

Schedule (Tentative)

Last updated: August 21, 2016

Readings are from the textbook

- Hw are **homeworks**.
- P are **programming assignments**.

Class	Date	Topic	Due
— Read: Ch. 0 —			
1	8/22	Introduction	
Rec		Logic and Sets	
2	8/24	Relations and Functions	
3	8/26		
— Read: Ch. 1.3 —			
4	8/29	Binary relations	
Rec			
5	8/31	Finite, Infinite	
6	9/2	Induction	Hw1
— Read: Ch. 1.2 —			
7	9/5	Diagonalization	
Rec			
8	9/7	Closures & Strings	
9	9/9	Languages	P1
— Read: Ch. 1.1 —			
10	9/12	Regular Expressions (RE)	
Rec			
11	9/14	Non-deterministic Finite Automata (NFA)	
12	9/16	From RE to eps-NFA	Hw2
— Read: Ch. 1.4 —			
13	9/19	From eps-NFA to NFA	
Rec			
14	9/21	From eps-NFA to NFA	
15	9/23	Deterministic Finite Automata (DFA)	P2
— Read: Ch. 1.1 —			
16	9/26	From DFA to RE	
Rec			
17	9/28	Closure properties	
18	9/30	Exam 1	Hw3
— Read: Ch. 1.4 —			
19	10/3	Pumping Lemma	
Rec			
20	10/5	Trim and Minimisation	
21	10/7		P3

Class	Date	Topic	Due
22	10/10	Fall Break	
Rec		Fall Break	
		—— Read: Ch. 3.1 ——	
23	10/12	Turing Machines	
24	10/14		Hw4
		—— Read: Ch. 3.2 ——	
25	10/17	Variants of Turing Machines	
Rec			
26	10/19		
27	10/21		P4
		—— Read: Ch. 4.1 ——	
28	10/24		
Rec			
29	10/26		
30	10/28		Hw5
		—— Read: Ch. 4.2 ——	
31	10/31	Universal Turing Machine	
Rec			
32	11/2	Undecidability of Halting Pb	
33	11/4	Exam2	P5
		—— Read: Ch. 5 ——	
34	11/7	Undecidable problems	
Rec			
35	11/9	Reducibility	
36	11/11		Hw6
		—— Read: Ch. 7.1 7.2 7.3 ——	
37	11/14	Time Complexity, P	
Rec			
38	11/16	NP	
39	11/18	NP problems	P6
	11/21	Thanksgiving	
Rec		Thanksgiving	
	11/23	Thanksgiving	
	11/25	Thanksgiving	
		—— Read: Ch. 7.4 8.1 8.2 9.1 ——	
40	11/28	NP-completeness	
Rec			
41	11/30	PSPACE, Savitch Theorem	
42	12/2	Hierarchy Theorems	P7
43	12/5	PSPACE, Savitch Theorem	
Rec			