MA 104 COLLEGE ALGEBRA
with Applications in Science & Technology

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Office hours:
3:00 M W Th F

By Appointment:
12:30, 5:00 M W Th F

Prerequisites:

MA 100 Intermediate Algebra, or recommendation of Math Placement Exam

Text:

Functions and Change: A Modeling Approach to College Algebra, 2nd Edition, Crauder, Evans and Noell.

Computers and Calculators:

We will make use of technology to model real-world situations and come up with solutions to problems. This will often make use of graphs,tables,and formulas that we will have the computer, or graphing calculator, construct for us.

You will need either

- a Laptop Computer, with *TI-Interactive* software (similar to a TI-83 calculator), *or*
- a Graphing Calculator with function tables (a TI-83 Plus or TI-83 is a good choice, especially if you will be taking a statistics course later; some other suitable calculators are TI-86, TI-89, TI-92).

The university will provide TI-Interactive for university owned laptops.

If you are using a laptop computer, you may find useful to also have a calculator handy for quick routine calculations. An inexpensive non-graphing "scientific" calculator will do for this.

We will use Laptop Computers and / or Graphing Calculators fairly often in class.

General Information:

In this course we will use Mathematical Modeling to solve applied problems. Modeling methods such as Scatter Plots, Finite Differences, Least Squares Curve Fitting, Linearization (Curve Straightening) will be used to find a suitable Mathematical Function (Linear, Polynomial, Exponential, Logarithmic, etc.) to fit the data in a problem.

We will often work in small groups in class to collect and analyze data. Sometimes we will use data collecting devices such as motion detectors and temperature probes that can be linked directly to a computer or calculator.

The will be several "hour-exams" and a final exam, as well as quizzes to see how things are going. There will also be some assignments to hand in. Some of these will be done in small groups and some will be done individually.

Alternate Courses:

The math department offers three somewhat similar courses, all with MA 100 as prerequisite.

MA 105 COLLEGE ALGEBRA FOR CALCULUS PREPARATION: This is intended for students intending to take the standard calculus sequence. Compared to MA 104, there is more emphasis on algebraic concepts and perhaps a bit less on applications. The pace is fairly rigorous to be sure to cover all the material that will be needed for Pre-Calculus and Calculus courses.

MA 104 COLLEGE ALGEBRA WITH APPLICATIONS IN SCIENCE AND TECHNOLOGY: This is intended for those who do not intend to take the standard calculus sequence (but may take the one semester calculus-for-applications course), and need college algebra for their major (usually in science or technology). The course is applications-oriented, with a number of applications geared toward those interested in science and technology. Compared to MA 105, there is a bit more flexibility; the pace and topics covered can be modified to suit the needs of the students in the class.

MA 103 FINITE MATHEMATICS : This is also intended for students who do not intend to take the standard calculus sequence. It is also applications oriented, with applications often coming from business and the natural & social sciences.

If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Disability Services Office at 1104 University Center: 227-1737 (TTY 227-1543). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.