

Henkin's Method and the Completeness Theorem

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Notes to the instructor

The project is designed for an upper level undergraduate course in mathematical logic. It covers the core material of the course, and the whole course may be designed around the project. Although the beginning of the project addresses basic facts about first-order languages, their syntax and semantics, it is expected that students are already familiar with these topics by the time the project is assigned. Instructors may wish to spend about three to four weeks early in the semester covering these topics before assigning the project. The project itself may take anywhere from four to seven weeks depending on the pace of the instructor. The only core topics of the course not covered by the project are the compactness theorem, elementary classes and elementary equivalence, and Peano Arithmetic. These topics may be assigned in the last three to four weeks of the semester, right after finishing the project. The notation Henkin uses in his treatise was common at the time of writing the treatise, but it is slightly outdated from today's point of view. Instructors may wish to spend some time comparing Henkin's notation to the contemporary one.

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