

Department of Mathematics

Contact Us

The Department of
Mathematics
Middlesex College
London, ON
Canada, N6A 5B7

Tel: 519.661.3639
Fax: 519.661.3610

Undergraduate inquiries:
math-inquiry@uwo.ca

Graduate inquiries:
math-grad-program@uwo.ca

All other inquiries:
mathdept@uwo.ca

Math 3020A: Introduction to Abstract Algebra (Fall 2019)

Essential information

- **Lectures:** Tu 9:30-10:30, Th 9:30-11:30 in MC 107
- **Office hours:** Th 3:30-5 in MC 116 or by appointment
- **Instructor:** [Chris Kapulkin](#)
- **Email:** [kkapulki \(at\) uwo.ca](mailto:kkapulki@uwo.ca)
- **Office:** MC 116
- **Teaching assistants:** Brandon Doherty and Udit Mavinkurve
- **Website:** <http://uwo.ca/math/faculty/kapulkin/courses/2019-3020A>
- **Prerequisites:** Math 1600A/B and one of Math 1120A/B, 2120A/B, 2124A/B, 2151A/B, 2155F/G, AppMath 2811B, CS 2214A/B.

Textbook

The course will largely follow (a selection of topics from):

- J.B. Fraleigh, *A First Course in Abstract Algebra*, Seventh Edition, 2002.

The recommended homework problems will be a selection from this text.

Other excellent abstract algebra texts include:

- P. Aluffi, *Algebra: Chapter 0*, Graduate Studies in Mathematics 104, 2009.
- D. Dummit, R. Foote, *Abstract Algebra*, Third Edition, 2003.
- J. Gallian, *Contemporary Abstract Algebra*, Ninth Edition, 2017.

Course content

The topics will include:

- Foundations: sets, functions, and relations.
- Group theory: groups, subgroups, quotient groups, and homomorphisms.
- Rings and fields: ideals, quotients, homomorphisms, integral domains, finite fields.
- Factorization: unique factorization domains, Euclidean domains (time permitting).

Evaluation

The final grades will be based on the following components:

- weekly quizzes: 19.99999999%
- midterm: 30.00000001%
- final exam: 50%

Midterm exam

- Date: October 22, 2019 (Tuesday)
- Time: 7-9 PM
- Location: P&AB 148

Final exam

- Date: December 17, 2019 (Tuesday)
- Time: 7-10 PM
- Location SH 3315

Quizzes

There will be 10 weekly quizzes on Tuesdays in the last 15 minutes of the class. The worst quiz grade will be dropped and the best will be counted twice.

Recommended homework problems

Section	Recommended problems
2	17, 18, 19, 20, 23, 24, 26, 35, 36, 37
3	2, 3, 8, 9, 10, 11, 26, 27, 33
4	8, 10, 11, 14, 15, 17, 31-37, 41
5	8-13, 47, 48, 51, 53
13	1-6, 12-14, 25-29, 49-52
6	32, 44, 45, 48, 49
7	1-6
8	40-43, 52
10	1-5, 12, 20-24, 26-29, 31-32, 34, 37, 39-40, 43
14	1-15
15	1-12, 35-36
11	1-7, 9-27, 47, 50-51, 53
18	1-22, 37-38, 44, 46, 55
19	28, 30
21	2, 4
26	1, 3, 17-21, 24-26, 30
27	1-5, 18-19, 24, 28, 30-31, 34-35
22	1-6, 22, 24-25
23	1-4, 9-14, 35
45	1-8, 25-28

Senate Policy on Prerequisites

Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Course Websites

Students should check OWL (<http://owl.uwo.ca>) or the course website, if not hosted on OWL on a regular basis for news and updates for all of the courses in which they are enrolled. This is the primary method by which information will be disseminated to all students in each class. Students are responsible for checking OWL on a regular basis.

Accommodation and Accessibility

If you are unable to meet a course requirement due to illness or other serious circumstances, you must seek approval for the absence as soon as possible. Approval can be granted either through a self-reporting of absence or via the Dean's Office/Academic Counselling unit of your Home Faculty. If you are a Science student, the Academic Counselling Office of the Faculty of Science is located in NCB 280, and can be contacted at scibmsac@uwo.ca.

For further information, please consult the university's policy on academic consideration for student absences: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf.

If you miss the Final Exam, please contact your faculty's Academic Counselling Office as soon as you are able to do so. They will assess your eligibility to write the Special Exam (the name given by the university to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (see http://www.registrar.uwo.ca/examinations/exam_schedule.html).

Academic Policies

The website for Registrarial Services is <http://www.registrar.uwo.ca>

In accordance with policy, <http://www.uwo.ca/its/identity/activatenonstudent.html>, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

Students must use their Western (@uwo.ca) email addresses when contacting their instructors.

Electronic devices (including cell phones, ipods and calculators) are NOT allowed on exams and may be confiscated.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

Support Services

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Student Accessibility Services (SAS) at 661-2147 if you have any questions regarding accommodations.

The policy on Accommodation for Students with Disabilities can be found here: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic%20Accommodation_disabilities.pdf.

The policy on Accommodation for Religious Holidays can be found here: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf.

Learning-skills counsellors at the Student Development Centre (<http://www.sdc.uwo.ca>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (http://www.health.uwo.ca/mental_health) for a complete list of options about how to obtain help.

Additional student-run support services are offered by the USC, <http://westernusc.ca/services>.

The Department of Mathematics
Middlesex College
London, Ontario, Canada, N6A 5B7
Tel: 519.661.3639
math-inquiry@uwo.ca (undergraduate), math-grad-program@uwo.ca
(grad), mathdept@uwo.ca (other)
[Privacy](#) | [Web Standards](#) | [Terms of Use](#) | [Accessibility](#)

Key Topics:

[About Us](#)
[Undergraduate](#)
[Graduate](#)
[Research](#)
[People](#)

Popular Resources:

[Calculus 1000A/B online](#)
[Office of the Registrar](#)
[Academic Calendar](#)
[Intranet Login](#)

