

Math467/Eleg467 Syllabus**Math467/Eleg467 Mathematics and Technology
University of Delaware**

Instructor Sebastian Cioaba, Ewing 506, cioaba@math.udel.edu

Lecture Times Tuesdays and Thursdays 3.30-4.45pm Sharp 105

Office Hours Tuesdays 10-11am and Wednesdays 10-11am.

Syllabus The plan is to learn the mathematics behind some recent technological advances such as GPS, Google PageRank, Error-Correcting Codes, Cryptography, Gamma Ray Surgery, Robots Motion etc. This is an experimental interdisciplinary course that is offered for the first time this year. The coursework will also include some small computing projects in Sage: <http://www.sagemath.org/>

Textbook Christiane Rousseau and Yvan St. Aubin, **Mathematics and Technology** Spring Undergraduate Texts in Mathematics and Technology 2010.

Grading

1. Homework (40% of the final grade). I will assign homework every 2-3 weeks.
2. Exams (30% of the final grade). There will be two exams that will take place during regular class time on Tuesday, March 24 and Tuesday, May 12.
3. Final Projects (20% of final grade). You will be grouped into teams of 4,5 students. You will choose one topic from a list given by me. You will write a short summary of your research on this topic (5 pages) in LaTeX and you will give a 20 minutes presentation describing your findings at the end of the semester.
4. Sage Computing Project (10% of final grade). I will assign some small computing projects in Sage.
5. There will be some bonus questions on homework and exams that might earn you extra credit.