

Fall 2011 M – Th 12:10 – 1:15 (Section AX/AH)

Instructor: Jon Freedman
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Office Hours: M 8:30 - 9, 1:15 – 2; Tu 1:15 – 2:30; W 8:30 – 9; 1:15 – 2:30; Th 1:15 – 2:30;
 F 8:30 – 9, 11 – 12 and most times I'm not in class by arrangement – ask.

Prerequisite: Math 222 with C or better, or appropriate score on placement test.

Important Details: (1) Math 251 is a prerequisite for majors in Engineering, Mathematics, and Physics. Check yours.
 (2) Transfer: CSU (B4); UC (credit limit).

Text: Hughes-Hallett, Gleason, McCallum, et al. *Single Variable Calculus*. 5th ed. New York: John Wiley & Sons Inc. 2009. (yellow binding). If you plan to take Math 253 (multivariate calculus), buy the red bound book, *Single and Multivariable Calculus*. It is also available as an e-book.

Materials: A TI-84 (or TI-83+) graphing calculator is required for this course. Other graphing calculators may perform the same functions and may be acceptable but see me about this. If you have a TI-89, TI-92, or other technology that can perform symbolic manipulations you may not be allowed to use it on some forms of assessment.

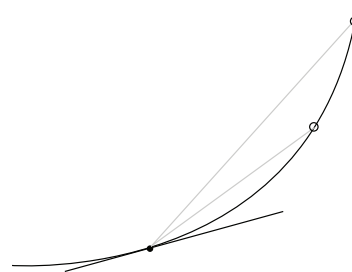
Important Dates:	Last day to Add this course:	Tuesday, August 30
	Last day to Drop this course without a W:	Friday, September 9
	Last day to Withdraw from class:	Tuesday, November 15
	Holidays:	9/5; 11/11; 11/24 – 7
	Last regular class:	Thursday, December 8
	Final Exam (comprehensive):	Monday, Dec. 12 11:10 – 1:40 pm

Assignments: Assignments will be given online through WileyPlus (packaged with the textbook or available online) or assigned from the book. Book assignments will be assessed through homework quizzes consisting of random problems taken from the book problems. There will be a written project concurrent with chapter 4. There will also be some group assignments during class.

Grading: Assignments (homework, classwork, quizzes) (30%)
 3 – 5 Tests (50%)
 Final (20%)
 You will also be required to pass a techniques test in order to pass the class. You may retake the test as often as you wish but you must pass it with at least 95% proficiency.
 I will drop your worst test score (Not the final). There will be no makeup tests. If you are late for a test you will have only the remaining time to complete the test (so don't be late). If you know you are going to miss a test date, contact me at least three days in advance and we can arrange an alternate test to be taken in advance of the class test date.
 I will excuse your worst score from each category (HW, tests, quizzes) but will not give makeup work. I will give quizzes often. I will drop your worst quiz. There will be no makeup quizzes.

Grading Scale:

A	≥ 90%
80% ≤ B	< 90%
70% ≤ C	< 80%
60% ≤ D	< 70%
F	< 60%



- Attendance: Your involvement in class and your participation in the process of discovering concepts will be fundamental in your understanding of calculus. I try not to lecture directly from the book but rather to provide experiences enhanced by the book. You will miss a lot of material if you do not attend and it is unlikely that you will pass the course.
- Withdrawal Policy: If you decide to drop this class you must do so formally either by using WebSMART or by filing the correct form with the registrar's office. The likelihood of you passing the class after ten absences is almost 0. If you miss more than 10 hours of class and still desire to remain in the class you must meet with me and convince me that you can learn the material necessary to pass the class.
- Course Contents: We will cover the majority of Chapters 1 through 5, as well as some supplemental materials. By the completion of the course you will be able to demonstrate the following skills:
- For each of the functions:
 - Linear
 - Quadratic (and some general polynomials)
 - Power
 - Trigonometric and Inverse Trig.
 - Exponential
 - Logarithmic
 - Logistic

you will be able to take any one of the representations: Data Table, Graph, Formula, and use technology or algebraic manipulation to generate the other two.
 - Additionally, you will recognize and derive the relationship between each function and Contextual Applications relevant to that function.
 - You will be able to use the graphing calculator to help you analyze complex functions, derive formulas from data, and perform various calculus-related analyses on a function.
 - You will understand and anticipate the behavior of functions through translation and distortion.
 - You will demonstrate your understanding of the derivative through (correct) numerical approximation, graphical means, symbolic manipulation, and contextual application.
 - You will understand the relationship between limits, continuity, and differentiability.
 - You will be able to apply the derivative in situations involving local linearity (e.g. L'hospital's Rule), and implicit differentiation (e.g. inverse function derivatives).
 - You will solve application problems involving graphing, related rates, and optimization targeting the fields of business, life science, and physics. You will be able to reason the correct calculus-based or algebraic means of solving problems in these and related subjects.
 - You will demonstrate your understanding of the definite integral through (correct) numerical approximation, contextual application and the Fundamental Theorem of Calculus.
 - You will demonstrate your understanding of the anti-derivative through graphical means, and symbolic manipulation.
- Tutoring: Think seriously about joining MESA (Rm. 7309). If you have any interest in Mathematics, Engineering, or the Sciences you should join MESA and make use of their many support resources. Just sitting in a supportive environment can be a tremendous help.
- The Learning Center (TLC) is a good resource for semi-free tutoring in all of your classes.
- Assistance: In Coordination with the DSP&S office, reasonable accommodations will be provided for qualified students with disabilities. If you have an accommodation letter, please meet with me during my office hours to discuss your needs. For more information, please contact DSPS office in building 2 at 738-4280.
- Academic Dishonesty: I strongly encourage you to form study groups and to work together to understand the material covered in this class. Explaining a concept is a valuable way for you and another to develop your insight and your skills. Copying work is of no value to you academically. Consequently, if I find that you are submitting any part of another's work as your own, you will not receive credit for it and it will not be dropped as a lowest score. The same holds true for any other kind of academic dishonesty. There is no situation that could arise in this class that would justify risking expulsion. If you are having any difficulty, PLEASE see me about it so that we can work together in resolving the issue.