

MATHEMATICAL LOGIC

Instructor: Jan Wehr, Mathematics Building 720, 621-2834, wehr@math.arizona.edu

Office hours: M W 2:00-3:00

Classes: M W F 1:00 - 1:50, Modern Languages 303

Class notes: a part of "Forever Undecided: A Puzzle Guide to Gödel" by Raymond Smullyan, Knopf 1987. Available from the U of A bookstore.

Course organization and grades

We will start the course by going over a part of Smullyan's book, solving most of the puzzles. During each class we will discuss puzzles assigned for this day. The students will put the numbers of the puzzles they have solved on a sheet of paper and this will determine their score for the class. Some of the students will then present their solutions. Except for documented, legitimate cases, **YOU HAVE TO BE IN CLASS IN ORDER TO RECEIVE A HOMEWORK SCORE THAT DAY.**

As the course proceeds, I will be lecturing on selected topics in logic, relevant for the course, but we will be returning to Smullyan's puzzles regularly, sometimes adding homework problems from other sources. At the end of the semester students will do final projects. The topics will be discussed in class and individually with me. The homework score will be worth 60% of projects, or for class participation.

Here is a list of some good mathematical logic books:

1. S. M. Srivastava: A course on mathematical logic
2. G. S. Boolos et al.: Computability and logic
3. E. Mendelson: Introduction to mathematical logic
4. R. Goldstein: Incompleteness: the proof and paradox of Kurt Gödel
5. R. Smullyan: Gödel's incompleteness theorems