

# Programme for Abstract Algebra 1

Week 1: Sets, Groups and Subgroups	0,4,5
Week 2: Cyclic groups, Permutations	6,8,9
Week 3: Permutations, Cosets, Lagrange's theorem	8,9,10
Week 4: Generators, Quotient groups	7,14,15
Week 5: Homomorphisms and isomorphisms	13
Week 6: Groups actions	16,17
Week 7: Abelian groups	11
Week 8: Isomorphism theorems	34
Week 9: Series	35
Week 10: Sylow's theorem	36,37
Week 11: Free groups	38,39
Week 12: Free groups, presentations	38,39,40
Week 13: Other advanced topics, according to time	
Week 14: Other advanced topics, according to time	
Week 15: Introduction to rings and fields	18

Mondays will be set aside for the solution of exercises.

This timetable is provisional.

In the course we will roughly follow the book Abstract algebra by Fraleigh. The numbers on the righthand side of the schedule represent chapter numbers from this book. There are plenty of other good books on group theory. In particular I recommend Rotman, An introduction to the theory of groups; Robinson, A course in the theory of groups; and Rose, A course on group theory.

Evaluation will take the form of three parcial exams each worth 20% taking place on the Monday of weeks 4, 8 and 12, two homeworks each worth 5% set at as yet unspecified times, and a final exam worth 30%.