

SYLLABUS: Math 104

DON FAUST

**College Algebra with Applications
in Science and Technology**

In this course we will get familiar with a broad spectrum of fundamental mathematical systems and techniques, each of which occurs often in the wide variety of mathematical attacks which have so far been invented for addressing problems.

Many of these systems and techniques will be very helpful to you as you proceed further with your studies, whether in mathematics itself or in any of the many areas of science and technology where mathematics is fruitfully applied. Building on your previous mastery of the fundamentals of the tools of mathematics, we will both extend those tools and particularly focus on applications of these tools in science and technology.

More generally, the following broad perspective may be helpful to you. The fundamental tools of mathematics provide a rich storehouse of models for the representation and solution of many problems. Making intelligent use of these models involves both (1) developing a facility for analyzing problems and casting them in ways which, where appropriate, make good use of these models of mathematics, and (2) developing a facility for working with these models themselves. Our course will take us through a representative sample of these tools of mathematics, and will concentrate on both aspects (1) and (2) delineated above. It can be a very exciting journey (if your involvement is sincere and includes both good class attendance and a parallel daily commitment to hammering things out on your own through daily study and problem-solving), at the end of which you will find not only that your mathematical maturity has been substantially enriched, but also that the general analytical skills you bring to bear in the broader arena of your daily life will be substantially enriched as well.

Text:

Functions and Change: a modeling alternative to college algebra

by Crauder

Evaluation:

Firstly, in addition to ungraded daily assignments, there will be a sequence of graded SUBMITTED ASSIGNMENTS which can be resubmitted repeatedly until satisfactory.

Secondly, there will be four mid-semester exams and a final exam. Only very exceptional circumstances could justify missing an exam; in these rare cases, permission must be requested in advance, and a make-up exam (usually oral) will be arranged for later in the semester.

The evaluation framework is as follows (please note especially the dates, already fixed, when the four mid-semester exams will take place):

Exam 1:	Wed	13 Feb	150 points
Exam 2:	Wed	13 Mar	150 points
Exam 3:	Wed	3 Apr	150 points
Exam 4:	Wed	17 Apr	150 points

Final Exam: 350 points

Submitted Assignments:

to be submitted en masse on
Fri 19 Apr for grade recording 50 points

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Total: 1000 points

Grading:

90-100%, A; 80-89%, B; 70-79%, C; 60-69%, D; 0-59%, F. The grading may be less stringent, but not more stringent, than this.

Note regarding special needs:

If you have a need for any disability-related accommodations or services, please inform the Coordinator of Disability Services Office in 1104 University Center (227-1737). 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.