

CUNY Ph.D. Program in Mathematics

Fall 2014

MATH 70500: Algebra I

M & W, 10:30am - 12:00pm, Rm. TBA

Prof. B. Steinberg

4.5 cr.

*Course Description:*

This is the first half of a two-semester graduate algebra course.

We will cover the fundamentals of group, ring and module theory. The topics will include group actions, Sylow's theorems, the Fundamental Theorem of Finitely Generated Abelian Groups, semidirect products, nilpotent and solvable groups, the Chinese Remainder Theorem, Euclidean Domains, PIDs, UFDs, polynomial rings and introduction to the module theory including tensor products and basic homological algebra.

The textbook will be Dummit & Foote's Abstract Algebra.