Math 110B: General Course Outline

Catalog Description

110B. Algebra. (4) Lecture, three hours; discussion, one hour. Requisite: course 110A or 117. Groups, structure of finite groups. P/NP or letter grading.

Textbook

T. Hungerford, Abstract Algebra, 2nd Ed., Brooks Col.

Reviews & Exams

The course should cover essentially the material between pages 160 and 280 (excluding the section on the simplicity of the appropriate alternating groups; one can come back to this if there is enough time). If there is not enough time, the material at the beginning is more important than the material at the end.

Schedule of Lectures

Week	Pages	Topics
1	160-180	Definition of groups, basic properties.
2	181-198	Subgroups, isomorphism, and homomorphism.
3	199-216	Congruence and Lagrange's Theorem, normal subgroups.
4	216-222	Quotient groups, review, first midterm.
5	222-238	Quotient groups and homomorphism, symmetric and alternating groups.
6	244-261	Direct products, finite abelian groups.
7	262-265	The Sylow Theorems, review, second midterm.
8	267-273	Conjugacy and proof of the Sylow Theorems.
9, 10	275-283	The structure of finite groups, groups of small order.

Comments

Outline update: 4/98

For more information, please contact Student Services, <u>ugrad@math.ucla.edu</u>.