

Math 0824.004 Mathematical Patterns (4 s.h.) CRN 089296
FULFILLS GENERAL EDUCATION QUANT. LITERACY REQ OR CORE 'QB' REQUIREMENT
Beury Hall 166, 2:40-4:30 PM Tuesday and Thursday

Instructor: Dr. David R. Hill, Mathematics Department, 512 Wachman Hall, Phone: 215-204-1654,
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Office Hours: Mon: 9:30 -12:00, Tues and Thurs. 9:30 – 12:00

Prerequisites: Algebra I , II

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;
 - Communicate logical arguments and their conclusions.

Description: This is an **algebra based course** in which we will explore elementary models. Mathematical techniques will involve lines, parabolas, polynomials, 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.

- You will need a **scientific calculator**; a graphics calculator which can do regression is HIGHLY recommended. **BRING IT TO CLASS!**
- 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 Temple's Tech Center or 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.)

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.

TEXT: Essentials of College Algebra with Modeling and Visualization (third edition),
by G. Rockswold, published by Pearson (Addison Wesley)

- 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>

When you register in MyMathLab the course code is hill97026.

Grading: Course grade consists of 3 parts: Homework 50%, Quizzes 20%, Exams 30%. The course letter grade will be determined on the following percentage scale: A (100-92), A- (91-90), B+ (89-88), B (87-82), B- (81-80), C+ (79-78), C (77-72), C- (71-70), D+ (69-68), D(67-62), D- (61-60), F (below 60). **General education courses require a C- or better.**

Homework & Quizzes: Some homework and quizzes will be given using the course management system and will automatically be scored. **There will be due dates imposed. In addition there will be class assigned homework and in-class quizzes.**

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

Make ups: **NO make ups for homework, quizzes or exams.**

Attendance Policy: Attendance is required. Roll will be taken.

Resources for help: Math and Science Resource Center (1810 Liacouras Walk Room 208), classroom assistants (CAs), 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 questions about text material & exercises, BUT NOT WITH INDIVIDUAL HOMEWORK OR QUIZ QUESTIONS.**

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:

- The first day of classes is Tuesday, January 20, 2009.
- **The last day to drop/add (tuition refund available) is Monday, February 2.**
- Spring recess: starts Monday March 9 , classes resume Monday March 16
- **The last day to withdraw (no refund) is Monday, March 30.**
- The last day of classes is Monday, May 4.
- **The FINAL EXAM is Wednesday May 13 from 2-4PM. (Room to be announced.)**

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.