

# Algebra I

## Schedule

Date	Title & Note	Assignments
April 10	Lecture 1. Groups	Read 1, Ex. 1.2, 1.3, 1.22 (7th edition)
April 13	Lecture 2. Examples + Recitation	Read 2, Five from Ex.2
April 15	Recitation Ex. 2 (Volunteers)	Review 2
April 17	Lecture 3. Finite Groups; Subgroups	Read 3, Five from Ex.3
April 20	Recitation Ex. 3 (Volunteers)	Review 3
April 22	Lecture 4. Cyclic Groups	Read 4, Five from Ex.4
April 24	Recitation Ex. 4 (Volunteers)	T/F and Five from Supplements 1-4
April 27	Lecture 5. Permutation Groups	Read 5, Five from Ex.5
April 29	Recitation Ex. 5 (Volunteers)	Review 5
May 1	Lecture 6. Isomorphisms	Read 6, Five from Ex.6
May 8	Recitation Ex. 6 (Volunteers)	Review 6
May 11	Lecture 7. Cosets and Lagrange's Theorem	Read 7, Five from Ex.7
May 13	Recitation Ex. 7 (Volunteers)	Review 7
May 18*	Lecture 8. External Direct Products	Read 8, Five from Ex.8
May 20*	Recitation Ex. 8 (Volunteers)	T/F and Five from Supplements 5-8
May 22*	Lecture 9. Normal Subgroups and Factor Groups	Read 9, Five odds from Ex.9
May 25	Recitation of Odd Numbered Problems of Ex. 9	Read 9, Five evens from Ex.9
May 27	Recitation of Even Numbered Problems of Ex. 9	Review 9
May 29	Lecture 10. Group Homomorphisms	Read 10, Five odds from Ex.10
June 1	Recitation of Odd Numbered Problems of Ex. 10	Read 10, five evens from Ex.4
June 3	Recitation of Even Numbered Problems of Ex. 10	Review 10
June 5	Lecture 11. Fund. Thm of Finite Abelian Groups	Read 11, Five odds from Ex.11
June 8	Recitation of Odd Numbered Problems of Ex. 11	Read 11, Five evens from Ex.11
June 10	Recitation of Even Numbered Problems of Ex. 11	T/F and Five from Supplements 9-11
June 12	Lecture 12. Sylow Theorems	Read 24, Five from Ex.24
June 15	Recitation Ex. 24 (Volunteers)	Review 24
June 17	Review and Recitation	Preparation of Final Exam

\*: C-Week Schedule

All assignments are due next class.

Algebra I final will be given during the term exam week. The schedule above is subject to change.

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

**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** <http://subsite.icu.ac.jp/people/hsuzuki/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.  
 Moodle: <https://moodle.icu.ac.jp/27/course/view.php?id=204>, Enrollment Key: alg1\_2015  
 Math Word Search, J to E and E to J: <http://cpu.icu.ac.jp/math/search-text.cgi?>  
 Sage, Computer Algebra: <http://www.sagemath.org/>  
<http://subsite.icu.ac.jp/people/hsuzuki/science/computer/education/sage-j.html> (*Japanese Support*)

Hiroshi Suzuki (Email: [hsuzuki@icu.ac.jp](mailto:hsuzuki@icu.ac.jp))