

Math 1301 Elementary Mathematical Modeling
Section 003 MWF 9:00-9:50
PKH 110
Syllabus

Instructor: Mr. Andrew Cavaness
Office Number: 404 Pickard Hall
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Office Hours: MW 8:00-9:00, 9:50-10:50, or by appointment

Required Course Materials:

Textbook: 1301 Handbook; Blackwell and Godeken; This is a custom printing and only available at local bookstores selling textbooks

The student must bring their graphing calculator to each class.

OPTIONAL Textbook: Elementary Mathematical Modeling Charts and Graphs (Second Edition); Davis and Edwards. ISBN 0-13-145035-2

Course Prerequisite: Math Placement Test Score of 11 or higher.

Description of Course Content:

Descriptive statistics, relationships between variables, interpretation of data and graphs, rudiments of probability, elementary statistical models, hypothesis testing, inference, and estimation.

Student Learning Outcomes

This course was developed to help liberal arts majors develop the reasoning, modeling, and problem solving skills necessary for success in the liberal arts. This course is **NOT** a traditional algebra course. Rather, it will be problem driven: the majority of the student time and effort will be spent on formulating (i.e. modeling) and solving word problems. Algebra at the level of traditional college algebra will be taught, but the course will ask students to apply it in solving word problems. Students may be asked to explain, in writing, their reasoning and steps in problem solving. The course will not follow the traditional lecture format. After introducing basic algebraic skills, students will be set to work solving problems in small groups, with the instructor acting as facilitator. All grading will be on an individual basis.

- Students will learn how to create basic mathematical models (linear, quadratic, and exponential)
- Given specific information, students will use basic algebraic principles to mold the mathematical model to fit the scenario.
- Students will enrich their basic algebraic knowledge by utilizing the mathematical model to solve real world problems.

If you feel that you are struggling, please see me in my office for advice or guidance.

Grade Components:

Group Quizzes	10%
Exams (6)	60%
Final Exam	30%

MAY 4, 9:00-11:30 PM**Midterm Dates:**

Jan. 28, Feb. 8, Feb. 27, Mar. 22, Apr. 10, Apr. 26

Grading Scale: 100-90 A; 90-80 B; 80-70 C; 70-60 D; <60 F

Note that each midterm date is tentative and subject to change (although the final exam date and time is not subject to change).

There will be no sharing of calculators or any use of cell phone calculators during any class period. You must show all work to receive full credit on each graded assignment

Make-up Policy:

No test or quiz make-ups will be allowed.

Classroom Expectations:

Show your work! If your work is not present, then you will receive at most one point for any answers. **There will be a considerable amount of group work in this class. Groups will change on a regular basis. All students are required to work in their assigned group. Students not participating in groups will be dismissed from class and receive a zero for that group assignment.**

All students are expected to attend every class and come prepared. Preparation should include bringing your textbook and other materials to class in addition to reading the corresponding chapter before attending. Also, please ask questions! You can ask before, after, or during class, but you can also reach me during my office hours and via email. Preparation also includes completing the assigned practice problems immediately following coverage of the corresponding material since you will see similar problems on quizzes and exams. (Remember: You should be dedicating a minimum of 10 hours outside of class each week for course-related activities --- e. g. reading the textbook, studying for quizzes/exams, practicing related problems).

Students must arrive to class on time and remain in class until dismissed. Arriving late and leaving early cause disruption to the other students and the instructor. If you are late for class, enter, take your seat quietly, and **after class**, ask a classmate or see me for what you missed. Should you need to leave early for a valid reason, please notify me in advance. Students leaving early may receive a zero on the previous quiz.

All students are expected to treat everyone in class with respect and consideration. Appropriate classroom conduct includes, but is not limited to the following points: Take off headphones and sunglasses. Turn off your radios and cell phones. Be sure that the alarm on your watch or phone is not set to go off during the class period. Do not begin packing up your class material until the period is completely over. **DO NOT USE CELL PHONES.** If a student violates any of these guidelines, then I will ask them to leave the classroom. If a student causes a disruption, then he may forfeit his previous quiz (this includes

leaving class early without early without prior notification).

The University reserves the right to impose disciplinary action for an infraction of University policies. For example, engagement in conduct, alone or with others, intended to obstruct, disrupt, or interfere with, or which in fact obstructs, disrupts, or interferes with, any function or activity sponsored, authorized by or participated in by the University

You can expect quizzes and challenging exams that apply the knowledge you have learned. Questions on the test may not be worded exactly as you see them in the book, but they are designed to make sure you understand what you are doing rather than regurgitating a problem with different numbers from your notes. Exams will cover theoretical concepts as well as contain problem-solving activities. Questions over theoretical concepts may be true/false or multiple-choice. Questions involving mathematical may be multiple choice or “show your work” style questions. Also note that extra credit is generally not given. If I decide to give extra credit, it is typically in the form of an unannounced quiz. Please do not ask for individual extra credit opportunities

Drop Policy: See university drop policy.

Americans with Disabilities Act:

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112- The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

Academic Integrity:

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. “Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.” (Regents Rules and Regulations, Part One, Chapter IV, Section 3, Subsection 3.2, Subdivision 3.22)

Student Support Services:

The Math Clinic (314 PKH) is available to you seven days a week (Summer hours may be different) at no additional cost. The SOAR program (132 Hammond Hall) provides tutors on a cost-share basis. The Science Education and Career Center (106 Life Sciences) has tapes and other material pertinent to the course. The Math Department maintains a list of people, primarily graduate students, who are available for hire.

E-Communication:

E-mail is a prime means for communication. Therefore, the University has the right to send communications to students via e-mail and the right to expect that those communications

will be received and read in a timely fashion. The Office of Information Technology (OIT) will assign all students an official University e-mail address. It is to this official address that the University will send e-mail communications. Students are expected to check their official e-mail account on a frequent and consistent basis to stay current with University communications. The University recommends checking e-mail daily; in recognition that certain communications may be time-critical.

(<http://www.uta.edu/catalog/general/academicreg>)

Final Review Week:

There will be no assessment items worth more than 10% of the students grades given during this week; although, new material may be covered during this period.

Course Schedule:

January 14	Classes start
January 21	Martin Luther King Jr. holiday
January 30	Census Date
March 11-15	Spring Break
March 29	Last Day to Drop
April 29-May 3	Dead Week
May 3	Last day of classes
May 4	Departmental Final Exam (Saturday)