Math 1320, Engineering Calculus II  
Fall 2017. MTWF 8:35-9:25. ST 205

Instructor: Hannah Hoganson  
Email: hoganson@math.utah.edu  
Office: JWB 306  
Office Hours: TBD. Other times by appointment.


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 series and sequences; 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:

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<tr>
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<th>Percentage of Final Grade</th>
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<tbody>
<tr>
<td>Homework</td>
<td>12%</td>
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<tr>
<td>Quizzes</td>
<td>8%</td>
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<tr>
<td>Labs</td>
<td>20%</td>
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<tr>
<td>Exams</td>
<td>36% (12% each)</td>
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<td>Final Exam</td>
<td>24%</td>
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Homework: One homework problem will be assigned per topic; approximately one per section of the text book, due each Wednesday in 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, with complete sentences. Optional “warm-up” homework problems will also be assigned but not collected. Homework assignments are designed to improve students technical writing and ability to communicate mathematics.
Quizzes: Quizzes will be given at some point during class every Friday (excluding exam days) and will be approximately 20 minutes long. Students can work in small groups of their choice, up to 3 people. Groups can be different each week, and you can work on your own. At least one quiz question each week will come from the optional homework exercises. Education research has shown that one of the best ways to learn something is to explain it to others. The goal of group quizzes is to both assess students’ current understanding of the course material, as well as foster small group discussion.

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 three exams given during the semester on September 15, October 27 and November 17 (Fridays) all in class. The final exam is scheduled by the University for Monday, December 11, 8-10 am. It is a comprehensive exam, students who chose to “skip” a subject should not expect to receive an “A” in the course.

Make-Up Policy: If a student expects to miss a quiz or 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 quiz or exam given. To accommodate for busy weeks and bad days, one lowest homework and one lowest quiz score will be dropped at the end of the semester.

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 ?? (Sorry this information is not available yet at time of syllabus posting.)

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- Tuesday, August 22 (Go watch the eclipse!)
Last day to add or drop – September 1
Labor Day- No Class September 4
Exam 1- September 15
Fall Break- October 8-15
Last day to withdraw- October 20
Exam 2- October 27
Exam 3- November 17
Thanksgiving Break- November 23-26
Last Day of Class- December 7
Final Exam- Monday, December 11, 8:00-10:00 am