



Math0109A 570
Preparatory Mathematics
Fall 2025

Instructor: Dr. Joseph Turnbull
Email: jturnbu7@uwo.ca

Course Information

Mode of Instruction: In Person

Calendar Description:

Review of mathematical operations and linear equations; introduction to functions; introductory finite mathematics, including combinatorics and probability; introductory financial mathematics, including compound interest and annuities.

Pre-requisite(s): Ontario Secondary School MCF3M, MCR3U, or equivalent.

Anti-requisite(s): Ontario Secondary School MCV4U, Mathematics 0105A/B, or any university-level calculus course.

Extra Information: 4 lecture hours.

Course Weight: 0.50

Breadth: CATEGORY C

Subject Code: MATH

Notice: Unless you have either the requisites for this course (fulfilment of pre-requisites, no anti-requisite conflicts), or special permission from your Dean to enrol 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.

Mathematics 0109A – Section 570
Preparatory Mathematics

September - December 2025

Section	Instructor	Email
570	J. Turnbull	jturnbu7@uwo.ca

Office location and office hours for the instructor will be posted to Brightspace.

Course Description:

Review of mathematical operations and linear equations; introduction to functions; introductory finite mathematics, including combinatorics and probability; introductory financial mathematics, including compound interest and annuities.

Prerequisite(s): Ontario Secondary School MCF3M, MCR3U, or equivalent.

Antirequisites: Ontario Secondary School MCV4U, Mathematics 0105A/B, or any university-level calculus course.

Textbook:

No textbook or software purchase is necessary. This year, we will be using two free online textbooks from OpenStax. They are:

- Algebra and Trigonometry (<https://openstax.org/details/books/algebra-and-trigonometry-2e>)
- Contemporary Mathematics (<https://openstax.org/details/books/contemporary-mathematics>)

The specific chapters/sections of these books will be indicated in class, along with assigned homework. In addition to the textbook homework, practice materials and full class notes will be provided on Brightspace.

Learning Outcomes:

- Work with linear relations, including solving a linear system of two equations with two unknowns
- Manipulate algebraic expressions, including simplification, isolating for a variable, and solving for the value of a variable that fulfills a mathematical requirement
- Represent and enumerate possible states of a system through permutation and combination
- Answer simple questions about probability
- Use exponential, logarithmic, and trigonometric functions, including as models of phenomena from different disciplines, and be able to evaluate and use these functions.
- Explore compound interest and annuities, including how to solve for an unknown interest rate, an unknown number of compounding periods, etc.
- Understand and apply arithmetic and geometric progression to finance problems, and discuss selected additional topics in financial math (e.g. debt and savings)

Student Expectations:

- regular attendance at classes. Attendance may be monitored at instructor discretion.
- completion of all assigned work.
- assumption of complete responsibility to follow-up regarding any assessments which are missed.
- awareness of materials posted on the course Brightspace web site.
- it is up to the student to seek help when needed.

Course Website:

Various supplemental materials are posted on the course Brightspace web site. In addition, there are forums on which students may post questions. Important information will be posted on the NEWS forum and/or on the class page on the web site. All students are expected to be aware of information, and make use of materials, posted on the course web site.

Instructor contact instructions:

Any email sent to an instructor **SHOULD say Math 0109A in the subject line.**

Note: do not trust email "autocomplete" to default to your instructors' email addresses. Type it in.

Please contact the course instructor if you require material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities for any specific question regarding accommodation.

Evaluation of student performance:

- 7 Quizzes
- 1 Midterm
- 1 Assignment
- 1 Final Exam

The weights (and tentative topics) for each assessment are indicated in the below table.

Assessment	Topics (tentative)	Date	Weights (Scheme 1)	Weights (Scheme 2)
Quiz 1	Fundamentals	September 18	5%	5%
Quiz 2	Functions: Lines, polynomials, radicals, rationals	September 25	3%	6%
Quiz 3	Functions: Exponentials and logs	October 9	3%	6%
Quiz 4	Functions: Trigonometry	October 16	3%	6%
Midterm	Quizzes 1, 2, 3, 4 materials	Friday, October 17 5:00-7:00 PM	18%	36%
Assignment	Functions: Financial Applications	Due October 28	2%	2%
Reading week (no class) November 3 – 7				
Quiz 5	Finite: Set theory	November 13	6%	3%
Quiz 6	Finite: Sets, permutations, combinations	November 20	6%	3%
Quiz 7	Finite: Probability	December 4	6%	3%
Final Exam	Quizzes 1, 5, 6, 7 materials	December (date TBD)	48%	30%

Your grade will be calculated according to which of scheme 1 or scheme 2 have the higher result. In direct terms:

- Scheme 1 will work out higher if you do better on finite mathematics than functions (functions becomes about 1/3 of your grade and finite becomes about 2/3 of your grade)
- Scheme 2 will work out higher if you do better on functions than finite mathematics (functions becomes about 3/5 of your grade and finite becomes about 2/5 of your grade)

Note: while the course is split into essentially two parts (functions and finite), components from the fundamentals unit (including things like basic operations, fraction arithmetic, and exponent notation) will be an assumed competency throughout the course and will be explicitly assessed on both the midterm and the final exam.

- The functions material will be covered from September to mid/late October, and the finite material is covered from mid/late October through to the beginning of December.
- The final exam is not entirely cumulative as it will not assess the functions material.

Missed Assessment Policy:

Quizzes: No academic consideration is required to miss a quiz. There are no makeups. Instead, students who miss quizzes will have the quiz weight transferred as indicated below.

- If you miss quiz 1, the weight of that quiz will shift to **the final exam**
- If you miss quizzes 2, 3, or 4 the weight of that quiz will shift to **the midterm**
- If you miss quizzes 5, 6, or 7, the weight of that quiz will shift to **the final exam**

Midterm: Academic consideration is strictly required if you miss the midterm, otherwise a grade of 0 will be assigned

- Learn about academic consideration here: <https://www.kings.uwo.ca/current-students/courses-enrolment/exams-and-tests/academic-consideration-requests/>
- The midterm is not eligible for self-reported absence
- For students approved by the dean's office to write a makeup, there will be a makeup exam on Friday, October 24 from 2:30 – 4:30 PM.
 - The midterm cannot be reweighted to the final exam for any reason – the material is different.

Assignment policy:

- The financial math assignment worth 2% is due on Tuesday, October 28 at the start of class (8:30 AM).
- There is a free extension available to everyone that allows you to submit the assignment late without penalty by Thursday, October 30 at the start of class (8:30 AM). You do not need to request the extension – it is granted automatically to everyone, no reason needed.
- Emailed assignments will be assigned a grade of 0. They need to be submitted in-person either on time (on the Tuesday) or on Thursday (late without penalty).
- Assignments submitted after the late extension deadline will be assigned a grade of 0.

Students seeking religious accommodation for any coursework must make such requests to academic counselling at least one week in advance (and at least two weeks in advance for final exams). After academic counselling has been contacted, you must then notify your instructor.

Your grade in the course will be what you earn based on your demonstrated understanding of the course content, assessed using the outlined criteria. Extra credit assignments are not available, and quizzes, assignment, midterm and exam cannot be rewritten to obtain a higher mark.

Notes:

1. The midterm will have some multiple-choice questions and some written answer questions. You may be required to graph/sketch, label diagrams, etc.
2. There are no makeups for quizzes, and the midterm will have exactly one makeup - see the policy at top of page.
3. Items cannot be reweighted, beyond what is outlined above, under any circumstances.
4. No electronics: no phones, no calculators, no other devices.
Use of any unauthorized electronic communication device during a quiz, midterm, or exam will result in an automatic grade of zero on that assessment, plus any additional penalties applied by the Dean's Office.
5. Regular completion of homework is expected in this course.
6. For academic integrity purposes, the instructor reserves the right to seek clarification on all submitted work.
7. It is your responsibility to gain mastery of all the subject matter in this course, as math 0109A is used as a prerequisite for several courses in calculus, statistics and mathematics. For example, those of you heading into math 0110A/B after this course will see exponential and log functions again, which will be reviewed very quickly (and at a more abstract level) before expanding into the calculus of those functions. If you are heading into math 1228A/B and Stats 1024A/B after, the finite part will be reviewed (and extended!) there. The intent of the flexibility in the grading scheme is to reward your mastery of at least one part of the course (functions or finite) – it is not intended to signal that you should neglect the other part.

KING'S UNIVERSITY COLLEGE

GENERAL COURSE POLICIES

2025-2026

1. Academic Accommodations, Consideration for Absences

Academic Accommodation (Accessibility)

Accessibility Services works to ensure that academic programs are accessible to all students, and supports students who may have a condition related to, but not limited to, vision, hearing, mobility, different ways of learning, mental health, chronic illnesses, chronic pain, autism spectrum disorder, ADD/ADHD, and temporary conditions (beyond short-term academic consideration). Accessibility Services provides recommendations for accommodation based on medical documentation or psychological and cognitive assessment. The accommodation policy can be found here [Academic Accommodation for Students with Disabilities](#). Information on Accessibility Services at King's can be found [here](#).

Academic Consideration for Student Absence

If a student is unable to meet a course requirement due to substantial but temporary extenuating circumstances (medical or compassionate), they should follow the procedures below.

In some cases, where instructors have built flexibility into their assessments, this flexibility will already address consideration needs.

Requests for academic consideration should be directed to the Academic Advising Office of your faculty/college of registration. Requests must be made as soon as possible and no later than 48 hours after the missed assessment.

As a rule, documentation is required for academic consideration. For academic consideration requests on medical grounds, the Student Medical Certificate is available at

https://www.kings.uwo.ca/kings/assets/File/currentStudents/courses_enrollment/exams_and_tests/SMC-Feb-2025.pdf.

Students are permitted one academic consideration request without supporting documentation per term per course.

Instructors may designate one assessment per half-course weight as requiring formal supporting documentation. Please refer to the course outline for each course.

For further information, please see:

https://uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf

Absences from Final Examinations

If you miss the Final Exam, contact the Academic Advising Office of your faculty/college of registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (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" (e.g., more than 2 exams in 23-hour period, or more than 3 exams in a 47-hour period).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See the Academic Calendar for details (under [Special Examinations](#)).

Religious Accommodation

Students should consult the University's list of recognized religious holidays, and should give notice in writing to the instructor and Academic Advising Office if a course requirement will be affected by a religious holiday/observance. Notice must be given as early as possible, and no later than two weeks prior to an examination, and one week prior to a midterm test date. It is the responsibility of such students to inform themselves concerning the work done in classes from which they are absent and to take appropriate action.

2. Support Services

Accessibility, Counselling and Student Development at King's University College:

<https://www.kings.uwo.ca/current-students/student-services/>

Students experiencing emotional or mental health distress can access services at King's University College:

<http://www.kings.uwo.ca/current-students/campus-services/student-support-services/personal-counselling/>

Good2talk is a good online and phone 24/7 resource for students and is available in English, Mandarin, and French: <https://good2talk.ca>, 1-866-925-5454

MentalHealth@Western provides a complete list of options about how to obtain help:

https://www.uwo.ca/health/mental_wellbeing/

Academic Support Services at King's University College:

<https://www.kings.uwo.ca/current-students/academic-resources/>

GBSV Support:

King's is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at: <https://www.kings.uwo.ca/about-kings/safe-campus/gender-and-sexual-violence/>

You can reach someone supports at Kings by emailing Care@kings.uwo.ca or calling 519-930-4640 to reach a social worker who can offer help.

You can also reach Western's Gender-Based Violence & Survivor Support Case Manager by [email](#) or by calling 519-661-3568.

Further supports can be found on this website: <https://www.kings.uwo.ca/about-kings/safe-campus/gender-and-sexual-violence/>

See also https://www.uwo.ca/health/student_support/survivor_support/get-help.html

University Students' Council offers many valuable support services for students, including the health insurance plan: <http://westernusc.ca/services/>

3. Statement on Use of Electronic Devices

Use of Electronic Devices: Unless explicitly stated otherwise, you are not allowed to have a cell phone, or any other electronic device, with you during tests or examinations. Unauthorized possession of such a device during a test or examination constitutes an academic offence.

Use of Laptops, Tablets, and Smartphones in the Classroom: King's University College at Western University acknowledges the integration of new technologies and learning methods into the curriculum. The use of electronic devices such as laptop computers, tablets, or smartphones can contribute to student engagement and effective learning. At the same time, King's recognizes that instructors and students share jointly the responsibility to

establish and maintain a respectful classroom environment conducive to learning.

The use of electronic devices by students during lectures, seminars, labs, etc., shall be for matters related to the course at hand only. Students found to be using electronic devices for purposes not directly related to the class may be subject to sanctions under the Student Code of Conduct; see <https://www.kings.uwo.ca/current-students/student-affairs/code-of-student-conduct1/>

Inappropriate use of electronics (e.g., laptops, tablets, smartphones) during lectures, seminars, labs, etc., creates a significant disruption. As a consequence, instructors may choose to limit the use of electronic devices in these settings. In addition, in order to provide a safe classroom environment, students attending in-person class sessions are strongly advised to operate laptops with batteries rather than power cords.

4. Statement on Academic Offences

King's is committed to academic integrity. Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, is posted at http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

It is expected that students will submit work that is truly their own, completed without external assistance (human or artificial) except as explicitly permitted by the course instructor. Check with you instructor on what tools, including generative AI (ChatGPT, translation tools, grammar-checking tools) are permitted in the course. Because a tool is permitted in one course, that does not mean it is permitted in other courses.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system; see <https://elearningtoolkit.uwo.ca/tools/Originality Reports - TurnItIn.html>.

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

5. Copyright of Course Material

Lectures and course materials, including PowerPoint presentations, tests, outlines, and similar materials are protected by copyright. Faculty members are the exclusive owner of copyright in those materials they create. Students may take notes and make copies for their own use. Students may not allow others to reproduce or distribute lecture notes and course materials publicly (whether or not a fee is charged) without the express written consent of a faculty member. Unauthorized sharing of class content is subject to academic discipline.

Similarly, students own copyright in their own original papers and exam essays. If a faculty member wishes to post a student's answers or papers on the course website, they should ask for the student's written permission.

6. Use of Recordings

Participants in this course are not permitted to record the sessions, except where recording is an approved accommodation and/or the participant has the prior written permission of the instructor. Unauthorized recording and/or sharing of class content is subject to academic discipline.

7. Policy on Attendance

Any student who, in the opinion of the instructor, is absent too frequently from class or laboratory periods in any course, will be reported to the Dean of the Faculty offering the course, after due warning has been given. On the recommendation of the department concerned, and with the permission of the Dean of that Faculty, the student will be debarred from taking the regular examination in the course.

