CS 465 Theory of Computation
Fall 2018

Time:	M 3:00-4:30 pm, R 3:30-5:00 pm
Place:	Odin 309
Instructor:	Michael Harmon mharmon@lclark.edu
Office Hours:	Immediately following class on Mondays or by appointment.
Prerequisites:	CS 172, Math 215
Textbook:	*Introduction to the Theory of Computation (3rd Edition)* Michael Sipser

Evaluation

Homework	25%
Attendance and Discussion	15%
Midterm Exam	30%
Final Exam	30%

Schedule

Date	**Topic**	**Assignment**	**Due**
Sept 6	Introduction, Sets, Sequences and Tuples	HW 1	
Sept 10	Notation, Terminology and Proof Finding		
Sept 13	Proof Techniques	HW 2	HW 1
Sept 17	Finite Automata		
Sept 20	Nondeterminism	HW 3	HW 2
Sept 24	Regular Expressions		
Sept 27	Pumping Lemma for Regular Languages	HW 4	HW 3
Oct 1	Context-Free Grammars		
Oct 4	Pushdown Automata	HW 5	HW 4
Oct 8	Pumping Lemma for Context-Free Languages		
Oct 11	Fall Break - No Class		
Oct 15	Deterministic Context-Free Languages		HW 5
Oct 18	Midterm Exam		
Oct 22	Computability and Turing Machines		

Oct 25	Turing Machines and Decidability	HW 6	
Oct 29	Nondeterminism and Other Models		
Nov 1	The Church-Turing Thesis	HW 7	HW 6
Nov 5	Decidable Languages		
Nov 8	Undecidability	HW 8	HW 7
Nov 12	Diagonalization		
Nov 15	Turing-Unrecognizable Languages	HW 9	HW 8
Nov 19	Undecidable Problems Pt. 1		
Nov 22	Thanksgiving – No Class		
Nov 26	Undecidable Problems Pt. 2		HW 9
Nov 29	Reducibility	HW 10	
Dec 3	Time Complexity		
Dec 6	P and NP Problems	HW 11	HW 10
Dec 10	NP-completeness		HW 11
Dec 19	Final Exam – 1:00-4:00 pm		

Course Website

There is a Google Classroom site for our course. Unless directed otherwise, I will post homework assignments to the Classroom site. To subscribe to the course website, navigate a web browser to classroom.google.com and log in *with your Lewis and Clark email account*. Click on the + and enter the code `28kkccr` and then click join.