 and Thursday 10-11, Other times by appointment.

Text: Calculus: Concepts and Contexts 4th Edition, by James Stewart (ISBN-13: 978-0-495-55742-5)

Website: We will be using the Canvas page for this course to post homework, grades, and announcements. Students should check their current Canvas notification settings to ensure they stay up to date.

Course Description: Differential and Integral Calculus II, with a focus on applications and projects for engineers: integral expressions for moments, centers of mass, and work; modeling with first order differential equations; infinite sequences and series; power series and Taylor series; vectors, dot and cross products, and the geometry of space; the calculus of vector functions and particle motion in space; differential calculus for functions of several variables, including linear approximation, partial and directional derivatives, chain rule, and multi-variable optimization. We will cover chapters 6-11 of the text.

Prerequisites: "C" or better in MATH 1310, or AP Calc BC score of 3 or better, or Department Consent.

Expectations: It is expected that students not only attend but engage in lecture and lab. This includes, but is not limited to, paying attention, asking questions, and participating in activities and group work. Laptops, tablets and cell phones are strictly prohibited during class time as they distract from a learning environment; students who refuse to comply may be asked to leave the classroom. Calculators may be used on homework and lab assignments but will not be allowed during quizzes or exams.

Grading Breakdown:

	Percentage of Final Grade
Homework	18%
Group Work	5%
Labs	20%
Exams	32% (16% each)
Final Exam	25%

Homework: One homework problem will be assigned per topic; approximately one per section of the text book, due each Tuesday at the beginning of class. Your solution and write up of the problem are just as important as your answer. Homework can be handwritten or typed but is expected to be neatly written and organized, easy to read and understand, with complete sentences. Optional "warm-up" homework problems will also be assigned but not collected and are highly recommended. The purpose of warm up homework is for students to practice computational skills and to familiarize themselves with various concept applications. Homework assignments are designed to improve students' technical writing and ability to communicate mathematics, and to assess a students current understanding of course content.

Group Work: Group work will be given at the end of class every Friday (excluding exam days) and will be approximately 20 minutes long. Students can work in small groups of their choice, which can be different each week. Worksheets will be comprised of past 1320 quiz and exam questions. Education research has shown that one of the best ways to learn something is to explain it to others. The goal of group work is to both foster small group discussion as well as provide students with a self-assessment of their current understanding of the course material. Group work scores will be earned through earnest participation.

Labs: The scheduled Thursday lecture will act as a lab day for the course. Lab is not an optional component of the course, and as such it is worth 20% of the grade. Lab problems are chosen to teach students to apply the tools they learn in lecture to both physical scenarios and in-depth mathematical problems. Labs facilitate problem solving, team work, group discussion and technical writing. As lab problems are more involved than exam questions, no lab grades will be dropped at the end of the semester.

Exams: There will be two exams given during the semester on Monday June 18 and Friday, July 13, during the scheduled class period. The final exam is scheduled by the University for Friday, August 3, 7:30-9:30 am. All exams will take place in the regular classroom, WEB 1250. Exams are written to assess knowledge and understanding of course content. The final is a comprehensive exam, students who chose to “skip” a subject should not expect to receive an “A” or “B” in the course.

Make-Up Policy: If a student expects to miss assignment due dates or an exam they are required to notify the instructor in advance, in person or by e-mail. The validity of excuses, whether given in advanced or not, will be handled on a case-by-case basis. As per university policy the final exam may not be taken early. The instructor reserves the right to alter the questions and format of any make-up assignment given. To accommodate for busy weeks and bad days, one lowest homework score and one group work score will be dropped from the grade.

Academic Dishonesty: Cheating in any form will not be tolerated and may result in a failing grade for the relevant assignment or exam and/or a failing grade in the course. The guidelines in the Student Handbook will be followed.

Tutoring: Free tutoring is offered at the T. Benny Rushing Mathematics Center, which is located in the basement between the JWB and LCB buildings. The hours are 8 am to 8 pm Monday through Thursday and 8 am to 4 pm on Fridays. The tutoring center will open starting Thursday, May 17.

Accommodations: The Americans with Disabilities Act requires that reasonable accommodations be provided for students with physical, cognitive, systemic learning, and psychiatric disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services (162 UNION , 801-581-5020)

Important Dates:

First Day of Class- Monday, May 14

Last day to add or drop – Wednesday, May 23

Memorial Day- No Class Monday, May 28

Exam 1- Monday, June 18

Last day to withdraw- Friday, June 22

Independence Day- No class Wednesday, July 4

Exam 2- Friday, July 13

Pioneer Day- No class Tuesday, July 24

Last Day of Class- Wednesday, Aug. 1

Final Exam- Friday, August 3, 7:30-9:30 am