

Math 316-01, Applied Math and Modeling II, Spring 2016
MWF 12:15-1:20 pm, BEC LL07

Instructor: Amy DeCelles

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Office: OSS 203

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Tentative office hours: MWF 11-12, Tu 2-3, Th 4-5, and by appointment

Course Prerequisites: A grade of C- or above in MATH 210 and MATH 240, or permission of instructor.

Credits and Workload Expectations: 4 credits: 8-10 hours per week outside the classroom.

Textbook: *Making, Breaking Codes: An Introduction to Cryptology*, by Paul Garrett. See Garrett's website for errata: <http://www.math.umn.edu/~garrett/crypto/>.

Course Objectives:

- Gaining factual knowledge
- Learning fundamental principles, generalizations, and theories
- Learning to apply course material
- Developing skill in expressing myself orally or in writing

Homework: Homework will typically be assigned in a "rolling trio": reading assignments, discussion problems, and written problems. For example, for Wed Feb 10, you are to write up the solution to a problem from Section 1.3 (which we will have discussed already, in class Mon Feb 8), work on discussion problems for Section 1.4 (which we will discuss in class on Wed Feb 10), and read and answer questions on Section 1.5 (which we will discuss in class Fri Feb 12).

Late Work: Late work is typically not accepted. The lowest three scores in each assignment category will be dropped at the end of the semester. Extensions may be granted if requested before the due date, and work may certainly be submitted before the due date, if arrangements have been made with the professor in advance. If there is a serious, unforeseeable reason for missing more than three days of class, it is the student's responsibility to contact the professor as soon as possible and to make appointments with the professor and with Academic Counseling upon returning to classes to make a plan for making up missed work.

Missed Exams: Make-up midterm exams or quizzes may be given to students with legitimate excuses such as serious illness, university sponsored events, etc., as long as the make-up exam can be taken within a reasonable time frame. If it is not possible to schedule a make-up exam within a reasonable time frame, the grade for the midterm may be prorated from the final exam. Written documentation may be required. Rescheduling the final is not possible except under very extreme circumstances.

Final Course Grade: The overall score for this course will be computed as outlined below. Final letter grades will be assigned based on the overall score, with the two mastery components, written work and exams also being considered separately. In particular, the final letter grade will not be higher than one letter grade above the level of the work on written work or the work on exams. Exceptional performance on the final may also be taken into account.

- Homework, quizzes, and participation (45%): reading questions (5%), discussion problems (5%), quizzes (5%), written problems and oral presentations (30%)
- Midterm Exams (30%): tentatively scheduled for Feb 22, Mar 16, Apr 18
- Final Exam (20%): cumulative; 8:00 am - 10:00 am Fri May 20
- Best Exam (5%): at the end of the semester, your best exam score will count an extra 5%

Disability Accommodations: Academic accommodations will be provided for qualified students with documented disabilities including but not limited to mental health diagnoses, learning disabilities, Attention Deficit Disorder, chronic medical conditions, visual, mobility, and hearing disabilities. Students are invited to contact the Disability Resources office about accommodations early in the semester. Appointments can be made by calling 651-962-6315 or in person in Murray Herrick, room 110. For further information, you can locate the Disability Resources office on the web at <http://www.stthomas.edu/enhancementprog/>.