Mathematics 1229A-Methods of Matrix Algebra
Course Outline
Fall 2021

1. Course Information

Course Information
Course Name: Mathematics 1229A-Methods of Matrix Algebra
Academic Term: Fall 2021
Instructors: M. Cardenas Montoya, A. Ghorbanpour, B. Nasserden, K. Nguyen, M. Mollahajiaghaei
(See Tutorial Schedule and Instructor Contact Information on next page.)

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.

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.

2. Instructor Information

Instructors	Sections	Email	Office
Asghar Ghorbanpour (Course Coordinator)	006, 007, 010, 014, 016 & 019	aghorba@uwo.ca	MC134
Mayecxiliana Cardenas Montoya	012, 013 & 024	mcrdenas@uwo.ca	TBA
Brett Nasserden	002, 003 & 004	TBA	MC 129
Khoa Nguyen	015, 017 & 018	knguyen@uwo.ca	MC 282
Mohsen Mollahajiaghaei	005, 008, 009	mmollaha@uwo.ca	MC 128

- Information about days, times and format of Instructor Office Hours will be provided on the course web site.
- Information about ways to get help from TAs will be posted on the Getting HELP!! page of the course web site
- Any changes to the above information will be clearly communicated to you via the course OWL page, and announced in class.
- Students must use their Western (@uwo.ca) email addresses when contacting their instructors.

- Any email sent to an instructor (and especially to the course coordinator) MUST say Math 1229A in the subject line. Any email without this, and/or any email sent from other than a Western (@uwo.ca) email address, may be deleted unread.
- Email is not efficient, and response times vary wildly depending on email volume (instructors may be receiving hundreds of emails per day).

3. Course Syllabus, Schedule, Delivery Mode

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

Delivery Mode
This is a blended course. All students are registered in section 200 and also in one of the Tutorial sections. Tutorials, taught by the course Instructors, meet once per week. Students are expected to have made every effort to have learned the material for the week, from the resources provided, before attending the tutorial.

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, all remaining 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.

Tutorial Schedule

002	Mondays	9:30 - 10:30 a.m.	UCC 37	Prof. Nasserden
003	Wednesdays	9:30 - 10:30 a.m.	NCB 114	Prof. Nasserden
004	Fridays	9:30 - 10:30 a.m.	UCC 41	Prof. Nasserden
005	Mondays	12:30 - 1:30 p.m.	PAB 148	Prof. Mollahajiaghaei
006	Wednesdays	12:30 - 1:30 p.m.	NCB 117	Prof. Ghorbanpour
007	Fridays	12:30 - 1:30 p.m.	UCC 41	Prof. Ghorbanpour
008	Mondays	1:30 - 2:30 p.m.	PAB 148	Prof. Mollahajiaghaei
009	Wednesdays	1:30 - 2:30 p.m.	PAB 148	Prof. Mollahajiaghaei
010	Fridays	1:30 - 2:30 p.m.	UCC 41	Prof. Ghorbanpour
012	Wednesdays	8:30 - 9:30 a.m.	UCC 41	Prof. Cardenas Montoya
013	Fridays	8:30 - 9:30 a.m.	UCC 41	Prof. Cardenas Montoya
014	Mondays	3:30 - 4:30 p.m.	FNB 1250	Prof. Ghorbanpour
015	Wednesdays	3:30 - 4:30 p.m.	UCC 41	Prof. Nguyen
016	Fridays	3:30 - 4:30 p.m.	UCC 41	Prof. Ghorbanpour
017	Mondays	4:30 - 5:30 p.m.	UCC 41	Prof. Nguyen
018	Wednesdays	4:30 - 5:30 p.m.	UCC 41	Prof. Nguyen
019	Fridays	2:30 - 3:30 p.m.	UCC 41	Prof. Ghorbanpour
024	Mondays	8:30 - 9:30 a.m.	online	Prof. Cardenas Montoya

Key Sessional Dates
    Classes begin: September 8, 2021
    Reading Week: November 1–7, 2021
    Classes end: December 8, 2021

4. Course Materials

Textbook
Custom Edition of **Elementary Linear Algebra** by S. Venit, W. Bishop and J. Brown, published by Cengage, ISBN: 0176559299, or the e-book SKU: CEB_CODEID=34452. Both available from the UWO Book Store.

Course Website
Various useful supplemental materials, such as lecture notes and videos of lectures, required extra homework problems, practice tests, and solutions to the homework exercises, are posted on the OWL web site (http://owl.uwo.ca). As well, there are forums on which students may post questions. Important information will be posted on the NEWS forum and/or on the class sub-site. All students are expected to be aware of information, and make use of materials, posted on the course web site.

> 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.

What is expected of the Students?
Students should make a serious effort to learn all course material and do all the assigned homework. The student must assume responsibility for staying up to date with course content and for being aware of posted deadlines. It is up to the student to seek out help when needed. The student is responsible for being aware of all relevant information posted on the OWL web site.

> **Please contact your 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 Accessible Education for any specific question regarding an accommodation: http://academicsupport.uwo.ca/accessible_education.**

Technical Requirements
- Computer or laptop access
- Stable internet connection
- Paper, pencils, and erasers
- *Recommended but not required*: access to a printer

5. Methods of Evaluation

Evaluation of Student Performance

Students will be assessed on the basis of Online Quizzes, 2 Term Tests, and a Final Exam.

- The quizzes are completed in OWL. See the Quiz Schedule and Quiz Information documents posted on the Course Information page on the course site in OWL.
- The 2 Term Tests are each 90 minutes in length.
  - Test 1 will cover the first 4 text sections of the course material,
    Test 1: 1:30 - 3:00 p.m. (EDT), Saturday October 16
  - Test 2 will cover (only) the next 4 sections.
    Test 2: 1:30 - 3:00 p.m. (EDT), Saturday November 13
- The Final Exam, 3 hours in length and covering all course material, will be scheduled by the Registrar's Office during the December Exam Period.

Note: Tests and examinations in this course will be in-person and handwritten on paper, if possible. In-person tests/exam will have some multiple choice and some written-answer questions. Total 25 marks for each Term Test and 50 marks for the Final Exam.

> **In the event of a health lockdown**, tests and examinations 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.

Calculation of Final Grade

Each Term Test will count for 20%, the Online Quizzes count for 10% with the student's best 5 of the 6 Online Quizzes each counting equally, and the Final Exam will count for 40%. The remaining 10% weight will be assigned to whichever of the 3 tests/exams is the student's best mark.

Notes:
1. The Term Tests and Exam will consist of mostly multiple choice questions, with also some written-answer questions.
2. NO calculators or other electronic devices or any other aids are allowed on tests and exams. 3. See Absence / Missed Work policy on next page.

Further Course Policies:
- All students are expected to engage online in a professional and respectful manner. This includes all interactions with peers, as well as communication between TAs or your Professor. Failure to do so will result in academic discipline.
- Recording of lectures or tutorials without the explicit consent of the Professor or TA is grounds for academic discipline.
- Course content created by a faculty member is considered the faculty member's intellectual property; it should not be distributed, shared in any public domain, or sold by a student or other third party without prior written consent of the faculty member.

6. Student Absences
Absence and Missed work:

Quizzes: A student who needs a makeup for an Online Quiz should email the instructor, stating the reason for missing the quiz, as soon as possible after the quiz window closes. (No other approval required.) Please note that there will be no makeups for Quiz 6

Tests: Students who have a direct conflict between a test and another academic requirement (i.e. test/class/lab/tutorial), and also students for whom a test conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, should contact the Academic Counselling Office in their Faculty of Registration as soon as they become aware of the conflict and not later that 2 weeks before the test. Students who experience an extenuating circumstance (illness, injury or other extenuating circumstance) sufficiently significant to temporarily render them unable to write a test may submit a request for academic consideration through the following routes:

(i)   Submitting a Self-Reported Absence (SRA) form provided that the conditions for submission are met. To be eligible for a Self-Reported Absence:

• an absence must be no more than 48 hours
• the assessments must be worth no more than 30% of the student's final grade
• no more than two SRAs may be submitted during the Fall/Winter term

(ii)   For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to the Academic Counselling office of their Faculty of Registration.

(iii) Submitting appropriate documentation for non-medical absences to the Academic Counselling office in their Faculty of Registration.

Note that in all cases, students are required to contact their instructors within 24 hours of the end of the period covered, unless otherwise instructed in the course outline.

Students should also note that individual instructors 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 that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling office of a student's Home Faculty.**

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.

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).

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.

6. Accommodation and Accessibility

Accommodation Policies
Students with disabilities work with Accessible Education (formerly SSD), 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,

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 his/her official university address is attended to in a timely manner.

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.

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/.

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 (519) 661-2147 if you have any questions regarding accommodations.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: https://www.uwo.ca/se/digital/.

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/mentalhealth) 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.