

MATH 1101 – Elementary Mathematical Modeling
University of Georgia, Fall 2009

Syllabus

Instructor

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Office: 320 Boyd Graduate Research Center
Office Hours: (provisional) Monday and Wednesday 2:15p - 3:15p

Course Description

This course is an introduction to mathematical modeling based on the use of elementary functions to describe and explore real-world data and phenomena. Graphical, numerical, symbolic, and verbal approaches to the investigation of data, functions, equations, and models will be covered. Emphasis will be put on applications and the ability to construct useful mathematical models, to analyze them critically, and to communicate quantitative concepts effectively. *The course is not meant to prepare students for Math 1113 (Precalculus).*

Web Page

Information about the course can be found on ELC ¹. The syllabus, handouts, homework assignments, project files, and a course calendar may be found there. I will use ELC to send occasional emails to you about the course, so please check your inbox regularly.

Textbook and Technology Requirements

1. **Textbook:** *Elementary Mathematical Modeling: Functions and Graphs* by Mary Ellen Davis and Henry C. Edwards, Prentice Hall 2007.
2. **Calculator:** Texas Instruments Graphing Calculator TI-83 / TI-84. While one can complete the course with a TI-82, TI-85, or TI-86, it is not recommended. You cannot use a TI-81 for this course. **Students are expected to have their calculators with them during each class.**
3. **Software:** At several points in the course we will use spreadsheet software to explore functions, data, and modeling. Some basic familiarity with a spreadsheet program (like Excel, or OpenOffice) will be helpful, but is not strictly required. All of the campus computer labs have Excel available for students to use.

¹<https://www.elc.uga.edu/>

Details

Lectures The lecture period for this course will meet MWF 1:25p - 2:15p in room 328, Boyd Graduate Research Center.

Homework Homework will be assigned each week. It will be completed using the online homework system: **WebWork**. You will need access to a computer to complete the homework. The online homework system immediately tells you whether or not you have completed a problem correctly and you get to try each problem an unlimited number of times.

Quizzes There will be an occasional in-class quiz or group activity which will count towards your homework grade. These assignments must be completed in-class. There are no make-ups.

Project There will be a semester project which involves population modeling. The project will involve creating an Excel spreadsheet and writing a summary about the use of mathematical modeling in this problem. The project is worth 10% of your course grade.

Exams There will be four midterm exams and a final exam which is comprehensive. Students are required to have their calculators for each exam. Make-up exams will only be given for university approved absences and **must** be scheduled in advance. Documentation for exam absences is required.

Exam Dates Exam 1: Mon. 9/14, Exam 2: Fri. 10/9, Exam 3: Fri. 11/6, Exam 4: Fri. 12/4
Final Exam: Wed. 12/16, 12:00 - 3:00 pm

Grades Grades will be available throughout the semester on ELC. The course grade is based on the following scheme:

Grading Scheme		Letter Grades	
Exams 1 – 4	50 %	100% - 90%	= A,
Final Exam	30 %	89% - 80%	= B,
Homework	10 %	79% - 70%	= C,
Project	10 %	69% - 60%	= D,
		59% or less	= F.

Honor Code All academic work must meet the standards contained in “A Culture of Honesty”. Students are responsible for informing themselves about those standards before performing any academic work. See [Academic Honesty Link] ².

You are encouraged to work together on the homework assignments, but copying in any form or submitting work done by others with your name on it is a violation of the Honor Code. It is my responsibility to uphold the University’s academic honesty policy and report my belief of dishonesty to the Office of Vice President for Instruction.

Attendance Students are expected to attend classes regularly. A student who incurs an excessive number of absences may be withdrawn from the class at the discretion of the professor [Attendance Link]³. In this class, I interpret “excessive” to mean **four** or more unexcused absences.

Withdrawal A student withdrawing after the first exam will receive a WF unless he/she has a marginally passing (D) average in the class (taking into account homework grades, exams, and attendance). Students withdrawing before the first exam will receive a WP.

²<http://www.uga.edu/honesty/>

³<http://bulletin.uga.edu/bulletin/ind/attendance.html>