

Math 1600A Course Outline

1. Course Information

Course Information

Math 1600A: Linear Algebra I (Fall 2023)

Lecture Section 001 (Franz): MWF 8:30-9:30, NCB 113

Lecture Section 002: (Sendov): MWF 10:30-11:30, WSC 55

Lecture Section 020: (Sendov): MWF 12:30-1:30, SSC 2028

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

Prerequisites

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

Antirequisites

NMM 1411A/B or the former Applied Mathematics 1411A/B, Applied Mathematics 2811B.

Unless you have either the requisites for this course or written special permission from your Dean's Designate (Department/Program Counsellors and Science Academic Counselling) 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.

2. Instructor Information

Instructors	Email (@uwo.ca)	Office	Phone	Office Hours
Prof. Matthias Franz (Course Coordinator)	mfranz	MC 113D	86538	in person TBA
Prof. Hristo Sendov	hsendov	WSC 205	86985	in person TBA

Students must contact the instructor of the lecture section they are enrolled in and use their Western (@uwo.ca) email addresses when contacting their instructor. The subject line of the email must indicate the kind of request and also contain the words "Math 1600".

Help Centre: The Mathematics Department runs free in-person and virtual help centres each week day during the semester, starting Monday September 19th. 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 and 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/Help_Centre.html

3. Course Syllabus, Schedule, Delivery Mode

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

The tutorials run in-person Wednesdays and Thursdays. Each student must be enrolled in a tutorial section and attend the tutorials for this section.

At a successful completion of the course, a student will be able to

- solve computational problems (that may or may not have been discussed in the course). This is the primary learning objective. Others are:
- state important definitions and results from the course in a precise way
- decide whether statements about the course material are true or false
- present written answers in a complete, correct and well-structured way, using correct notation.

Contingency plan

Although the intent is for this course to be delivered in person, should any university-declared emergency require some or all of the course to be delivered online, either synchronously or asynchronously, the course will adapt accordingly. The grading scheme will **not** change. Any assessments affected will be conducted online as determined by the course instructor.

4. Course Materials

Textbook

University of Western Ontario, Custom textbook: MATH 1600, ISBN: 9780176907532.

Alternatively, the ebook version of the book is available through the Western bookstore.

University of Western Ontario Custom eBook: MATH 1600 (365 Days/One Year Access), ISBN: 9780176907532

The textbook/ebook consists of selected sections of the book:

D. Poole, Linear Algebra: A Modern Introduction, 4th edition: 9780176907532.}

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 course material will be posted to OWL.

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.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

9 Quizzes	1% for each of the best 8 out the 9 quizzes, 8% in total
2 Midterm Tests	21% each, 42% in total
Final Exam	51%

The quizzes will either be in-person during the tutorials (Wed/Thu) or online. Tentative dates (in case of in-person quizzes): September 21 & 22, 27 & 28, October 4 & 5, 18 & 19, 25 & 26, November 8 & 9, 22 & 23, 29 & 30, December 6 & 7

Midterm 1: Thursday, October 12th, 7:00-8:30 PM, room TBA

Midterm 2: Thursday, November 16th, 7:00-8:30 PM, room TBA

Make-up exams: date, time and room TBA

A minimum grade of 40% on the final exam is required to pass the course. If the final exam grade is below 40%, the overall final grade can be at most 49%.

6. Student Absences

If you are unable to meet a course requirement due to illness or other serious circumstances, please follow the procedures below.

Assessments worth less than 10% of the overall course grade:

The lowest of the 9 quiz grades will be dropped. This includes quizzes missed for whatever reason.

Assessments worth 10% or more of the overall course grade:

For work totalling 10% or more of the final course grade, you must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. For further information, please consult the University's medical illness policy at

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

The Student Medical Certificate is available at

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

Midterms: Students who miss a midterm exam for a valid reason (medical or otherwise) write a make-up exam. They have to inform both their instructor and Academic counselling as soon as possible (that is, immediately after recovering from the illness and otherwise as soon as the reason for missing the exam is known to the student). In case of exam conflicts students must inform their instructor at least one week before the exam.

If a student also missed the make-up exam for a valid reason, the weight of the midterm will be transferred to the final exam.

Absences from Final Examinations

If you miss the Final Exam, 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 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, 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](#)).

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/Academic Accommodation_disabilities.pdf](https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_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 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 their official university address is attended to in a timely manner.

No electronic devices are permitted on tests or 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 switch to online examinations, these exams in this course will 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

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>.

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://academicsupport.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/>.