DEPARTMENT OF MATHEMATICS AND STATISTICS
UNIVERSITY OF CALGARY

PMAT 613 – FIELD AND GALOIS THEORY – WINTER TERM 2007

Monday	Tuesday	Wednesday	Thursday	Friday
			12:30–14:00 15:00-16:00 MS 522	

- **Instructor:** Clifton Cunningham
- **Office:** Mathematical Sciences Building, Room 528.
- **Lectures:** Thursday, 13:30-14:00 and 15:00-16:00 in MS522.
- **Office hour:** by appointment
- **Course website:** go to `http://blackboard.ucalgary.ca`
- **Recommended Reading:** *Field and Galois Theory* by Patrick Morandi.
- **Pre-requisite:** PMAT431, or approval from the Division of Pure Mathematics.
- **Evaluation:**
  - take-home test: 30%
  - presentation and oral exam: 20%
  - take-home exam: 50%

  All grading will use the GPA (grade point average) system, following official Faculty of Science guidelines.
- It is the student's responsibility to request academic accommodations. A student with a documented disability who may require academic accommodation must register with the Disability Resource Centre to be eligible for formal academic accommodation. DRC registered students are required to discuss their needs with the instructor no later than fourteen (14) days after the start of this course.

	Date	Topic	Comments	
1	2007.01.11	categories: fields, subfields, groups, subgroups	**Chapter 1:**	
	2007.01.18	no lecture	**The Galois Adjunction**	
2	2007.01.25	functors; the galois adjunction		
3	2007.02.01	finite splitting fields; finite separable extensions	**Chapter 2:**	
4	2007.02.08	Fundamental Theorem of (Finite) Galois Theory	**Finite Galois Extensions**	
5	2006.02.15	finite fields; finite cyclic extensions		
	2007.02.22	Reading Week/Take-home test	Test due 2007.03.01	
6	2007.03.01	limits and colimits; profinite groups	**Chapter 3:**	
7	2007.03.08	Fundamental Theory of (Infinite) Galois Theory	**Infinite Galois Extensions**	
	2007.03.15	no lecture		
8	2007.03.22	infinite cyclic extensions		
9	2007.03.29	some galois representations	**Chapter 3:**	
10	2007.04.05	some algebraic number theory	**An introduction to**	
11	2007.04.12	decomposition and inertia groups	**Class Field Theory**	
	2007.04.26	Take-home exam	Exam due 2007.04.26	

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Date: January 3, 2007.