Course Calendar

Mon.	Tues.	Wed.	Thurs.	Fri.
Jan. 16 2023 Martin Luther King Jr. Day	17	18 Motivation · Syllabus · 19c. – 20c. revolution	19	20 Prerequisite Survey Motivation · Argumentation · Truth values
23 Propositional Logic · Propositions · Connectives · Truth tables	24	25 Propositional Logic · Sufficiency · Necessity · Boolean algebras	26 Recitation	27 Problem Set 1 Propositional Logic · Equivalence proofs · Boolean theorems
30 First-Order Logic · Predicates · Quantifiers	31	**Feb. 1 2023** First-Order Logic · Rules of inference · Proofs	2 Recitation	3 First-Order Logic · Validity of arguments · Church's Theorem
6 Problem Set 2 ZF Set Theory · Well-formed formulæ · What is a set? · Why set theory?	7	8 ZF Set Theory · Ax. Existence · Ax. Extensionality · Ax. Pairing · Ax. Union	9 Recitation	10 ZF Set Theory · Unions of sets · Ax. Separation
13 Set Theory · Ax. Regularity · Ax. Power Set · Ax. Infinity	14	15 Problem Set 3 Induction · v. Neumann ordinals · Arithmetic on $\mathbb{N}$ · L.E.P. of $\mathbb{N}$	16 Recitation	17 Induction · Weak induction · Strong induction
20 Problem Set 4 Recursion · Recurrence relations · Algorithms	21	22 Recursion · Big-$\mathcal{O}$ · Big-Ω · $\preccurlyeq$-ordering	23 Recitation	24 Midterm 1
27 Functions · Injections · Surjections · Bijections	28	**Mar. 1 2023** Functions · Monomorphisms · Epimorphisms · Isomorphisms	2 Recitation	3 Problem Set 5 Functions · Schröder-Bernstein · Permutations

Mon.	Tues.	Wed.	Thurs.	Fri.
6 Cardinality · Finite sets · Countable sets · Ax. Choice	**7**	**8** Cardinality · Some theorems	**9** Recitation	**10** Problem Set 6 Cardinality · Uncountable sets
13 Spring Break Midterm Grades Due	**14** Spring Break	**15** Spring Break	**16** Spring Break	**17** Spring Break
20 Cardinality · Strings · Sequences	**21**	**22** Relations · Properties · Preorders · Partial orders	**23** Recitation	**24** Problem Set 7 Relations · Equiv. Relations
27 Number Theory	**28**	**29** Number Theory	**30** Recitation	**31** Problem Set 8 Number Theory
Apr. 3 2023 Number Theory	**4**	**5** Number Theory	**6** Recitation Problem Set 9	**7** Easter Holiday
10 Easter Holiday	**11**	**12** ???	**13** Recitation	**14** Midterm 2
17 Graph Theory	**18**	**19** Graph Theory	**20** Recitation	**21** Problem Set 10 Graph Theory
24 Graph Theory	**25**	**26** Graph Theory	**27** Recitation	**28** Problem Set 11 Graph Theory

Mon.	Tues.	Wed.	Thurs.	Fri.
May. 1 2023 ???	2	3 Review	4 Reading Days	5 Reading Days
8	9	10 Final Exam 4:15pm – 6:15pm	11	12
15 Final Grades Due	16	17	18	19