Lecture 10: Revision

This last lecture recaps the main points of the course...
and hence what you are likely to find in the exam.
- the aims of logic, and the main ideas
- syntax
- semantics
- deduction
And a few pointers to possible next steps in logic.

Aims and main ideas of logic
- logic aims for a theory of good reasoning
- that is, to determine whether or not a given argument is valid

Syntax
- formulae are mathematical models of statements
- PL can only represent complete sentences
- QL analyses sentences using names, properties and relations, and quantification
- both logics have semantics and a deductive calculus
- deductive calculi may be sound or complete with respect to a semantics
- a logic may also be decidable if it is complete

Semantics
- interpretations are mathematical models of “situations”
- they can serve as counter-examples to invalid arguments
- the truth-tree method produces an interpretation that makes its input formulae true, if one exists
Deduction

- models step by step reasoning
- for each connective, we have an introduction rule and an elimination rule

Beyond Phil134

- University offers much more than specific job-related skills. Enjoy the culture of knowledge and enquiry, and become an independent strong thinker! This is of more long term value, even at work, than specific technical skills. Don’t just learn accounting, learn to think!
- The philosophy department offers many interesting courses, some related to logic:
  - PHIL232 Philosophy of Science
  - PHIL256 Knowledge and Reality
  - PHIL280 Truth and Existence
  - PHIL281 Language and Logic

Beyond Phil134

- some universities also offer mathematics and computer science courses closely related to logic
- if you are interested in logic, you might consider the annual ANU/NICTA Logic Summer School in Canberra - http://lss.rsise.anu.edu.au Scholarships are available.
- There are amusing, popular books of logic puzzle/stories by Raymond Smullyan, such as What is the name of this book?
- You are welcome to contact me after the course if you want advice or have questions

Exercises

- Homework Assignment
  - Swot for the exam!
  - Good Luck!