

Math 1111 College Algebra Spring 2006

Instructor: Dr. Tim Howard
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Course web: <http://math.colstate.edu/thoward/Math1111/>
MyMathLab: <http://www.coursecompass.com>
Course ID: howard70175 (necessary to access my course in MyMathLab)
Office Hours: MW 11:00 – noon and by appointment. Drop-ins are also welcome when my office door is open.

Required Text: *Algebra & Trigonometry, Seventh Edition*, by Michael Sullivan, with MyMathLab (MML) student access kit, Prentice Hall, 2005. ISBN 0131517376 for book and MML access kit bundled together or ISBN 013147894X for only the MML access kit (includes online text).

Computer Access. To utilize MyMathLab for homework completion, you must have access to a computer with a Windows operating system and a supported version of Microsoft Internet Explorer. Requirements include the following:

- Windows 98, 2000, ME, NT, XP
- Internet Explorer versions 5.5 through 6.0
- Internet connection
- At least 64 MB of RAM
- Capacity to install the plug-ins and players available for download through the MyMathLab Installation Wizard.

Course Description: This course is a functional approach to algebra that incorporates the use of appropriate technology. Emphasis will be placed on the study of functions, and their graphs, inequalities, and linear, quadratic, piece-wise defined, rational, polynomial, exponential, and logarithmic functions. Appropriate applications will be included.

Student Learning Outcomes

After successfully completing the course, the student will be able to do the following:

- Express relationships using the concept of a function and use verbal, numerical, graphical and symbolic means to analyze a function.
- Model situations from a variety of settings by using polynomial, exponential and logarithmic functions.
- Manipulate mathematical information, concepts, and thoughts in verbal, numeric, graphical and symbolic form while solving a variety of problems which involve polynomial, exponential or logarithmic functions.
- Apply a variety of problem-solving strategies, including verbal, algebraic, numerical, and graphical techniques, to solve multiple-step problems involving polynomial, exponential, logarithmic equations and inequalities and systems of linear equations.
- Shift among the verbal, numeric, graphical and symbolic modes in order to analyze functions.
- Use appropriate technology in the evaluation, analysis and synthesis of information in problem-solving situations.

Calculators

You are required to have a scientific calculator or a graphing calculator for this course. Some test problems will require a calculator. Since you will not be permitted to share a calculator with a class mate on test days and effective calculator use requires practice, you should acquire your own calculator in time to practice with it extensively.

I'll conduct classroom demonstrations using a TI-83 graphing calculator, but you may use others. Calculators with symbolic manipulation capabilities (such as the TI-89 and TI-92) are not permitted. If you have any questions about the suitability of a particular calculator, please feel free to discuss them with me -- but do so promptly so that you have an opportunity to learn and practice with your calculator far in advance of the first test.

The Mathematics Department does have some TI-83 calculators available for students to rent. For more information, visit the Math Office in room 222, Faculty Office Building.

Course Grade

Your course score will be based on a weighted average of your scores on homework problems, tests, and a comprehensive final exam. The relative weights are as follows:

Homework	15%
Tests	60%
Final exam	25%

The overall course score will be a number between 0 and 100. A letter grade will be assigned based on the following scale:

A	90 or above	D	60-70
B	80-90	F	below 60
C	70-80		

Test Dates: Jan. 27, Feb. 24, March 24, April 14

Final Exam

The final exam is a common exam given by the Mathematics Department. It will be comprehensive and is required of all students. Our exam period is scheduled for Thursday, May 4, at 8:00-10:00 a.m. If you have a conflict with the exam period, please notify me as soon as possible to see if alternative arrangements will be permitted. Ordinarily, this should be arranged by the end of the second week of class. Copies of previous exams can be found on the web at <http://math.colstate.edu/SampleExams/sampleExams.htm> or through a link on my course website.

Substitution of the Final Exam Score

If it works to the student's advantage and if the student has completed all tests, I will replace the lowest test score or the homework score with the score from the final exam.

Attendance and Make-up Policy

Attendance is not a formal part of the course grade, but it is expected and important. Your attendance and participation might be required for some forms of financial aid. Students who miss class meetings are responsible for all information covered and all assignments given. Make-up tests will not be given under any circumstances (nor will early tests be given); if a student is absent on a test day, the score from the final exam will be substituted for the missing test score. A 1-point bonus will be awarded to each student who has a perfect attendance record at the end of the semester.

Cheating and Plagiarism

Cheating is a serious offense and will not be tolerated. You are expected to complete your own work for the homework assignments submitted in MyMathLab for a grade, although you are free to seek assistance with similar problems before submitting your homework problems. Any student found cheating will be subject to disciplinary action. Penalties for academic dishonesty might include the assignment of an "F" for the course grade and/or other administrative penalties consistent with the policies of the university.

Respectful Conduct

All students are expected to conduct themselves in a dignified and considerate manner. Students who disrupt the class might be barred from attendance. Appropriate behavior includes arriving in the room before class is scheduled to start, silencing pagers and cell phones during class time, remaining for the entire class period, and refraining from private conversations during class time.

Retention of Graded Papers

Students' papers and final exams will be archived until the midpoint of the next semester. At that time, any papers not picked up by the student will be discarded.

Students with Disabilities: If you have a documented disability as described by the Rehabilitation Act of 1973 (P.L. 933-112 Section 504) and Americans with Disabilities Act (ADA) and would like to request academic and/or physical accommodations, please contact Joy Norman at the Office of Disability Services in the Center for Academic Support and Student Retention, Tucker Hall (phone 706-568-2330) as soon as possible. Course requirements will not be waived, but reasonable accommodations may be provided as appropriate.

Text Sections Covered

3.1 Functions	4.6 The real zeros of a polynomial function
3.2 The Graph of a function	4.7 Complex zeros: Fundamental Theorem of Alg.
3.3 Properties of functions	5.1 Composite functions
3.4 Lib. of functions; piecewise-defined functions	5.2 Inverse functions
3.5 Graphing techniques: Transformations	5.3 Exponential functions
3.6 Mathematical models: constructing functions	5.4 Logarithmic functions
4.1 Quadratic functions and models	5.5 Properties of logarithms
4.2 Polynomial functions	5.6 Logarithmic & exponential equations
4.3 Rational functions I	5.7 Compound interest
4.4 Rational functions II	5.8 Exp. Growth/decay; Newton's Law of Cooling
4.5 Polynomial and rational inequalities	11.1 Sys. Of Lin. Eq.: Substitution & Elimination