

# MATH 231 - Euclidean Geometry

Winter 2020

## General information

**Instructor:** Martin Frankland

**Email:** Martin.Frankland@uregina.ca

**Office:** CW 307.17

**Office hours:** Mondays 3-4, Tuesdays 4-5, Fridays 2-3, or by appointment.

**Lectures:** MWF 4:30 - 5:20 in Classroom Building 130. There are no tutorials.

**Textbook:** *Geometry*, by Roger Fenn.

**Prerequisite:** MATH 221. Recommended: MATH 122.

**UR Courses:** <https://urcourses.uregina.ca/>

This site will contain announcements, additional course material, and solutions to selected problems. The site is updated throughout the semester, so please check back regularly.

## Course outline

MATH 231 covers the following topics:

- The geometry of the Euclidean plane: Euclidean axioms, angles and lines, triangles, polygons, isometries and similarities, circles.
- Coordinate geometry: numbers, coordinate systems, equation of a line, distances and angles, area.
- The geometry of complex numbers: definition of complex numbers, operations, modulus, lines and circles in the complex plane, roots of unity.
- Conics: conic sections, conics as quadratic curves, focal properties of conics.

## Tutoring services

- Math and Stats Tutoring:  
<https://www.uregina.ca/science/mathstat/undergrad/resources/help-centre.html>

The following services focus on first-year courses, but might have resources for MATH 231.

- Student Success Centre:  
<http://www.uregina.ca/student/ssc/tutoring/math-stats-tutoring/>
- Global Learning Centre:  
<https://www.uregina.ca/international/global-learning-centre/glc-services-programs.html#tutoring>
- Champion College Math/Stats Help Centre:  
<https://championcollege.ca/student-services/math-stats-tutoring/>

## Grading scheme

- Homework: 16%
- Midterms (2): 34%
- Final Exam: 50%

## Exams

- Midterm 1: **Wednesday February 12**, in class.
- Midterm 2: **Wednesday March 25**, in class.
- Final exam: **Friday April 24**, 2:00 - 5:00 PM, room to be announced.

The final exam covers the entire semester.

All exams will be **closed book**: notes or class material are not allowed.

Calculators or electronic devices (cell phones, iPads, etc.) are **not allowed** on exams.

## Homework

Homework will be assigned more or less weekly and collected in class. Selected problems from each assignment will be graded.

**Late homework will not be accepted.**

The **lowest homework score** will be dropped.

If needed, homework can be submitted in advance: in lectures, office hours, or at the Math Office (CW 307.14).

## Missed course work

Information about missed course work can be found in the *Academic Regulations*, section “Deferral of Final Exams or Course Work”, available at:

<https://www.uregina.ca/student/registrar/resources-for-students/academic-calendars-and-schedule/undergraduate-calendar/sections.html>

See in particular the sections “Grounds for Deferral” and “Supporting Documentation”.

**Schedule conflicts:** If you have a schedule conflict between an exam and another course or university sponsored activity (e.g. conference, sports tournament), please contact me in advance, **no later than a week before the exam** in question.

**Illness:** If you are unable to meet a course requirement due to illness or other serious circumstances, please contact me as soon as possible.

**Homework:** An excused missed assignment will be dropped. There will be no make-up homework.

**Midterms:** In case of excused absence from a midterm, the midterm will be dropped. There will be no make-up midterm.

**Final:** You will need to submit the form *Deferral of term work and/or final exam*, available at:

[https://www.uregina.ca/student/registrar/assets/docs/pdf/forms/deferral\\_form.pdf](https://www.uregina.ca/student/registrar/assets/docs/pdf/forms/deferral_form.pdf)

For more information, please consult the *Academic Regulations*, section “Deferral of Final Exam”, or contact Science Student Services, Lab Building 238.

## Academic integrity

Working on homework with your peers is allowed. However, each student must write **their own** solutions. Handing in suspiciously similar solutions will be considered an instance of cheating.

Handing in any material copied from the internet or another source will likewise be considered cheating. **Cite sources** that you consult, for instance Wikipedia, Math Stack Exchange, or online course notes.

Scholastic offences are taken seriously and will not be tolerated. For more information, please consult the *Student Code of Conduct and Right to Appeal*, section “Academic Misconduct”, available at:

<https://www.uregina.ca/student/registrar/resources-for-students/academic-calendars-and-schedule/undergraduate-calendar/sections.html>

as well as the *Faculty of Science Student Handbook*, section “Academic Integrity”, available at:

<https://www.uregina.ca/science/assets/docs/pdf/programpdf/new-student-manual.pdf>

## Accessibility

Any student with special needs who may need accommodation should contact the Centre for Student Accessibility at:

<https://www.uregina.ca/student/accessibility/>

After I receive the letter from the Centre for Student Accessibility, please schedule an appointment with me to discuss the accommodation.