Week		Content	Reading	HW Assigned	HW Due
week1	Thursday, September 1, 2022	Course policies, introduction to Th. Of Comp. First look at Finite State Automata (FSA)	Chapter 0		
week 2	Tuesday, September 6, 2022	Terminology and formal defnition of FSAs state diagrams, regular languages (RL) operations on RLs	Chapter 1.1	PS1 Out	
	Thursday, September 8, 2022	Closure of RLs under operations of union and intersection, the product machine	Chapter 1.1		
week 3	Tuesday, September 13, 2022	Non-deterministic Finite Automata, closure under concatenation & Kleene star	Chapter 1.2		
	Thursday, September 15, 2022	Equivalence of NFAs and DFAs, a DFA requiring exponentially more states than an NFA	Chapter 1.2	PS2 Out	PS1 Due Fri, 9/16, 11:59pm
week 4	Tuesday, September 20, 2022	Regular expressions, conversion from REs to NFAs/DFAs	Chapter 1.3		
	Thursday, September 22, 2022	GNFAs and conversion from DFAs ➡️ REs	Chapter 1.3	PS3 Out	PS2 Due Fri, 9/23, 11:59pm
week 5	Tuesday, September 27, 2022	Distinguishable & equivalent states in a DFA, Distinguishability Lemma, the Quotient automaton	Hopcroft, et al. 4.4		
	Thursday, September 29, 2022	State minimization algorithm for DFAs, the Pumping Lemma for regular languages	Hopcroft, et al. 4.4.3 Sipser 1.4	PS4 Out	PS3 Due Fri, 9/30, 11:59pm
week 6	Tuesday, October 4, 2022	Examples of non-regular languages, using the the Pumping Lemma to prove non-regularity	Chapter 1.4		
	Thursday, October 6, 2022	Context Free Grammars, parse trees	Chapter 2.1		
week 7	Tuesday, October 11, 2022	Monday schedule -- no class		PS5 Out	PS4 Due Fri, 10/11, 11:59pm
	Thursday, October 13, 2022	CFG ambiguity, converting DFAs to CFGs, Chomsky normal form	Chapter 2.1		
week 8	Tuesday, October 18, 2022	Deterministic Pushdown Automata	Chapter 2.2		PS5 Due Fir, 10/18, 11:59pm
	Thursday, October 20, 2022	Review			
week 9	Tuesday, October 25, 2022	**MIDTERM EXAM**			
	Thursday, October 27, 2022	The Pumping Lemma for CFLs, examples of non-CFG languages	Chapter 2.3	PS6 Out	
week 10	Tuesday, November 1, 2022	Turing Machines	Chapter 3.1		
	Thursday, November 3, 2022	Working with Turing Machines	Chapter 3.1, 3.2	PS7 Out	PS6 Due Fri, 11/4, 11:59pm
week 11	Tuesday, November 8, 2022	Variants of Turing Machines Church-Turing Thesis	Chapter 3.2, 3.3		
	Thursday, November 10, 2022	Decidable Languages, Enumerators	Chapter 4.1	PS8 Out	PS7 Due Fri, 11/11, 11:59pm
week 12	Tuesday, November 15, 2022	Undecidability	Chapter 4.2		
	Thursday, November 17, 2022	Reductions	Chapter 5.1, 5.3	PS9 Out	PS8 Due Fri, 11/18, 11:59pm
week 13	Tuesday, November 22, 2022	The Recursion Theorem	Chapter 6.1		
	Thursday, November 24, 2022	Thanksgiving!			
week 14	Tuesday, November 29, 2022	Applications of Recursion Theorem Introduction to Complexity	Chapter 6.1, 7.1	PS10 Out	PS9 Due Tue, 11/29, 11:59pm
	Thursday, December 1, 2022	Polynomial Complexity/class P	Chapter 7.1, 7.2		
week 15	Tuesday, December 6, 2022	Class NP	Chapter 7.3		PS10 Due Tue, 12/7, 11:59pm
	Thursday, December 8, 2022	NP-completeness	Chapter 7.4, 7.5		
	Tuesday, December 13, 2022	Examples of NP-complete problems	Chapter 7.5		
	TBA	FINAL EXAM			