Important. The course instructor for this class is Professor Joe Repka, who is temporarily unavailable. I, Dror, was asked to replace Joe for the first semester. Thus this page the the **About This Class (https://q.utoronto.ca/courses/398996/pages/about-this-class)** document are partial, and cover the second semester in less detail, so as to leave Prof. Repka the freedom to teach the class as he believes it should be taught. Schedules and policies may change once Prof. Repka is back.

@Dror Bar-Natan (http://www.math.toronto.edu/~drorbn/) @Classes (http://www.math.toronto.edu/~drorbn/classes/) @2025-26 (http://www.math.toronto.edu/~drorbn/classes/#2526)

Primary Instructor. Professor Joe Repka.

Substitute Instructor. Dror Bar-Natan (http://www.math.toronto.edu/~drorbn/), drorbn@math.toronto.edu (mailto:drorbn@math.toronto.edu) (email for course administration matters only; math on email is slow and prone to misunderstandings, so I generally avoid it). Office: Bahen 6178.

Teaching Assistants. Matt Koster (matthew.koster@mail.utoronto.ca (mailto:matthew.koster@mail.utoronto.ca)) and Jacob Taylor (jacobw.taylor@mail.utoronto.ca (mailto:jacobw.taylor@mail.utoronto.ca)).

Classes. Wednesdays 10-12 at SS1073 (fall) and BA1190 (spring) and Fridays 11-12 at GB248.

Fall Office Hours. With Dror on Wednesday September 10 at 1-2 and after that on Wednesdays at 2-3 at BA6178 and at http://drorbn.net/vchat (http://drorbn.net/vchat).

Tutorials. Fridays 1-2 at WO30 with Jacob and 2-3 at FE213 with Matt, starting September 12.

Text. Abstract Algebra, 3rd Edition by Dummit and Foote. The textbook is not required for the course, but it is highly recommended. Older editions should be similar enough that they can be used.

Fall Semester Blackboard Shots. See https://drorbn.net/bbs/show.php?prefix=25-347 (https://drorbn.net/bbs/show.php?prefix=25-347).

Fall Semester Course Calendar

#	Week of ...	
1	September 1-5	Tuesday: UofT classes begin. Wednesday: The Rubik's cube problem and the very basics about groups, partially following https://www.math.toronto.edu/~drorbn/Talks/Cambridge-1301 (https://www.math.toronto.edu/~drorbn/Talks/Cambridge-1301).

#	Week of ...	
		Friday: Commutative and non-commutative Gaussian elimination. Blackboard shots are **here** (https://katlas.math.toronto.edu/drorbn/bbs/show?prefix=25-347#250905-122039) .
2	September 8-12	Handout: **About This Class** (https://q.utoronto.ca/courses/398996/pages/about-this-class) . Wednesday: More Non-Commutative Gaussian Elimination. Blackboard shots are **here** (https://katlas.math.toronto.edu/drorbn/bbs/show?prefix=25-347#250910-104537) . Thursday: HW01 is on **Crowdmark** (https://q.utoronto.ca/courses/398996/modules/1248110) , with a PDF copy **here** (https://drorbn.net/AcademicPensieve/Classes/25-347-GroupsRingsFields/HW01.pdf) . It is due on Friday September 19 at 11:59PM. Friday: An **NCGE animation** (https://drorbn.net/AcademicPensieve/Classes/25-347-GroupsRingsFields/Rubiks_Cube_Simulation_NCGE_wCredit.html) by Yudai Suzuki using ChatGPT (see **their dialog** (https://chatgpt.com/share/68c2e80f-0410-800b-9512-e06ac51659b4)). Friday: The "hard theorem" of NCGE, a word on homomorphisms. Blackboard shots are **here** (https://drorbn.net/bbs/show?prefix=25-347#250912-162522) .
3	September 15-19	Wednesday: Homomorphisms, conjugations, kernels, images, normal subgroups. Blackboard shots are **here** (https://drorbn.net/bbs/show?prefix=25-347#250917-122511) . Thursday: HW2 will likely be assigned. Friday: Class and Tutorials.
4	September 22-26	Wednesday: Class. Thursday: HW3 will likely be assigned. Friday: Class and Tutorials.

#	Week of ...	
5	September 29 - October 3	Wednesday: Class. Thursday: HW4 will likely be assigned. Friday: Class and Tutorials.
6	October 6-10	Wednesday: Class. Thursday: HW5 will likely be assigned. Friday: Class and Tutorials.
7	October 13-17	Monday is Thanksgiving, UofT closed. Wednesday: Class. Thursday: HW6 will likely be assigned. Friday: Class and Tutorials.
8	October 20-24	Wednesday: Class. Friday: Class, no tutorials.
R	October 27-31	Reading Week - no classes, no tutorials, no office hours.
9	November 3-7	Tuesday: Term Test I will take place at 7-9pm at EX310. Wednesday: Class. Thursday: HW7 will likely be assigned. Friday: Class and Tutorials.
10	November 10-14	Wednesday: Class. Thursday: HW8 will likely be assigned. Friday: Class and Tutorials.
11	November 17-21	Wednesday: Class. Thursday: HW9 will likely be assigned.

#	Week of ...	
		Friday: Class and Tutorials.
12	November 24-28	Wednesday: Class. Friday: Last fall semester class!
13	December 1-5	Fall Final Assessments begin on Friday.

Further resources:

- The University of Toronto **Faculty of Arts & Science Calendar (https://artsci.calendar.utoronto.ca/)** .
- Academic integrity **Information for Students (https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-academic-integrity#:~:text=Academic%20Integrity%20in%20the%20Faculty,%2C%20respect%2C%20responsibility%20and%20courage.)** .
- My personal **1982 Algebra B1 (https://drorbn.net/AcademicPensieve/Classes/82-AlgebraB1/)** notebook (as a student, in Hebrew).
- My personal **1983 Rings and Modules (http://drorbn.net/AcademicPensieve/Classes/83-RingsAndModules/index.html)** notebook (as a student, in Hebrew).
- My **2014 Core Algebra I (https://drorbn.net/?title=14-1100)** , **2011 Core Algebra I (https://drorbn.net/index.php?title=11-1100)** , and **2010 Core Algebra I (https://drorbn.net/index.php?title=10-1100)** web pages (similar graduate classes).
- My **2008 MAT 401 (https://drorbn.net/index.php?title=08-401)** and **2007 MAT 401 (https://drorbn.net/index.php?title=07-401)** web pages (similar math majors classes).
- My personal **25-347-GroupsRingsFields (http://drorbn.net/AcademicPensieve/Classes/25-347-GroupsRingsFields)** notebook.