

Week		Content	Reading	HW Assigned	PA Assigned
week 1	Tuesday, September 3, 2024	Course policies, introduction to Th. Of Comp. First look at Finite State Automata (FSA)	Chapter 0		
	Thursday, September 5, 2024	Terminology and formal definition of FSAs state diagrams, regular languages (RL) operations on RLs	Chapter 1.1	PS1 Out Due Fri, 09/20, 11:59pm	
week 2	Tuesday, September 10, 2024	Closure of RLs under operations of union and intersection, the product machine	Chapter 1.1		PA1 Out Tue, 10/12, 11:59pm
	Thursday, September 12, 2024	Non-deterministic Finite Automata, closure under concatenation & Kleene star	Chapter 1.2		
week 3	Tuesday, September 17, 2024	Other regular operations Equivalence of NFAs and DFAs, Subset Construction	Chapter 1.2		
	Thursday, September 19, 2024	NFAs whose DFAs have exponential size, Regular Expressions	Hopcroft, et al. 2.3.6 Chapter 1.3	PS2 Out Due Fri, 10/04, 11:59pm	
week 4	Tuesday, September 24, 2024	Conversion from REs to NFAs/DFAs GNFAs	Chapter 1.3		
	Thursday, September 26, 2024	Conversion from DFAs to REs The State Elimination Algorithm for GNFAs	Chapter 1.3		
week 5	Tuesday, October 1, 2024	Distinguishable & equivalent states in a DFA, Distinguishability Lemma, the Quotient automaton	Hopcroft, et al. 4.4		
	Thursday, October 3, 2024	State minimization algorithm for DFAs, the Pumping Lemma for regular languages	Hopcroft, et al. 4.4.3 Sipser 1.4	PS3 Out Due Fri, 10/18, 11:59pm	
week 6	Tuesday, October 8, 2024	Examples of non-regular languages, using the the Pumping Lemma to prove non-regularity	Chapter 1.4		PA2 Out Due Tue, 11/09, 11:59pm
	Thursday, October 10, 2024	Context Free Grammars, Leftmost Derivations Parse Trees	Chapter 2.1		
week 7	Tuesday, October 15, 2024	Monday Schedule/No class			
	Thursday, October 17, 2024	Review		PS4 Out Due Sat, 11/02, 11:59pm	
week 8	Tuesday, October 22, 2024	MIDTERM EXAM			
	Thursday, October 24, 2024	CFG Ambiguity, CFL Closure Properties, Chomsky's normal form,	Chapter 2.1		
week 9	Tuesday, October 29, 2024	Nondeterministic Pushdown Automata & CFLs	Chapter 2.2		
	Thursday, October 31, 2024	Equivalence of NPDA's and CFGs	Chapter 2.2	PS5 Out Due Sat, 11/16, 11:59pm	
week 10	Tuesday, November 5, 2024	The Pumping Lemma for CFLs Examples of non-CFL languages	Chapter 2.3		PA3 Out Due Tue, 12/06, 11:59pm
	Thursday, November 7, 2024	Turing Machines	Chapter 3.1		
week 11	Tuesday, November 12, 2024	Multi-tape Machines & Their 1-Tape Simulators	Chapter 3.2		
	Thursday, November 14, 2024	Nondeterministic Turing Machines and Their Deterministic Simulators	Chapter 3.2	PS6 Out Due Fri, 11/29, 11:59pm	
week 12	Tuesday, November 19, 2024	The Universal Machine, Decidable Languages	Chapter 4.1		
	Thursday, November 21, 2024	Undecidable & Unrecognizable Languages	Chapter 4.2		
week 13	Tuesday, November 26, 2024	Additional Undecidable Problems Complexity of Turing Machines	Chapter 4.2, 7.1	PS7 Out Due Thu, 12/12, 11:59pm	
	Thursday, November 28, 2024	Thanksgiving!			
week 14	Tuesday, December 3, 2024	Classes P and NP	Chapter 7.2, 7.3		PA3 Due Due Tue, 12/03, 11:59pm
	Thursday, December 5, 2024	Polynomial Verifiers, Polynomial Reductions	Chapter 7.3, 7.4		
week 15	Tuesday, December 10, 2024	Cook's Theorem, NP-Completeness	Chapter 7.4		
	Thursday, December 12, 2024	Examples of NP-complete Problems	Chapter 7.4, 7.5	PS7 Due Due Thu, 12/12, 11:59pm	
	Thursday, December 19, 2024	FINAL EXAM			