Mathematics–Computer Science 415H – Mathematical logic
TRENT UNIVERSITY, Fall 2006

Instructor

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Fall hours: Mondays 12:00-12:50, Tuesdays 10:00-10:50, Thursdays 10:00-10:50, Fridays 10:00-10:50
... or by appointment, or just drop by!
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home page: `http://euclid.trentu.ca/math/sb/`

Prerequisite

MATH 260, or MATH 330, or the permission of the instructor.

Text

A Problem Course in Mathematical Logic, Version 1.6, Stefan Bilaniuk, 2003.
It's free and can be downloaded from the course web site or from:

`http://euclid.trentu.ca/math/sb/pcml/`

Meetings

The student(s) will meet with the instructor for feedback and evaluation at least once a week at times and locations to be arranged between the student(s) and the instructor.

Format and Evaluation

This will be a problem course: the hope is that student(s) will learn the material by doing the problems in the text and proving the theorems for yourself. There will be 12 problem sets, the best 10 of which count equally towards the final mark.

This scheme may be modified in exceptional circumstances. Any such modification will require the agreement of both the student(s) concerned and the instructor.

Syllabus

We will cover as many of the following topics as we can:

1. Propositional logic: language, truth assignments, deduction
2. Propositional logic: Soundness, Completeness, and Compactness
3. First-order logic: languages, structures and models, deduction
4. First-order logic: Soundness, Completeness, and Compactness

Depending on time and interest, other topics could be covered as well.

Honour

Plagiarism is an extremely serious academic offence and carries penalties varying from failure in an assignment to suspension from the University. Definitions, penalties and procedures for dealing with plagiarism are set out in Trent University's *Academic Dishonesty Policy* which is printed in the Calendar. It can also be found online at:

`http://www.trentu.ca/deansoffice/dishonestypolicy.html`

For clarity, the following guidelines will apply in MATH 415H:

Students are permitted and encouraged to ask anyone willing (especially the instructor!) for explanations, hints, and suggestions on the problem sets, and to consult whatever sources they wish, with the exceptions that **students may not consult the work returned to other students until they have submitted their own and may not consult anyone who has taken the course before or their work**. However, **all work submitted for credit must be written up entirely by the student, giving due credit to all relevant sources of help and information**.

MATH 415H Web Site

Hopefully up-to-date information and handouts can be found at:

`http://euclid.trentu.ca/math/sb/415H/`

Comic Relief

Think slowly – a mind is a terrible thing to haste.