

Course Syllabus

Course: Mathematics 0824.004.

Course Title: Mathematical Patterns.

Time: 2:40-4:30 PM Tuesday and Thursday.

Place: Beury Hall 166.

Instructor: Hill, David R.

Instructor Office: 512 Wachman Hall.

Instructor Email: david.hill@temple.edu

Instructor Phone: 215-204-1654.

Course Web Page: <http://astro.temple.edu/~dhill001/course/GENED/genedspring2009.html>

Office Hours: Mon: 9:30-12, Tues and Thurs. 9:30 - 12:00.

Prerequisites: Algebra I, II.

Textbook: Essentials of College Algebra with Modeling and Visualization (third edition), by G. Rockswold, published by Pearson (Addison Wesley) The text is available in several forms: Traditional hardbound textbook with MyMathLab: ISBN 0321490827 Unbound textbook with MyMathLab: 032158936X Stand-Alone MyMathLab Access Code: ISBN: 032119991X (This includes access to the online edition of the text.) Or purchase online at <http://www.coursecompass.com> You can find the text at the campus bookstore and at Zavelle's Bookstore 1520 N. Broad St. To register in MyMathLab you will need a course code supplied by the instructor.

Course Goals: Explore the use of elementary algebra in developing mathematical models of real world phenomena and data employing both calculators and computing. Connections between algebra and visualization using computer software will be utilized to develop a tool kit of models for applicability beyond the course. Understand quantitative models that describe real world phenomena and recognize limitations of those models; Perform simple mathematical computations associated with a quantitative model and make conclusions based on the results; Recognize, use, and appreciate mathematical thinking for solving problems that are part of everyday life; Understand the various sources of uncertainty and error in empirical data; Retrieve, organize, and analyze data associated with a quantitative model; and Communicate logical arguments and their conclusions.

Topics Covered: This is an algebra based course in which we will explore elementary models. Mathematical techniques will involve lines, parabolas, exponential functions, and systems of equations. Activities include constructing and interpreting graphs and mathematical models of data related to physical situations, financial information, sports, and a variety of topics that occur in newspaper articles, puzzles, and everyday experiences.

Course Grading: Grading will consist of three parts: Homework (50%), Quizzes (20%), and Exams (30%). (See below for further information on homework, quizzes and exams.).

Exam Dates: There will be 2 in class exams plus the final. (Dates will be announced.).

Attendance Policy: Attendance is required.

Calculator: You will need a scientific calculator, preferably a graphics calculator. Bring it to class.

Course management system: The course will also employ a course management system MyMathLab. A subscription to MyMathLab will be included when you purchase the text book for the course. The text (with subscription to MyMathLab) will be available in the bookstore or items may be purchased online. In order to register in MyMathLab you will need a course code which will be supplied the first day of class.

Use of computing: You will also be expected to use various pieces of software some of which will be available on the web and others that will be available through the Temple Tech Center, and the Math/Science Resource Center. (No computer programming will be involved, rather you will be expected to become an informed efficient user of the software accompanying the course.)

Homework & Quizzes: Homework and quizzes will be given in class and in the course management system. Items in the course management system will automatically be scored. There will be due dates imposed on work in the course management system.

In class exams: Two in-class tests and the final will be given.

Make ups: NO make up for homework, quizzes or exams will be given.

Resources for help: Math and Science Resource Center (1810 Liacouras Walk Room 208), classroom assistants, and Dr. Hill.

Classroom Assistants (CAs): This course has a number of classroom assistants. They will be available for general help on the math, using the software, and with the course management system MyMathLab. The CAs can help you with general questions but not with specific homework or quiz questions.

Final Exam: Wednesday May 13, 2-4 PM; room to be announced.

Any student who has a need for accommodation based on the impact of a disability should contact me privately to discuss the specific situation as soon as possible. Contact Disability Resources and Services at (215) 204-1280, 100 Ritter Annex, to coordinate reasonable accommodations for students with documented disabilities.

Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy # 03.70.02) which can be accessed at <http://policies.temple.edu>.

Students will be charged for a course unless a withdrawal form is processed by a registration office of the University by the Drop/Add deadline date given below. For this semester, the crucial dates are as follows:

During the first two weeks of the fall or spring semester or summer sessions, students may withdraw from a course with no record of the class appearing on the transcript. In weeks three through nine of the fall or spring semester, or during weeks three and four of summer sessions, the student may withdraw with the advisor's permission. The course will be recorded on the transcript with the instructor's notation of "W," indicating that the student withdrew. After week nine of the fall or spring semester, or week four of summer sessions, students may not withdraw from courses. No student may withdraw from more than five courses during the duration of his/her studies to earn a bachelor's degree. A student may not withdraw from the same course more than once. *Students who miss the final exam and do not make alternative arrangements before the grades are turned in will be graded F.*

The grade I (an "incomplete") is reserved for extreme circumstances. It is necessary to have completed almost all of the course with a passing average and to file an *incomplete contract* specifying what is left for you to do. To be eligible for an I grade you need a good reason and you should have missed not more than 25% of the first nine weeks of classes. If approved by the Mathematics Department chair and the CST Dean's office, the incomplete contract must include a default grade that will be used in case the I grade is not resolved within 12 months.