

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	HW assigned	HW Due
Thu 08/28	Introduction		0.1–0.4		
Tue 09/02	Deterministic Finite Automata (DFA)		1.1	HW1	
Thu 09/04	Deterministic Finite Automata (DFA)				
Tue 09/09	Nondeterministic Finite Automata (NFA)		1.2	HW2	HW1
Thu 09/11	Nondeterministic Finite Automata (NFA)				
Tue 09/16	Equivalence of DFAs & NFAs			HW3	HW2
Thu 09/18	Regular Expressions		1.3		
Tue 09/23	Equivalence of Regular Expressions			HW4	HW3
Thu 09/25	Regular Language Pumping Lemma	<b>Quiz 1</b>	1.4		
Tue 09/30	Context-free Grammars (CFG)		2.1	HW5	HW4
Thu 10/02	Context-free Grammars (CFG)				
Tue 10/07	Chomsky Normal Form			HW6	HW5
Thu 10/09	Pushdown Automata (PDA)	<b>Quiz 2</b>	2.2		
Tue 10/14	PDAs for CFGs			HW7	HW6
Thu 10/16	CFGs for PDAs				
Tue 10/21	Context-Free Pumping Lemma		2.3	HW8	HW7
Thu 10/23	Turing Machines	<b>Quiz 3</b>	3.1		
Tue 10/28	Turing Machines		3.2	HW9	HW8
Thu 10/30	Regular Language Decision Properties		4.1		
Tue 11/04	Context-free Decision Properties			HW10	HW9
Thu 11/06	The Halting Problem	<b>Quiz 4</b>	4.2		
Tue 11/11	Undecidability		5.1	HW11	HW10
Thu 11/13	Undecidability		5.2		
Tue 11/18	Reductions		5.3	HW12	HW11
Thu 11/20	Recursion Theorem	<b>Quiz 5</b>	6.1		
Tue 11/25	Kolmogorov Complexity		6.4		HW12
Thu 11/27	<i>Thanksgiving Break</i>				
Tue 12/02	P vs NP		7.1-7.3	HW13	
Thu 12/04	NP-completeness		7.4		
Tue 12/09	NP-completeness		7.5		HW13
Thu 12/11	<b>Final Exam 10:30am – 12:30pm</b>				