

MATH 505G - 56245 - Pre Calculus

Spring 2009

Instructor: Neil Hoffman E-mail: nhoffman@math.utexas.edu
Office: RLM 11.154 Office Hours: MW 11-12 F 1:30-2:30; by appointment
Class Hours: MWF 3-4 RLM 6.104 Review Sessions: TTH 3:30-4:30 UTC 3.132

Website: ma.utexas.edu/users/nhoffman/2009Spring505G/505G.html

Textbook

Precalculus (Custom Edition) by Michael Sullivan, Pearson

Course Overview

This course has been designed to prepare students for the calculus courses (M408C and M408K) required to earn their degrees in their chosen majors. In fact, the final exam will have questions similar to those assigned in the first week of M408K. Over the course of the semester the lectures, homework and discussion sections will introduce you to the functions and skills that form the foundation of calculus. These concepts include: sets, algebra of functions, inverse functions, logarithms*, exponential functions*, trigonometric functions, inverse trigonometric functions, polynomials, and the range, domain and graphs of these functions. In general, the course is geared toward those students who have had at least three and a half years of high school mathematics.

Grade Distribution

Homework, 20% Three in class exams, 45%
Project 5% Final Exam 30%

Important Dates:

February 16, Last day to drop without possible academic penalty

March 14-22 Spring Break

March 30, Last day to drop with dean's approval

May 8, Last day of class

Calculator Policy

Some of the homework and exam questions will require the use of a basic scientific calculator. No graphing calculators or calculators with text capable memories will be allowed. On exams, you must show all of your work. A calculator should only be used to compute approximate or exact values where appropriate. Also to use a calculator on the exam, you must have it approved by me at least a day prior to that exam. The co-op has several acceptable calculators including the TI 30Xa, TI 30X IIS, and the TI 36X.

If I feel that calculators are inhibiting students' mastery of the course material, I reserve the right to prohibit the use of calculators on exams. In this case, the exams not require the use of a calculator.

Attendance Policy

You are expected to attend class and the working sessions. Attendance will be taken at every meeting. Students who have strong attendance (better than 95%) will be considered favorably if they find themselves on the verge of a better grade (within 1.5 points). Students without strong attendance

WILL NOT be afforded such opportunities, so a 90.0-100.0% is an A an 80.0-89.9% is a B and so on.

Homework Policy

Homework will be assigned and collected on Mondays, Wednesdays and Fridays. Your homeworks are expected to be neatly written and presented with clear logic. They should be stapled. It is not expected that you turn in your first draft to be graded. You should rewrite and edit your work so that you turn in something you are proud of.

There will also be a computer component of the homework. More information on this component will be provided in the second week of class.

Students with Disabilities

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471- 6259, 471-6441 TTY.

Please let me know as soon as possible if you require special accommodations for class, homework, or exams.

Cell Phones, laptops and Ipods

Turn your cell phones and ipods off in class and review session. Laptops do more harm then good in math classes so do not have them out either.

Project

Functions describe the world. Mathematical functions can be created to observe natural phenomena e.g. $F = m \cdot a$ or to convey more subjective criteria e.g. your grade point average. The purpose of the project component of this course is to explore some functions that describe subjective criteria by writing a 2-3 page explanation for about a specific function. The project will be to take a function with several variables that models or measures some behavior and explain in depth some properties of this function. More information and constraints about this project will be provided after spring break.

Exam Dates

- Exam 1: Feb 13
- Exam 2: Mar 13
- Exam 3:
- Final Exam: To be determined by the Registrar

Tentative Course Schedule

Weeks 1 and 2: Algebra Review and Sections 2.1-2.5

Week 3: Sections 3.1 and 3.3

Week 4: Section 4.1 and Test I

Week 5: Sections 4.2, 4.3, 4.4

Week 6: Sections 5.1-5.3

Week 7: Sections 5.4-5.5

Week 8: Sections 5.6 and Test II

Week 9: Sections 6.1-6.2

Week 10: 6.3 - 6.4

Week 11: 6.5-7.1

Week 12: 7.2-7.3

Week 13: 7.4-7.5

Week 14: Test III and Projects Due, 8.1

Week 15: 8.2, Review

More up to date information will be recorded on my website throughout the semester.