

**MATHEMATICS 187**

<b>COURSE PACK</b>	<i>An Introduction to Mathematical Logic</i> by R. Hodel
<b>INSTRUCTOR</b>	Richard Hodel
<b>OFFICE/PHONE</b>	228C Physics; 660-2846 (W), 489-4914 (H) (before 10 pm please!)
<b>OFFICE HOURS</b>	MWF 2:30 – 3:00, Tu 10 – 11:30 and by appointment (the best time to make an appointment is before or after class)
<b>E-MAIL</b>	hodel@math.duke.edu

**TESTS/FINAL GRADE** There will be two tests and a final exam. For each test and for the final exam, there is both an in-class part and a take-home part. The weight of each test and the exam, together with the material covered, is as follows (I reserve the right to make minor adjustments in these numbers):

TEST 1	140 points	Propositional logic (chapters 2 and 3)
TEST 2	160 points	First-order logic (chapters 4 and 5)
EXAM	200 points	Chapters 2-5 and 7 with an emphasis on chapter 7
TOTAL	500 points	

Homework and faithful class attendance are also used to settle borderline cases in assigning the final grade.

**SUGGESTED READING** *Gödel, Escher, Bach: An Eternal Golden Braid* by D. Hofstadter

**OVERVIEW OF THE COURSE**

<b>Topic</b>	<b>Reading Assignment</b>	<b>Time</b>
Informal propositional logic	Chapter 2	2 weeks
Formal propositional logic	Chapter 3	3 weeks
First-order languages	Chapter 4	3 weeks
First-order logic and Gödel's Completeness Thms.	Chapter 5	3 weeks
Hilbert, Gödel, Church, and Turing	Chapters 5 and 7	3 weeks

