Abstract Algebra (Math 470) Fall 2022 Schedule

MW 4 pm to 5:15 pm in Markstein Hall

Text: Contemporary Abstract Algebra 9th Edition by Joseph A. Gallian

| ■ August | | | September 2022 | | | October ▶ |
|----------|---|---------|--|-----|-----------------|-----------|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | Aug. 29 First Day of Classes Introductions and expectations What is Abstract Algebra? | Aug. 30 | Aug. 31 Ch. 0: Preliminaries | 1 | 2 | 3 |
| 4 | 5 Labor Day, no class | 6 | 7 Ch. 1: Intro to Groups. Examples | 8 | 9 Homework Due | 10 |
| 11 | 12 Ch. 2: Groups. Elementary Properties | 13 | 14 Ch. 2: Groups. Elementary Properties | 15 | 16 | 17 |
| 18 | 19 Ch. 2: Groups. Elementary Properties | 20 | 21 Ch. 3: Finite Groups; Subgroups | 22 | 23 Homework Due | 24 |
| 25 | 26 Quiz 1 Ch. 3: Finite Groups; Subgroups | 27 | 28 Ch. 4: Cyclic Groups | 29 | 30 | |

| ✓ September | | | October 2022 | | | November ► |
|-------------|--|-----|---|-----|-----------------|------------|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat 1 |
| 2 | 3 Ch. 4: Cyclic Groups | 4 | 5 Ch. 5: Permutation Groups | 6 | 7 Homework Due | 8 |
| 9 | 10 Ch. 6: Isomorphisms (and a bit about Homomorphisms) | 11 | 12 Ch. 6: Isomorphisms (and a bit about Homomorphisms) | 13 | 14 | 15 |
| 16 | 17 Ch. 7: Cosets and Lagrange's Theorem | 18 | 19 Ch. 7: Cosets and Lagrange's Theorem | 20 | 21 Homework Due | 22 |
| 23 | 24 Quiz 2 Ch. 8: External Direct Products | 25 | 26 Ch. 8: External Direct Products | 27 | 28 | 29 |
| 30 | 31 Ch. 9: Normal Subgroups and Factor Groups (Quotient Groups) | | 1 | 1 | 1 | |

| October | | | November 2022 | 2 | | December ► |
|---------|--|-----|---|--|---|------------|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | | 1 | 2 Ch. 9: Normal Subgroups and Factor Groups (Quotient Groups) | 3 | 4 Homework Due | 5 |
| 6 | 7 Ch. 10: Group Homomorphisms | 8 | 9 Ch. 10: Group Homomorphisms and Statement of the Fundamental Theorem of Finite Abelian Groups | 10 | 11 Veterans Day, no class | 12 |
| 13 | 14 Primary Source Project: Holder's Quotient Group Concept | 15 | 16 Primary Source <u>Project: Holder's</u> Quotient Group <u>Concept</u> | 17 | 18 Homework Due | 19 |
| 20 | 21 Quiz 3 Ch. 12: Introduction to Rings | 22 | 23 Ch. 12: Introduction to Rings | 24 Thanksgiving holiday, no class | 25 Thanksgiving holiday, no class | 26 |
| 27 | 28 Ch. 12: Introduction to Rings and Ch. 13: Integral Domains | 29 | 30 Ch. 13: Integral Domains | | | |

| ■ November | | | December 2022 | 2 | | January ▶ |
|------------|---|-----------------|---|--------------------------------------|---------------------------------------|-----------------|
| Sun | Mon | Tue | Wed | Thu 1 | Fri 2 Homework Due | Sat |
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| 4 | 5 Ch. 14: Ideals and Factor Rings (Quotient Rings) | 6 | 7 Ch. 14: Ideals and Factor Rings (Quotient Rings) | 8 | 9 Homework Due Last day of classes | 10 |
| 11 | 12 Exam Week | 13 Exam Week | 14 Exam Week | 15 Exam Week | 16 Exam Week | 17 Exam Week |
| 18 | 19 | 20 | 21 | 22 Grades due from instructors | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |
| | | | | | | |

Possible Grading Scheme

| | 0 |
|------------------------|-----|
| Homework | 25% |
| Primary Source Project | 15% |
| Quiz 1 | 10% |
| Quiz 2 | 15% |
| Quiz 3 | 15% |
| Final | 20% |

A possible final Primary Source Project is an option: <u>Dedekind and the Creation of Ideals</u>