

# MATH 1229 Methods of Matrix Algebra

Winter 2020, Online

*Instructor:* Allen O'Hara

*Office:* Middlesex College 113

*e-mail:* aohara@uwo.ca

**Course Description:** Vectors in  $\mathbb{R}^m$ ; Equations of lines and planes; Linear Equations; Solution of Linear Systems; Matrix Algebra; Matrix Multiplication and Inverses; Determinants.

**Course Assessments:** Students' grades will be based on online quizzes (collectively worth 10%), two tests (each worth 20%), as well as a cumulative final exam (worth 40%). The remaining 10% will be added to each students' best of the three examinations.

The first term test will be written on Saturday February 8th at 2 p.m. The second term test will be written on Saturday March 7th at 2 p.m.

Your mark in the course will be the mark that you earn based on your demonstrated understanding of the course content, assessed using the outlined criteria. Extra credit assignments are not available, and tests and exams cannot be rewritten to obtain a higher mark.

*Note: For students who receive Academic Consideration for a Term Test, the weight of that test will be shifted to the final exam. There will not be makeup examinations arranged.*

*Note: Any student who lives a significant distance from their Exam Centre, and for whom having to travel to the Exam Centre 3 times during the term would be a financial hardship, may contact the Instructor to request having the weight from 1 (only) term test shifted to the final exam.*

**Textbook:** Custom Edition of Elementary Linear Algebra by S. Venit, W. Bishop and J. Brown, published by Nelson Education Ltd., ISBN: 0176559299

**Prerequisites:** One or more of Ontario Secondary School MCF3M, MCR3U, or equivalent.

**Antirequisites:** Applied Mathematics 1411A/B, 2811B, Mathematics 1600A/B, 2120A/B, 2155F/G, 2211A/B, the former 2155A/B

**What is Expected of the Student:** Students should attend all classes, make a serious effort to understand all course material, and do all the assigned homework. The student must assume responsibility for any missed classes. The student is responsible for being aware of all relevant information posted on the OWL web site. It is up to the student to seek out help when needed.

Remember, you understand the course material if you can answer new questions about it. Being able to answer similar questions repeatedly just shows that you remember a formula and being able to reproduce results from class only demonstrates memorization. While these are certainly important, you should not confuse them with a true understanding of the concepts.

In addition, students are expected to abide by the course and university policies and to maintain a healthy environment of respect and openness.

## Course Policies:

- With regards to e-mails being sent to the professor or other students, remember to be respectful of the other party and to use appropriate language in your correspondence. E-mails to the professor will receive a

response within a span of two days, barring any extreme circumstances such as health.

- o Calculators will not be permitted for any of the examinations in the course.

### **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 Website:**

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](mailto: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](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](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 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](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](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](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](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>.

#### **Acknowledgment of the Science Student Donation Fund:**

Mathematics undergrad courses are supported by the Science Student Donation Fund. If you are a BSc or BMSc student registered in the Faculty of Science or Schulich School of Medicine and Dentistry, you pay the Science Student Donation Fee. This fee contributes to the Science Student Donation Fund, which is administered by the Science Students' Council (SSC). One or more grants from the Fund have allowed for the purchase of equipment integral to teaching this course. You may opt out of the Fee by the end of September of each academic year by completing the online form linked from the Faculty of Science's Academic Counselling site. For further information on the process of awarding grants from the Fund or how these grants have benefitted undergraduate education in this course, consult the Chair of the Department or email the Science Students' Council at [ssc@uwo.ca](mailto:ssc@uwo.ca).

#### **Disclaimer:**

This document is not a contract; the instructor reserves the right to make changes as needed throughout the semester.