Syllabus for Math 13 Bridge to Engineering Calculus Spring 2014

Instructor: Patrick Bardsley
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Lecture when and where: 6:30PM-8:30PM M,T,W,H; January 6-9, AEB 306 Course website: check the Canvas course page in your CIS
Office hours: JWB 206 Tuesday 8:30-10:30AM, or by appointment
Textbook: *Calculus: Concepts and Contexts*, by James Stewart (ISBN-13: 978-0-495-55742-5)—price is about $195.

This course will cover material required for entry to Engineering Math 1320 that is not covered in 1210. This four-evening course constitutes an accelerated and intensive coverage of function transformations; inverse functions; exponential, inverse trigonometric, logarithm functions and their respective derivatives; parametric curves; approximation methods; L'Hopital's rule; integration-by-parts, trigonometric integrals.

The work you will complete in Math 13 comprises in-class group work, quizzes, daily homework, and a final exam. Details about the content of each assignment type are as follows:

- In-class group worksheets designed to provide necessary preparation for the end-of-class quizzes.
- Three end-of-class Quizzes: At the end of class on Monday-Wednesday, a quiz will be given with a similar form and format as the in-class group work.
- Homework: Roughly three textbook sections are due the following day after they are assigned, consisting of roughly two problems each section.
- Final exam: A one-hour comprehensive exam will be given at the end of the Thursday class time based on similar questions as given in the preceding day's quizzes.
- Grades are computed as a weighted average comprising 30% homework scores, 20% quiz scores, and 50% final exam score.
- Letter grades are determined as follows: If X is your percentage grade, then $\{X \geq 93\% \Rightarrow A, X \geq 90\% \Rightarrow A-, X \geq 87\% \Rightarrow B+, X \geq 83\% \Rightarrow B\ , X \geq 80\% \Rightarrow B-\ , X \geq 77\% \Rightarrow C+\ , X \geq 73\% \Rightarrow C, X \geq 70\% \Rightarrow C-\ , X \geq 67\% \Rightarrow D+\ , X \geq 63\% \Rightarrow D\ , X \geq 60\% \Rightarrow D-\ , X < 60\% \Rightarrow E\}$. Letter grade assignments can be changed at the discretion of the instructor.
- **Students with disabilities:**

  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, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Class meeting schedule

Day 1: 1.5, 1.6, 5.6—Compositions, Exponential Function, Logarithms, Inverse Functions, Integration by parts

1st hour Lecture: Exponential functions (1.5), Logarithms and Inverse functions (1.6), Log Functions, and their Derivatives (3.7), and Integration by parts (5.6)

2nd hour Group work

HW 1: due Tuesday

1.5: 4 , 32

1.6: 52

3.7: 4, 34

5.6: 22, 36

Day 2: 1.3, 1.7, 3.6, 5.7—Function transformations , Parametric Curves and Inverse Trig Functions, Partial fractions and trigonometric integrals (5.7)

1st hour: Review of Day 1 , Parametric curves (1.7), Inverse Trig Functions (3.6), Partial fractions (5.7)

2nd hour: Group work, followed by quiz

HW 2: due Wednesday

1.3: 26, 58

1.7: 4, 22

3.6: 2, 20

5.7: 6, 28

Day 3: Linear approximations (3.9) and L'Hopital's rule (4.5)

1st hour: Lecture on 3.9, and 4.5

2nd hour: Group work, followed by quiz

HW 3: due Thursday

3.9: 16, 28

4.5: 8, 28

Day 4: Exam review and final exam.

1st hour: Group work review

2nd hour: Final exam