

PHIL 350: Symbolic Logic

Andrew Bacon

1 Course Details

CLASSES: Tuesdays and Thursdays 9:30-10:50pm, VKC 211

OFFICE HOURS: 10:50-11:50 Tuesdays and Thursdays, 224 Stonier Hall

WEBSITE: Blackboard will be used.

PHONES: Phones must be on silent and out of sight during class.

TEXTS: There are no primary texts for this course, and it will therefore rest heavily on your own notes from class. You will therefore need to bring a notepad to class. This can be supplemented by the first few chapters of

‘The Limits of Logic’ by Jeff Russell

which is freely available on his website.

GRADING: You will be assessed entirely on the basis of weekly exercises (25%), two exams (30% and 35%) and participation and notetaking (10%).

Weekly exercises will be graded on a pass fail basis. You have two free passes: you may miss up to two weekly exercises without it affecting your grade, which should be reserved for illness or family emergencies. Further absences will need proper documentation.

MIDTERM: Thursday, March 12, 9:30-10:50 in class.

FINAL EXAM: Tuesday, May 12 8-10 a.m.

Exams *cannot* be rescheduled except in a very limited set of circumstances (you may consult the universities regulations and policies here: <http://catalogue.usc.edu/content.php?catoid=2&navoid=281>).

STATEMENT ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS

Academic Conduct

Plagiarism presenting someone else's ideas as your own, either verbatim or recast in your own words is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Section 11, Behavior Violating University Standards <https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/>. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct/>.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity <http://equity.usc.edu/> or to the Department of Public Safety

<http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us>. This is important for the safety whole USC community. Another member of the university community such as a friend, classmate, advisor, or faculty member can help initiate the report, or can initiate the report on behalf of another person. The Center for Women and Men <http://www.usc.edu/student-affairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

SUPPORT SYSTEMS

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the American Language Institute <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. The Office of Disability Services and Programs http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, USC Emergency Information <http://emergency.usc.edu/will> provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

2 Schedule of topics

1. Inductive structures: natural numbers, lists, trees.
2. Definitions by recursion.
3. Proof by induction.
4. Algebras and homomorphisms.
5. Propositional languages.
6. Semantics for propositional languages.
7. Hilbert axiom systems.
8. Soundness and statement of completeness.
9. Non-classical propositional logics.
10. Modal languages.
11. Hilbert axiom systems.
12. Semantics for modal languages.
13. Conditional logics. (If we have time.)