Math 430 Schedule – Spring 2020
Last updated: April 15, 2020

This is a *tentative* schedule for the spring semester; it is subject to change based on how quickly we cover material as well as student interest. In particular, the schedule after Spring Break (and especially after Exam 2!) is extremely flexible. All section numbering refers to the 7th edition of *A First Course in Abstract Algebra* by John Fraleigh.

Week number	Day	Textbook section	Topics covered
January 13, Week 1	M	2, 4	Course introduction; binary operations; definition of a group
	W	3, 4	Groups; isomorphism of binary structures
	F	4	Groups; examples of groups
January 20, Week 2	M		No Class – Holiday
	W	13	Homomorphisms; isomorphisms
	W	5, 6	Subgroups; cyclic groups
January 27, Week 3	M	6	More properties of cyclic groups
	W	8	Permutation groups
	F	8, 9	Permutations, cycles, orbits, Cayley's theorem,
February 3, Week 4	M	11	Finitely generated abelian groups
	W	10	Cosets
	F	10, 13	Lagrange's theorem; cosets and homomorphisms
February 10, Week 5	M	10, 13, 14	Quotient groups
	W	14	Quotient groups, first isomorphism theorem
	F	15	Computations with quotient groups
February 17, Week 6	M	2-6, 8-11, 13-15	Computations and review for Exam 1
	W		Exam 1
	F	18	Rings and fields
February 24, Week 7	M	18, 19	Properties of rings, fields, integral domains
	W	19, 20	Characteristic, number theory, Fermat and Euler's theorems
	F	21	Field of fractions of an integral domain
March 2, Week 8	M	22	Rings of polynomials; discussion of goal for rest of the semester
	W	23	Factorization of polynomials
	F	23, 26	Factorization continued; ring homomorphisms and quotients
March 23, Week 10	M	26	More on ring homomorphisms
	W	27	Prime and maximal ideals
	F	27	Prime and maximal ideals
March 30, Week 11	M	23, 27, 29	Review of the goal, extension fields
	W	29	Extension fields
	F	20, 30	Extension fields, vector spaces

Week number	Day	Textbook section	Topics covered
April 6, Week 12	M	29, 30	Extension fields, vector spaces
	T		Exam 2 due on Crowdmark at 11:00 PM Central
	W	31	Vector spaces, algebraic extensions
	F	33	Finite fields
April 13, Week 13	M	16	Group actions
	W	16, 36	Group actions and Sylow theory
	F	36, 37	Sylow theory and applications
April 20, Week 14	M	37	More examples of Sylow theory
	W	All	Examples, applications, and review
	F	All	Examples, applications, and review