

**Unit Aims** To further your mathematical education by introducing the elements of modern algebra: groups, rings and fields, polynomials, field extensions, and by developing some of the Galois Theory of polynomial equations.

**Unit Objectives** For you to gain proficiency in dealing in abstract concepts with an emphasis on clear explanation of such concepts to others, as demonstrated by the ability to write down proofs of the elementary theorems in the subject.

**Lecturer** Adrian Nelson Carslaw 526. 9351 5779 A.Nelson@maths.usyd.edu.au

**Classes** Three lectures per week, each at 2pm, Monday in Law105, Wednesday and Thursday in Carslaw 173. You should attend all three lectures. Lectures run for thirteen weeks.

Tutorials start in week 2 and are held at 12noon Wednesdays in Carslaw 351. Remember to bring a copy of the tutorial sheet to the tutorial. To gain maximum benefit from the tutorials it is imperative that you attempt the exercises in advance.

If timetable clashes prevent you attending tutorials or lectures because of timetable clashes, please let me know.

**Assessment** A final raw mark will be calculated as follows.

75% Exam. The 2 hour exam which will be held in June.

25% Homework. Made up number of small homework exercises to count 10% and a take home assignment worth 15%. Details yet to be determined

**Tutorial Sheets, Homework, Solutions, and other Unit Material**

Tutorial sheets and tutorial solutions, homework and solutions to selected homework exercises will be posted on the unit web page, as will some lecture material.

**Consultations** I will keep two general timetabled office hours Tuesday 12-1 and Wednesday afternoons 3:30-4:30. Students who want to talk about the unit are most welcome to call by my office at other times or arrange an appointment for a mutually convenient time.

**Text** The text book for this unit is the set of notes *Rings, Fields and Galois Theory* by Robert Howlett. The notes are available from Kopystop, 55 Mountain Street Ultimo, cost \$14.

**References** A list of reference books will be posted on the unit web page.

**Additional Information** Please read the general information, as well as the MATH3962 entry, in the *Senior Level Pure and Applied Mathematics and Mathematical Statistics, 2008 Handbook*, available on the Senior Mathematics page. [www.maths.usyd.edu.au/u/UG/SM/](http://www.maths.usyd.edu.au/u/UG/SM/)