

Syllabus : Math 453, Spring 2012

Meeting place and time: Univ 017, MWF 12.30 pm -1.20 pm.

Instructor: Saugata Basu

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Office hours: Mon 3-4 pm or by appointment.

1. Textbook for the course: *Topics in Algebra (2 ed.)* by I.M. Herstein.
2. Rough list of topics to be covered. Some set theory and mappings (Chapter 1), Group Theory (Chapter 2, Sections 2.1-11), Ring Theory (Chapter 3, Sections 3.1-3.7), Fields (Chapter 5, Section 5.1), and if time permits, Vector Spaces (Chapter 4, Sections 4.1-2).
3. There will be weekly assignments to be handed in. You are free to collaborate but must write the solutions on your own.
4. There will be two in-class mid-term exams, and a final exam. Dates to be announced later.
5. The weightage towards the final grade will be as follows:
 - i. Homework: 20%
 - ii. Mid-terms: 25% + 25%
 - iii. Final Exam: 30%
6. **Important note:** The major goal of this course is to learn how to *read, understand and construct proper mathematical proofs*. We will not use any extraneous facts, but *prove* everything that we discuss. The assignments and the exams *will require writing proofs* and not only mechanical calculations.