

We will follow the textbook *Introduction to the Theory of Computation* (second edition) by Michael Sipser. The following schedule outlines the material to be covered during the semester and specifies the corresponding sections in the textbook.

Date	Topic	Quiz	Reading	Homework	
				Assigned	Due
Thu 01/28	Introduction		0.1–0.4		
Tue 02/02	Deterministic Finite Automata (DFA)		1.1	HW1	
Thu 02/04	Nondeterministic Finite Automata (NFA)		1.2		
Tue 02/09	Equivalence of DFAs & NFAs			HW2	HW1
Thu 02/11	Regular Expressions		1.3		
Tue 02/16	Equivalence of Regular Expressions			HW3	HW2
Thu 02/18	Regular Language Pumping Lemma		1.4		
Tue 02/23	Context-free Grammars (CFG)		2.1	HW4	HW3
Thu 02/25	Context-free Grammars (CFG)	Quiz 1			
Tue 03/02	Chomsky Normal Form			HW5	HW4
Thu 03/04	Pushdown Automata (PDA)		2.2		
Tue 03/09	PDAs for CFGs			HW6	HW5
Thu 03/11	CFGs for PDAs	Quiz 2			
Tue 03/16	<i>Spring Break</i>				
Thu 03/18	<i>Spring Break</i>				
Tue 03/23	Context-Free Pumping Lemma		2.3	HW7	HW6
Thu 03/25	Turing Machines		3.1		
Tue 03/30	Turing Machines		3.2	HW8	HW7
Thu 04/01	Regular Language Decision Properties	Quiz 3	4.1		
Tue 04/06	Context-free Decision Properties			HW9	HW8
Thu 04/08	The Halting Problem		4.2		
Tue 04/13	Undecidability		5.1	HW10	HW9
Thu 04/15	Undecidability	Quiz 4	5.2		
Tue 04/20	Reductions		5.3	HW11	HW10
Thu 04/22	P vs NP		7.1-7.3		
Tue 04/27	NP-completeness		7.4	HW12	HW11
Thu 04/29	NP-completeness	Quiz 5	7.5		
Tue 05/04	Advanced Topic TBA			HW13	HW12
Thu 05/06	Advanced Topic TBA				
Tue 05/11	Advanced Topic TBA				HW13
Thu 05/13	Advanced Topic TBA				
Tue 05/18	Final Exam 10:30am – 12:30pm				