

MA 114

Introduction to Finite Mathematics with Applications

TuTh 8:30-9:45 SAS 2203

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Office Hours: TuTh 9:45-10:45 AM

MMC Hours: M 2:00-4:00PM

Course Description: 3 credit hours. Topics covered: Elementary matrix algebra including arithmetic operations, inverses, and systems of equations; introduction to linear programming including simplex method; sets and counting techniques, elementary probability including conditional probability; Markov chains; applications in the behavioral, managerial and biological sciences.

Learning Objectives: MA 114 will provide instruction and guidance to improve and refine mathematical problem-solving abilities and develop logical reasoning skills. Upon completion of this course, students should be comfortable applying the concepts and techniques listed above.

Prerequisite(s): MA 101 or equivalent completed in high school. This includes knowledge of high school algebra such as fractions, negative numbers and solving for variables. If students are uncomfortable with the material, they are responsible for finding the resources to help themselves (see below for some options).

Text: *Finite Mathematics and its Applications* by Goldstein, Schneider and Siegel.

Course Materials: In addition to obtaining the textbook, each student will need to submit 6 blue books (two are for the final exam) to me before the first test. **Do NOT write anything in or on the blue books.** Students who fail to submit 6 blue books will lose two points on a test for each blue book missing.

Attendance In accordance with university policy, attendance is mandatory and will be recorded daily. An absence includes: missing at least one half of the lecture, sleeping, doing work for another class or using an electronic device such as a laptop or cell phone. Students with **4 or fewer** absences will have their lowest test grade replaced by the grade they receive on the final exam, if it is to their advantage.

Course Grade: The final grade is based on collected homework (15%), four exams (60%) and the final exam (25%). According to NCSU policies, we will use the plus/minus grading system.

Homework Homework will be assigned weekly and posted on the course Moodle page (accessible through WolfWare). Homework will not be collected each week, though students should be prepared to hand it in on the due date. The homework grade will be determined by the assignments that are collected. Of these collected assignments, it is possible that only select problems will be graded. However, students will not be made aware of which problems are to be graded in advance. Therefore, students should complete all problems on all homework assignments.

Exams There will be four in-class midterm exams. The dates for these exams are **January 26, February 23, March 22, and April 12**. Each exam will be worth 15% of your final grade. You will be given a short review to assist in preparation for the exam.

Final The final exam will be on **Tuesday, May 3 at 8:00 AM** in the usual classroom. It will be cumulative. More information will be provided closer to the exam date.

Course Policies: The use of laptops, cell phones and other electronic devices is **not** permitted during class unless prior approval is given by the instructor. If a student misses a class session, it is the student's responsibility to get notes from a classmate or refer to the available online resources. Make up exams will be granted on an individual basis, depending on the circumstance. I will ask for supporting documentation for such excused absences, such as a doctor's note. The make up exam will be scheduled for a time that is convenient for the instructor, not necessarily the student.

Additional Resources: The following additional resources are available to students enrolled in MA 114 at NCSU:

Free tutoring is available through the department Multi Media Center on a drop-in basis. For more information, see <https://www.math.ncsu.edu/mmc/tutoring.php>

Previously recorded MA 114 lectures can be found at <http://ma114online.blogspot.com> **Please note that while these are a great supplemental tool, they are based on a different book than we will be using for this course.**

Academic Integrity: Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct found at <http://policies.ncsu.edu/policy/pol-11-35-01>

Accommodations for Disabilities: Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must register with the Disability Services Office (<http://www.ncsu.edu/dso>), 919-515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation at <http://policies.ncsu.edu/regulation/reg-02-20-01>.

Non-Discrimination Policy: NC State University provides equality of opportunity in education and employment for all students and employees. Accordingly, NC State affirms its commitment to maintain a work environment for all employees and an academic environment for all students that is free from all forms of discrimination. Discrimination based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation is a violation of state and federal law and/or NC State University policy and will not be tolerated. Harassment of any person (either in the form of quid pro quo or creation of a hostile environment) based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation also is a violation of state and federal law and/or NC State University policy and will not be tolerated. Retaliation against any person who complains about discrimination is also prohibited. NC State's policies and regulations covering discrimination, harassment, and retaliation may be accessed at <http://policies.ncsu.edu/policy/pol-04-25-05> or http://www.ncsu.edu/equal_op/. Any person who feels that he or she has been the subject of prohibited discrimination, harassment, or retaliation should contact the Office for Equal Opportunity (OEO) at 919-515-3148.