Instructor: Dr. Bojko Bakalov, office SAS 3116, phone 513-7442, email bojko_bakalov@ncsu.edu

Course Webpage: http://www4.ncsu.edu/~bnbakalo/ma405.htm

Office Hours: MWF 12:30-1:20, in SAS 3116.

Tutoring is available for free in the Math Multimedia Center in SAS 2105 on a first-come, first-served basis. No appointment is necessary.

Course Description: This course offers a rigorous treatment of Linear Algebra, including systems of linear equations, matrices, determinants, abstract vector spaces, bases, linear independence, spanning sets, linear transformations, eigenvalues and eigenvectors, similarity, inner product spaces, orthogonality and orthogonal bases, factorization of matrices. Compared to MA 305, more emphasis is placed on theory and proofs.

Prerequisites: MA 241 is a required prerequisite. MA 225 is recommended as a prerequisite, and MA 341 is recommended as a corequisite. Credit is not allowed for both MA 305 and MA 405.


Homework will be assigned regularly. Selected problems will be collected and graded. A key to success in this course is doing as many of the homework problems as you can.

Tests: There will be three midterm tests and a cumulative final exam (on December 16, 1-4 pm). Calculators are not permitted on exams.

If you miss a test, I will need a letter documenting the reason. Makeup tests can only be given for reasons such as illness, family emergency, participation in a University-sponsored event, required court attendance or military duty, or religious observances as certified by the Department of Student Development. If you know you will be absent on a test date, you must clear the absence with me in advance and schedule a makeup date. In the case of an unanticipated absence on a test date, you must give me documentation and schedule a makeup date as soon as possible. Keep
the day and time of the final exam in mind when scheduling plane tickets or making other obligations as the university has strict policies on missing the final exam. See the University policies at http://policies.ncsu.edu/regulation/reg-02-20-03.

Grade will be determined from a raw score of the homework and test grades using the 10 point scale with +/- grading. The homework will count for 10% of the grade, each of the three midterm tests 20% and the final exam 30%. The best way to prepare for the exams is to do your homework and to take and study the practice tests.

Attendance: Students are expected to arrive on time, to contribute to group work and class discussions, and to stay until the class ends. Attendance at all meetings of the class is expected. Occasional absences will be approved if they meet University policies (see http://policies.ncsu.edu/regulation/reg-02-20-03).

Adverse Weather: Announcements regarding scheduled delays or the closing of the University due to adverse weather conditions will be broadcast on local radio and television stations and posted on the University homepage.

Cell Phones: Cellular phones and other types of telecommunication equipment are prohibited from use during class. Make sure that any phones or other equipment are turned off during the class period. If you have a special need to have your phone on during class, please notify the instructor.

Academic Integrity Statement: “Academic dishonesty is the giving, taking, or presenting of information or material by a student that unethically or fraudulently aids oneself or another on any work which is to be considered in the determination of a grade or the completion of academic requirements or the enhancement of that student’s record or academic career.” (NCSU Code of Student Conduct; see http://policies.ncsu.edu/policy/pol-11-35-01).

Statement for Students with Disabilities: Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Disabilities Services Office (see http://dso.dasa.ncsu.edu).

Class Evaluations: Online class evaluations will be available for students to complete during the last two weeks of class. Students will receive an email message directing them to a website where they can login using their Unity ID and complete evaluations. All evaluations are confidential; instructors will never know how any one student responded to any question, and students will never know the ratings for any particular instructors.