

OVERVIEW: RING

These materials were developed in Spring, 2001, to use the computer algebra system GAP to teach topics in ring theory.

The course and format

This course is MT A512, the second half of a two-semester graduate sequence in abstract algebra. It uses the same text and draws roughly the same students as the first semester course in group theory.

The format was also the same as for the first semester. The class met three times each week in a regular classroom but twice met in the computer classroom.

What's here

GAP was not as frequently useful in ring and field theory as it was in group theory, primarily because GAP does not handle field extensions in a simple and pedagogically useful manner. Apart from the analysis of Galois groups, the topic for which GAP proved most useful is Euclidean domains. The instructional materials that were developed for this topic are included.

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