

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

| September 2022 | | | | | | |
|----------------|--|----------------|--|-----|-----------------|-----------|
| ◀ August | | | | | | 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 | |

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

| November 2022 | | | | | | |
|---------------|---|-----|--|---|---|-----|
| ◀ October | | | | | | |
| December ▶ | | | | | | |
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | Oct. 31 Ch. 10: Group Homomorphisms | 1 | 2 Ch. 10: Group Homomorphisms and Statement of the Fundamental Theorem of Finite Abelian Groups | 3 | 4 Homework Due | 5 |
| 6 | 7 <u>Primary Source Project: Holder's Quotient Group Concept</u> | 8 | 9 <u>Primary Source Project: Holder's Quotient Group Concept</u> | 10 | 11 Veterans Day, no class | 12 |
| 13 | 14 Ch. 12: Introduction to Rings | 15 | 16 Ch. 12: Introduction to Rings | 17 | 18 Homework Due | 19 |
| 20 | 21 Quiz 3 Ch. 13: Integral Domains | 22 | 23 Ch. 14: Ideals and Factor Rings (Quotient Rings) | 24 Thanksgiving holiday, no class | 25 Thanksgiving holiday, no class | 26 |
| 27 | 28 Ch. 14: Ideals and Factor Rings (Quotient Rings) | 29 | 30 Ch. 15: Ring Homomorphisms | | | |

| December 2022 | | | | | | |
|---------------|---|---------|--|--------------------------------------|---------------------------------------|-----------|
| ◀ November | | | | | | |
| | | | | | | January ▶ |
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | Nov. 28 Ch. 14: Ideals and Factor Rings (Quotient Rings) | Nov. 29 | Nov. 30 Ch. 15: Ring Homomorphisms | 1 | 2 Homework Due | 3 |
| 4 | 5 Ch. 16: Polynomial Rings | 6 | 7 Ch. 16: Polynomial Rings | 8 | 9 Homework Due Last day of classes | 10 |
| 11 | 12 Final Exam 4-6 pm in Markstein Hall 208 | 13 | 14 | 15 | 16 | 17 |
| 18 | 19 | 20 | 21 | 22 Grades due from instructors | 23 | 24 |
| 25 | 26 | 27 | 28 | 29 | 30 | 31 |

Possible Grading Scheme

| | |
|------------------------|-----|
| 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: [Dedekind and the Creation of Ideals](#)