Cornell University
Mathematics 105-Finite Mathematics for the Life and Social Sciences

Section: 04
Lecture: MWF 1:25–2:15 p.m. in Malott Hall, room 203.

Instructor: Michael Kozdron
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Email: kozdron@math.cornell.edu
Home Page: `http://www.math.cornell.edu/~kozdron/Teaching/Cornell/105Fall03/`
Office Hours: M 12:15–1:15 p.m., Th 11:30 a.m.–12:30 p.m., or by appointment

Required Texts:

- Margaret L. Lial, Raymond N. Greenwell, Nathan P. Richey, *Finite Mathematics*, 7th edition, Addison-Wesley 2002.

Optional Materials:

- Margaret L. Lial, Raymond N. Greenwell, Nathan P. Richey, *Student Solution Manual for Finite Mathematics*, 7th edition, Addison-Wesley 2002.
- Calculator

Course Description:
3 credits. This course is an introduction to linear algebra, probability, and Markov chains which develops the parts of the theory most relevant for applications. Specific topics include: equations of lines, the method of least squares, solutions of linear systems, matrices; basic concepts of probability, permutations, combinations, binomial distribution, mean and variance, and the normal approximation to the binomial. Examples from biology and the social sciences are used.

Prerequisites:
3 years of high school mathematics, including trigonometry and logarithms.

General Policies:
The policies listed on this page supplement the general Math 105 policies as detailed on the Math 105 website. It is expected that all students have carefully read this information.

Grading Information:
Your final grade will be determined by your performance in the course, including homework, office visits, prelims, and the final exam.

Evaluation Type	Number	Percentage of Final Grade
Homework	12	10%
Office Visits	2	0%
Prelim Exams	3	60%
Final Exam	1	30%

Homework:
As discussed on the *Words of Wisdom* handout, it is not possible to cover all of the required material in lecture. As a result, each student must take an active role in his or her own education. Mathematics is not a spectator sport. It cannot be learned passively only by watching the instructor lecture. Instead it must be learned by doing. Consequently, most of what you learn in this course will be the result of working exercises that are designed to reinforce key concepts, develop skills, and test your understanding of the material. Before you try working the exercises, however, do the reading assignment. Reading the text will help you review the important concepts before you start on the exercises. Some of the exercises are straightforward, others are very complex. After each class meeting, you should work all problems assigned from the section discussed that class. Assignments will take on the average 6–10 hours. You are encouraged to talk with your classmates about the homework; you might even want to form a study group to work together on the most difficult homework problems. However, all problems you submit must be your own work. ***It is dishonest, and a violation of Cornell's Code of Academic Integrity, to submit someone else's work as your own.***

Office Visits:
Each student is required to schedule an appointment with me once before Fall break and once after Fall break to discuss the course and your progress.

Prelim Exams:
There will be three major term tests, known at Cornell as Prelim Exams, that will be given during the semester. All students in all sections of Math 105 write common prelims, which are jointly written by the Math 105 instructors. All prelims will be closed-book, and graphing calculators will be allowed. Each prelim will be a comprehensive test of all of the material covered on the syllabus before that prelim, including lectures, assigned readings, and homework assignments.

Final Exam:
All students in Math 105 write a common final exam which is written in committee by all the instructors for this course. As with the prelims, the final exam will be closed book and graphing calculators will be allowed. The final exam will be comprehensive and cover all of the material listed on the syllabus.

Exam Dates:
The locations of the prelims will be announced in class, and the location of the final exam will be determined by the Registrar near the end of the term.

- Prelim 1: **Tuesday, September 30, 2003, 7:30–9:00 p.m.**
- Prelim 2: **Thursday, October 30, 2003, 7:30–9:00 p.m.**
- Prelim 3: **Thursday, November 20, 2003, 7:30–9:00 p.m.**
- Final Exam: **Thursday, December 11, 2003 9:00–11:30 a.m.**

It is possible that these dates may include Religious Holidays for some students. NYS Education Law section 224-A mandates that faculty make available an opportunity to make up any examination missed because of religious beliefs. In order to facilitate preparation of makeup exams, it is requested that students intending to be absent in order to observe a religious holiday notify the instructor by September 5, 2003.

Policy for Missed Classes, Missed Prelims, and Missed Final Exam:
Students should familiarize themselves with the section on Class Attendance, Meeting Times, and Examinations on pages 13–15 of *2003–2004 Courses of Study*.

Web Site:
I have written a web site for this section. The URL is

`http://www.math.cornell.edu/~kozdron/Teaching/Cornell/105Fall03/`.

I will be updating this site throughout the term and you will be able to download any handouts that you don't get in class. There is also a Math 105 course web page which contains information useful for all students taking this course. That URL is

`http://www.math.cornell.edu/~web105`.

Email:
Email will be a significant form of course related communication between both students and the instructor. Therefore, please check your email regularly for course updates and homework/prelim information. Feel free to email your questions to me. I will endeavour to respond within 24 hours. Should you not receive a reply within 24 hours, try sending the message again, or ask me in person if I received your mail.

Extra Help:
There is a 1 credit companion course to Math 105 offered by the Cornell Center for Teaching and Learning which is designated Math 005. For more information, please consult

`http://www.math.cornell.edu/~web105`

and click on the Courseinfo link. The Mathematics Department also runs the Math Support Center located in 256 Malott Hall which provides free tutoring throughout the week.

Academic Integrity:
For a university community of scholars, academic integrity is the heart of intellectual life—both in learning and in research, to paraphrase the section on Academic Integrity in Arts and Sciences on page 424 of *2003–2004 Courses of Study*. Students should read carefully Cornell's Code of Academic Integrity and not assume they understand what integrity and cheating are and are not. Academic integrity most certainly implies more at the university than it did in high school. The standards of integrity are those that prevail in professional life. Students must acknowledge and cite ideas they adopt from others (not just direct quotations), and understand the general standards and policies of academic integrity, as well as specific expectations in individual courses. When in doubt, ask!

Therefore, students are expected to abide by Cornell University policies, including the campus Code of Conduct and the Code of Academic Integrity, as described in the *Policy Notebook*, and should pay particular attention to §I.C of the Code of Academic Integrity.