Math 437 – Applications of Algebra – Spring 2017

T, Th 10:15 - 11:30 am, SAS 2102

Instructor: Cynthia Vinzant

Office Hours: T 11:30am-12:30pm, W 1:30 - 2:30pm or by appointment

Office: SAS 3260

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Textbook: Klima-Sigmon-Stitzinger, *Applications of Abstract Algebra with Maple and MATLAB*, 3rd edition, Chapman & Hall/CRC, 2015

Course website: http://www4.ncsu.edu/~clvinzan/Math437.html

Prerequisites: MA 405 and either MA 403 or MA 407

Course Description: This course will present several applications of linear and abstract algebra to real-world problems. Topics include: error correcting codes and block designs; cryptography; Markov chains and ranking; additional topics as time permits.

Homework: Homework will be assigned roughly every week and due at the beginning of class on Thursday, unless explicitly stated otherwise. Late homework will not be accepted.

Final Project: A 3-5 page exposition of a topic related to an application of algebra (selected by the student subject to instructor approval) will be due on **May 4 at 11am**. Further details and suggested topics will be posted on the course website later in the semester.

Grades: Grades will be based on homework (80%) and the final project (20%), based on the following scale A: ($>$ 85%), B: (70-85%) C: (60-70%) D-F: ($<$60%).

Academic Integrity: Students are expected to follow the NC State code of student conduct, available at http://policies.ncsu.edu/policy/pol-11-35-01.

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 Disability Services for Students at 1900 Student Health Center, Campus Box 7509, 515-7653. More information on NC State's policy on working with students with disabilities is available at http://policies.ncsu.edu/regulation/reg-02-20-01.

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.