

# MATH 817, GROUPS AND RINGS, FALL 2009

## COURSE OUTLINE

### 1. LECTURES

Tuesday and Thursday 10:30-12:20 PIMS seminar room, TASC2 8500.

We will meet **Thursday September 10** to decide amongst us what topics to cover and how you will be evaluated. **Please attend if you want to have your say.** Regular lectures will begin Thursday September 17.

### 2. INSTRUCTOR

- Karen Yeats
- SC K 10508
- Office hours to be determined
- [karen\\_yeats@sfu.ca](mailto:karen_yeats@sfu.ca)
- course website <http://math.sfu.ca/~kyeats/teaching/math817.html>

### 3. PREREQUISITES

Senior level undergraduate algebra or come talk to me.

### 4. TEXTBOOK

ALGEBRA: A Graduate Course, by I. Martin Isaacs. This is currently published by the AMS <http://www.ams.org/bookstore-getitem/item=gsm-100>. You can all get free membership to the AMS for being math grad students (and hence a discount on the book). New students probably won't be able to get their memberships processed fast enough to take advantage of this; even still the price is cheaper than what the bookstore would have charged you. The older edition published by Brooks/Cole is also fine.

### 5. COURSE DESCRIPTION

A first course in graduate algebra with emphasis on topics in groups and rings.

### 6. OUTLINE

The detailed outline will be decided on **Thursday September 10** please come and be a part of it. We will be certain to cover the basic theory of groups and rings. Further topics will be taken, according to interest, from among noncommutative rings, representation theory, commutative rings and Galois theory, introductory category theory, combinatorial Hopf algebras, . . . .

## 7. HOMEWORK

Doing good, difficult problems is the key to learning mathematics. There will be regular assignment worth 40% of the final grade. If your assignment will be late, you must inform me **before** the hand-in deadline (otherwise solutions will be posed immediately). Lates will not automatically be granted. **There are no retroactive lates.**

Please credit any help you received from other students, books, or other sources when you write up your problems. **Don't plagiarize.** (Good guidelines to avoid excessive help from others are to think about the problem yourself for at least a day before seeking help, and always to write up your work independently, without looking at books or notes of discussions with others.)

## 8. GRADING

- Assignments: 40%
- The remaining 60% will be made of some combination of exams and project/presentations. Details will be decided on **Thursday September 10**. Please attend.