

Mathematics 1600B: Linear Algebra I

Winter 2023

[course outline version Jan 12, 2023; may be updated later]

1 Course Information

Course Schedule:

Lecture Section 001 (Jeffrey): MWF 12:30-1:30, NCB 113

Lecture Section 002: (Lemire): MWF 10:30-11:30, SEB 2200

Lecture Section 003: (Riley): MWF 9:30-10:30, TC 141

The tutorials are 1h/week, either on Wednesdays or Thursdays. See the Academic Timetable for a list of times and rooms of the tutorial sections.

Prerequisites: One or more of Ontario Secondary School MCV4U, Mathematics 1229A/B, Calculus 1000A/B or Calculus 1500A/B may be taken as a pre-or corequisite.

Antirequisites: Applied Mathematics 1411A/B, Applied Mathematics 2811B.

Unless you have either the requisites for this course or written 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.

Instructors	Email@uwo.ca	Office
Prof. David Jeffrey	djeffrey	MC 252
Prof. Nicole Lemire (Course Coordinator)	nlemire	MC 103C
Prof. David Riley	dmriley	MC 136

Office hours will be announced on OWL during the first week. You may also contact your instructor via email if you have any questions. **Students must contact the instructor of the lecture section they are enrolled in. The subject line of the email must indicate the kind of request and also contain the words Math 1600. Students must use their Western (@uwo.ca) email addresses for all University correspondence.**

Help Centre: The Department of Mathematics runs help centres each weekday during the semester, starting in the second week of classes. The in-person help centre is located in the Math-Physics Accelerator in PAB 48/49/26 (on the lower level of the Physics and Astronomy Building.) These help centres are staffed by graduate

student teaching assistants; all first-year mathematics courses are supported. No appointments are necessary. Information about the help centre and other departmental supports for students can be found at:

https://www.uwo.ca/math/undergraduate/current_students/HelpCentre.html

2 Course Syllabus and Delivery Mode

Syllabus: Properties and applications of vectors; matrix algebra; solving systems of linear equations; determinants; vector spaces; orthogonality; eigenvalues and eigenvectors.

Each student must be enrolled in a tutorial section. Lectures and tutorials are normally in-person.

Contingency plan for an in-person class pivoting to 100% online learning:

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, affected course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

3 Course Materials

Textbook: Textbook: University of Western Ontario Custom eBook: MATH 1600 (365 Days/One Year Access), ISBN13: 978-0-17-690753-2. It might be possible to find a used hardcopy version of the Custom eBook, but new hardcopies are not currently available for purchase. The Custom eBook consists of selected sections of the full book: D. Poole, Linear Algebra: A Modern Introduction, 4th edition, ISBN13: 978-1-285-46324-7. Any one of these three options is suitable for the course. If you have trouble finding the full book: D. Poole, Linear Algebra: A Modern Introduction, 4th edition, ISBN13: 978-1-285-46324-7 at the UWO Bookstore, here is a direct link to the publisher:

<https://www.cengage.ca/shop/en/micrositesca/UofW-MATH1600B>.

Course webpage: Students are responsible for checking the course **OWL** site (<http://owl.uwo.ca>) on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class. All lecture sections of this course share the same webpage. If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Technical Requirements: In case of a switch to online learning, students are required to have stable internet connection, computer with working microphone and webcam and an up-to-date web browser like Firefox, Chrome or Safari, a document scanner or scanning app.

4 Methods of Evaluation

The overall course grade will be calculated as listed below:

5 Quizzes	5% each, 25% in total
Midterm Exam	25%
Final Exam	50%

The quizzes will be held in-person during the tutorials.

The following times and dates are subject to change:

Quizzes: January 25/26; February 8/9; March 8/9; March 22/23; April 5/6.

Make-up Quiz: Monday, April 10, room and time TBA.

Midterm Exam: Monday, February 27, 7:00-9:00 PM, room TBA

Make-up Midterm Exam: Monday, March 6, 7:00-9:00 PM, room TBA

Several online quizzes will be posted on Webwork. These quizzes will be provided only extra practice for students and will not affect students' course grades.

5 Academic Consideration for Student Absences

Students who are absent from an exam or quiz or who are otherwise unable to meet the academic requirements of the course owing to extenuating circumstances (illness, injury or other extenuating circumstance) may submit a request for academic consideration through the following routes:

- (i) To seek accommodation for a **missed Midterm Exam, Make-up Midterm Exam or Final Exam**, students must apply to the Academic Counselling office of their Faculty of Registration. For a medical absence, students will need to submit a Student Medical Certificate (SMC), signed by a licensed medical or mental health practitioner, to the Academic Counselling office of their Faculty of Registration. For non-medical absences, students will also need to submit appropriate documentation to the Academic Counselling office of their Faculty of Registration.
- (ii) To seek accommodation for a **missed quiz or the Make-up Quiz**, please send an email message to Professor Jeffrey (djeffrey at uwo.ca), as soon as

possible. Students should note that individual instructors (including Professor Jeffrey) are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. All documentation required for absences must be submitted to the Academic Counselling office of a student's Home Faculty.

Missed assessments can only be excused through one of the mechanisms above. In all cases, students are required to contact their instructors within 24 hours.

For the policy on Academic Consideration for Student Absences Undergraduate Students in First Entry Programs, see:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf

and for the Student Medical Certificate (SMC), see:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf.

Accommodated Evaluations

Missing a quiz or exam will result in a grade of zero unless appropriate accommodation is sought and granted.

Quizzes: All students who are accommodated for at least **one quiz** will write the common **Make-up Quiz** at the end of the course, tentatively scheduled on **April 10**. If a student also misses the **Make-up Quiz**, and has been appropriately accommodated, then their Final Exam will be re-weighted to include the weight of one missed quiz. If a student misses **more than one regular quiz**, and has been appropriately accommodated, then they will write the common **Make-up Quiz** and their Final Exam will be re-weighted to include the weight of each additional accommodated quiz after the first.

Midterm and Make-up Midterm Exams: Students who are accommodated for a missed Midterm Exam will write the Make-up Midterm Exam. See above for the accommodation procedure. If a student is also accommodated for a missed Make-up Midterm Exam, then their Final Exam will be re-weighted to include the weight of their missed Midterm Exam. In case of exam conflicts, students must inform their instructor at least one week before the exam.

Final Exam: If you miss the Final Exam for a valid reason (medical or otherwise), please contact the Academic Counselling office of your Faculty 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 make-up 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, more than 3 exams in a 47-hour period).

6 Accommodation and Accessibility

Religious Accommodation: When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at

<https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>.

Accommodation Policies: Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/AcademicAccommodation_disabilities.pdf.

7 Academic Policies

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

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf, the centrally administered e-mail account provided to students will be considered the individuals official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner.

No electronic devices are permitted during quizzes, midterms and final exams.

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.

In case of a change to online learning, tests and examinations in this course may be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide personal information (including some biometric data) and the session will be recorded. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More

information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at:
<https://remoteproctoring.uwo.ca>.

8 Support Services

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help. 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 Accessible Education at http://academic-support.uwo.ca/accessible_education/index.html if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<https://learning.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.

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