

Meeting: 1003, Atlanta, Georgia, SS 2A, AMS-MAA-MER Special Session on Mathematics and Education Reform, I

1003-97-289 **Julia F. Knight*** (knight.1@nd.edu). *Logic for undergraduates at Notre Dame.*

Notre Dame has a universal requirement of two semesters of mathematics. Students intending to major in science, engineering, or business need at least two semesters of calculus. Arts and Letters students have some other options. One is a logic course. The goal is to give students some formal tools for analyzing arguments. There is an emphasis on formal proofs, and we cover both propositional logic and predicate logic. Such a course is standard in philosophy departments. However, in our course, homework is done in groups, and students also write a group paper, on some topic in logic that is not covered in the lectures.

For mathematics majors at Notre Dame, there are several junior/senior electives. One of these is on various kinds of automata, and what they can and cannot do. Such a course is standard in computer science programs. However, there are challenging problems that encourage mathematical thinking, and the mathematics majors who choose the course seem to respond well to the material. (Received September 07, 2004)