

# 80-311/611 Spring 2004

## Computability and Incompleteness

### Syllabus (Buldt)

Day	Date	Subject	Remarks
<b>I. Introduction</b>			
Mo	01/12	Introduction	—
We	01/14	Axioms & Proofs	—
Fr	01/16	Formal Systems	—
<b>II. Primitive Recursive Arithmetic</b>			
Mo	01/19	PRA	—
We	01/21	PRA	—
Fr	01/23	PRA	1st hw
Mo	01/26	PRA	—
We	01/28	PRA	—
Fr	01/30	Recitation	2nd hw
<b>III. Arithmetization</b>			
Mo	02/02	Arithmetization	—
We	02/04	Arithmetization	—
Fr	02/06	Arithmetization	3rd hw
<b>IV. Representability</b>			
Mo	02/09	Representability	—
We	02/11	Representability	—
Fr	02/13	Recitation	4th hw
<b>V. Fixpoint Theorem</b>			
Mo	02/16	<i>President's Day</i>	no class
We	02/18	Fixpoint Theorem	—
Fr	02/20	Fixpoint Theorem	5th hw
<b>VI. The Gödel Theorems</b>			
Mo	02/23	G1	—
We	02/25	G1	—
Fr	02/27	G2	6th hw

Mo	03/01	Review session	—
We	03/03	In-class Examination	!
Fr	03/05	<i>Mid-Semester Break</i>	no class

*Spring Break*

Mo	03/08	<i>Spring Break</i> , Mid-Term Grades (9AM)	no class
We	03/10	<i>Spring Break</i>	no class
Fr	03/12	<i>Spring Break</i>	no class

### VII. (Partial) Recursive Functions & Turing Machines

Mo	03/15	(Partial) Recursive Functions & TM	—
We	03/17	(Partial) Recursive Functions & TM	—
Fr	03/19	(Partial) Recursive Functions & TM	7th hw
Mo	03/22	(Partial) Recursive Functions & TM	—
We	03/24	(Partial) Recursive Functions & TM	—
Fr	03/26	Recitation	8th hw

### VIII. Recursively Enumerable Sets & Their Properties

Mo	03/29	R. E. Sets	—
We	03/31	R. E. Sets	—
Fr	04/02	R. E. Sets	9th hw
Mo	04/05	R. E. Sets	—
We	04/07	R. E. Sets	—
Fr	04/09	Recitation	10th hw
Mo	04/12	Creativity	—
We	04/14	Recursive Inseparability	—
Fr	04/16	<i>Carnival</i>	no class

### IX. The Arithmetical Hierarchy & Degree of Unsolvability

Mo	04/19	AH & Degrees	—
We	04/21	AH & Degree	—
Fr	04/23	AH & Degrees	11th hw
Mo	04/26	Review Session	—
We	04/28	Review Session	—
Fr	04/30	In-class Examination	!
Th	05/13	Final Grades (4PM)	