CAS 701 Fall 2002

00 Preliminaries

Instructor: W. M. Farmer

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Instructor

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Course web site:

http://www.cas.mcmaster.ca/~wmfarmer/CAS-701-02

Mission

- Give students a graduate-level understanding of the logic and mathematics that is needed for Software Engineering
- The course will focus on the creation, use, and understanding of mathematical models
- Students taking this course are expected to be familiar with propositional and first-order logic and sets, functions, and relations

Work Plan

- Lectures in class
- Exercises outside of class (not marked)
- Student presentations in class (10%)
- Midterm test on October 24 (30%)
- Final exam (60%)

Selected Policy Statements

1. Significant study and reading outside of class is required.

2. Regular class attendance is expected.

3. Students are expected to ask questions during class.

4. The midterm test may not be taken later without *prior* approval from the instructor.

5. The instructor reserves the right to require a deferred final exam to be oral.

6. Suggestions on how to improve the course and the instructor's teaching methods are always welcomed.

Tentative Schedule

01 The Nature of Mathematics

02 Mathematical Models

03 Review of Logic

04 Simple Type Theory

05 Partial Functions and Undefined Terms

06 Equational Logic and Algebraic Reasoning

07 Recursive Definition and Inductive Proof

08 Practical Application of the Axiomatic Method