

# Algebra I

**Schedule:** *Tentative*

Date	Title & Note	Assignments
April 9	Lecture 1. Groups	Review 1, Ex. 1.1, 2, 24 and 2 from Ex.1
April 11	Lecture 2. Elementary Properties + Recitation	Review 2, Five from Ex. 2
April 13	Recitation of Ex. 2 (Volunteers)	Review 1-2 and Read 3
April 16	Lecture 3. Finite Groups; Subgroups	Review 3, Five from Ex. 3
April 18	Recitation of Ex. 3 (Volunteers)	Review 3 and Read 4
April 20	Lecture 4. Cyclic Groups	Review 4, Five from Ex. 4
April 23	Recitation of Ex. 4 (Volunteers)	T/F and Five from Supplements 1-4
April 25	Recitation of Supplements 1-4	Review 1-4 and Read 5
April 27	Lecture 5. Permutation Groups	Review 5, Five from Ex. 5
May 2	Recitation of Ex. 5 (Volunteers)	Review 5 and Read 6
May 4	Lecture 6. Isomorphisms	Review 6, Five from Ex. 6
May 7	Recitation of Ex. 6 (Volunteers)	Review 6 and Read 7
May 9	Lecture 7. Cosets and Lagrange's Theorem	Review 7, Five from Ex. 7
May 11	Recitation of Ex. 7 (Volunteers)	Review 7 and Read 8
May 14	Lecture 8. External Direct Products	Review 8, Five from Ex. 8
May 16	Recitation of Ex. 8 (Volunteers)	T/F and Five from Supplements 5-8
May 21*	Recitation of Supplements 5-8	Review 5-8 and Read 9
May 23*	Lecture 9. Normal Subgroups and Factor Groups	Review 9, Five from Ex. 9
May 25*	Recitation of Ex. 9	Review 9 and Read 10
May 28	Lecture 10. Group Homomorphisms	Review 10, Five from Ex. 10
May 30	Recitation of Ex. 10	Review 10 and Read 11
June 1	Lecture 11. Fund. Thm of Finite Abelian Groups	Review 11, Five from Ex. 11
June 4	Recitation of Ex. 11 (Volunteers)	T/F and Five from Supplements 9-11
June 6	Recitation of Supplements 9-11	Review Chapters 9-11 and Read 24
June 11	Lecture 12. Sylow Theorems	Review 24, Five from Ex. 24
June 13	Recitation of Ex. 24	Review 24 and Study Review Sheet
June 15	Review and Recitation	Preparation for Final Exam
June 18	Review and Recitation	Preparation for Final Exam

\*: C-Week Schedule. No class on May 18 due to New Student Retreat.

All assignments are due the day of next class. No class on June 8 due to instructor's business trip, makeup TBA. Algebra I final will be given during the term exam week.

**Textbook for Algebra I and II** Joseph A. Gallian, Contemporary Abstract Algebra – 8th Edition – International Version — Paper backs ISBN-13: 978-1133606758 640 pages, available at ICU Bookstore

**Grading Policy** Grade will be decided by the performance on the following: Home Work (35%), Class Participation by Solving Problems (15%) and Final Exam (50%).

**Home Page and More** <https://icu-hsuzuki.github.io/science/class/algebra1/index-j.html>  
 Schedule, references, old quizzes, old finals, old midterms and their solutions, and much more.  
 Author's Home Page: <http://www.d.umn.edu/~jgallian/>  
 Supporting documents, True/False Quizzes, software and much more.  
<https://moodle.icu.ac.jp/27/course/view.php?id=1795>, Enrollment Key: alg1\_2018  
 Sage, Computer Algebra: <http://www.sagemath.org/>  
<https://icu-hsuzuki.github.io/science/computer/education/sage-j.html> (*Japanese Support*)

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