

Faculty of Science Course Syllabus
Department of Mathematics and Statistics
MATH 3031
Abstract Algebra I
Fall 2020

Lectures: Online (asynchronous)
Instructor: Neil J. Ross neil.jr.ross@dal.ca
Office hours: MWF 10:35 – 11:25 on Microsoft Teams

Course Description

Groups, subgroups, permutation groups, cosets, direct products, fundamental theorem of finitely generated abelian groups, simple groups, group homomorphisms, factor groups, isomorphism theorems of groups, series of groups, Sylow theorems and applications. Additional topics may include free groups, group actions, and groups in Topology.

Course Prerequisites

MATH 2040 or MATH 2135.

Course Objectives/Learning Outcomes

- Become familiar with the objects and methods of group theory.

Course Materials

- *A First Course in Abstract Algebra* (7th ed.) by John B. Fraleigh.

Course Delivery

The course material will be delivered through course notes and accompanying videos. Every week (typically on Monday mornings) the notes and videos covering the week's material will be posted on Brightspace.

On Mondays, Wednesdays, and Fridays, the instructor will be available for online office hours on Microsoft Teams. Students are encouraged to attend these office hours even if they don't have specific questions, as discussing the week's material can help in developing an intuition for mathematical concepts. Alternative meeting times can be arranged on a case-by-case basis.

Questions and concerns about the delivery of the course should be addressed to the instructor.

Course Assessment

Students are required to attend an individual introductory online meeting with their instructor during the first week of the term. Modalities for setting up this meeting will be posted on Brightspace shortly before the beginning of the term.

There will be no timed examinations. The course grade will be entirely based on assignment marks. Assignments will be posted weekly on Brightspace, along with the course notes and videos. In total, there will be 11 assignments.

Assignments 1 through 10 will account for 70% of the course grade. The 11th and last assignment will account for the remaining 30% of the course grade. The 11th assignment will cover all the material discussed in class and students will be required to briefly meet online with their instructor to discuss their work.

The final grade will be computed according to the grading scheme below.

Component	Weight (% of final grade)
Assignments 1-10	70%
Assignment 11	30%

The conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale.

Conversion of numerical grades to Final Letter Grades

A+ (90-100)	B+ (77-79)	C+ (65-69)	D (50-54)
A (85-89)	B (73-76)	C (60-64)	F (<50)
A- (80-84)	B- (70-72)	C- (55-59)	

Course Policies

Students are encouraged to collaborate when working on their assignments but must prepare their final copy individually. Assignments must be submitted by the posted deadline. Late assignments will not be accepted and will result in a grade of 0 unless a prior arrangement was made.

Student emails will be answered within 48 hours.

Course Content

The course will cover Chapters I, II, III, and IV of the textbook.

Faculty of Science Course Syllabus (Section B)
MATH 3031
Abstract Algebra I

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: <http://www.dal.ca/cultureofrespect.html>

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

https://www.dal.ca/academics/important_dates.html

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html

Missed or Late Academic Requirements due to Student Absence (policy)

https://www.dal.ca/dept/university_secretariat/policies/academic/missed-or-late-academic-requirements-due-to-student-absence.html

Student Resources and Support

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors: <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Black Students Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: <https://libraries.dal.ca/>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Fair Dealing Guidelines <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

Other supports and services

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html

Student Advocacy: <https://dsu.ca/dsas>

Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety

Biosafety: <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>