

THE UNIVERSITY OF WESTERN ONTARIO
DEPARTMENT OF MATHEMATICS

Mathematics 1229A
Methods of Matrix Algebra

September - December 2014

INSTRUCTORS: (*Course Coordinator: V. Olds*)

001 - F. Sala; 002 - V. Olds; 003 - M. Manolaki; 004 - A. O'Hara;
530 (Brescia) - C. Florence; 550 & 551 (Huron) - A. Pourkia; 570 (King's) - S. Kuzmin;
571 (King's) - D. Meredith; 572 (King's) - T. Moschandreou; 573 (King's) - J. Turnbull
(*See Class Schedule and Instructor Contact Information on next page.*)

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, 2155A, 2211B, the former
Mathematics 030, 031, 203b.

COURSE OUTLINE:

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

COURSE WEB SITE:

Various supplemental materials, such as required extra homework problems, practice tests and solutions to the
homework exercises, are posted on the course OWL 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.

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. 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 Services for
Students with Disabilities (SSD) at 661-2111 x82147 for any specific question regarding an accommodation.**

EVALUATION OF STUDENT PERFORMANCE:

Students will be assessed on the basis of "Class Work", 2 Term Tests, and a Final Exam. The means of assessing the Class Work component will be determined by the instructor of each section, and may be for participation, quizzes, assignments, etc. (Some sections will use Online Quizzes in OWL.)

The 2 Term Tests, each 90 minutes in length, will be held on:

Friday October 3 2014, 7:00 - 8:30 p.m. and **Friday November 7 2014**, 7:00 - 8:30 p.m.

Locations of these tests will be announced in class and/or on the course web site.

The Final Exam will be 3 hours in length, covering all of the course material. This exam will be scheduled by the Registrar's Office during the December Exam Period.

Calculation of Final Grade:

Each Term Test will count for 20%, the Final Exam will count for 40% and the Class Work component will count for 10%. 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 all have some multiple choice questions and 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.

CLASS SCHEDULE:

Section	Campus	Instructor	Days & Times	Location
001	Main	F. Sala	MWF 9:30	NS 1
002	Main	V. Olds	MWF 12:30	MC 110
003	Main	M. Manolaki	MWF 1:30	NS 1
004	Main	A. O'Hara	MWF 8:30	SH 3345
530	Brescia UC	C. Florence	MWTh 1:30	BR - 203
550	Huron UC	A. Pourkia	MWF 8:30	HC - V214
551	Huron UC	A. Pourkia	MWF 1:30	HC - V214
570	King's UC	S. Kuzmin	Tu 3:30 - 4:30	KC - SA150
			Th 3:30 - 5:30	KC - W168
571	King's UC	D. Meredith	Tu 9:30 - 10:30	KC - W166
			Th 9:30 - 11:30	KC - W166
572	King's UC	T. Moschandreou	M 7:00 - 8:30	KC - W168
			W 7:00 - 8:30	KC - W166
573	King's UC	J. Turnbull	M 8:30 - 10:30	KC - W166
			W 8:30 - 9:30	KC - W168

INSTRUCTOR CONTACT INFORMATION:

V. Olds (002 & Course Coordinator): volds@uwo.ca, MC 103G, X86520

F. Sala (001): ???@uwo.ca, MC 114, X86531

M. Manolaki (003): mmanolak@uwo.ca, MC 120, X80044

A. O'Hara (004): aohara@uwo.ca, MC ???, X8????

C. Florence (530): jplusc@rogers.com, BUC MSJ301E, 519 432-8353

A. Pourkia (550 & 551): apourki@uwo.ca, HUC A13, HUC X399

S. Kuzmin (570): skuzmin@uwo.ca, KUC SA 061, KUC X4508

D. Meredith (571): meredith@uwo.ca, KUC DL 120, KUC X4322

T. Moschandreou (572): tmoschan@uwo.ca, KUC SA 061, KUC X4508

J. Turnbull (573): jturnbu7@uwo.ca, KUC BH 110, X4609

Note: 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 UWO email address, may be deleted unread.

SENATE POLICY ON PREREQUISITES:

Prerequisite checking is the **student's responsibility**. Unless you have either the prerequisites 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.

STATEMENT ON ACADEMIC OFFENCES:

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/scholastic_discipline_undergrad.pdf

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.

ABSENCE / MISSED WORK:

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or other supporting documentation *to your Dean's Office as soon as possible* and contact *your instructor immediately*. It is the student's responsibility to make alternative arrangements with his or her instructor once the accommodation has been approved and the instructor has been informed. In the event of a missed final exam, a "Recommendation of Special Examination" form must be obtained from the Dean's Office immediately. For further information concerning UWO's Policy on Accommodation for Medical Illness please refer to this policy at: <https://studentservices.uwo.ca/secure/index.cfm>

A student requiring academic accommodation due to illness should use the Student Medical Certificate when visiting an off-campus medical facility or request a Record's Release Form (located in the Dean's Office) for visits to Student Health Services. The form can be found here: https://studentservices.uwo.ca/secure/medical_document.pdf

A makeup will be held for each term test as well as for the final exam. Only students with prior permission from their instructor will be allowed to write the makeup for a test. Only students with a Recommendation for Special Exam from their Dean's Office will be allowed to write a makeup for the Final Exam. Any student who misses a portion of the Class Work component of the grade for any legitimate reason should contact your instructor as soon as possible. Supporting documentation may be required. In the case of missed Class Work, or if a student is unable to write the scheduled makeup for a Term Test due to a documented prolonged or recurring absence or other legitimate conflict, your instructor will decide whether to accommodate by rescheduling or by reweighting that component of the grade.

SUPPORT SERVICES

Office of the Registrar (UWO) www.registrar.uwo.ca
Brescia www.brescia.uwo.ca/academics/registrar_services
Huron www.huronuc.on.ca/students/service_centre
King's www.kings.uwo.ca/academics/academic-deans-office/

Student Development Services www.sdc.uwo.ca
Learning Skills Services www.sdc.uwo.ca/learning

USC <http://westernusc.ca/services/>

Academic Calendar www.westerncalendar.uwo.ca

ITS www.uwo.ca/its/helpdesk

Mathematics 1229A - Suggested Exercises - Fall 2014

Section	Page	Problems
§1.1	11	1 - 27, 37.
§1.2	20	1 - 9, 13 - 23, 34.
§1.3	29	1 - 21, 25, 27, 29.
		Extra Chapter 1 Problem Sheet. (Posted on course web site.)
§2.1	48	1 - 13, 16 - 25.
§2.2	55	1 - 15.
§2.3	69	1 - 17, 19, 21, 23 - 26, 37.
§2.2	56	19 - 24 (use Gauss-Jordan).
§3.1	96	1 - 7, 9 - 14, 17 - 27, 35 - 38.
§3.2	107	1 - 7, 9 - 19, 21, 23, 25, 30 - 33.
§3.3	116	1 - 6, 9 - 21.
§4.1	151	1 - 22, 27 - 29, 34.
§4.2	163	1 - 19, 25, 26.
§4.3	172	1, 3, 5, 7, 9, 11, 13.

Notes:

- Page numbers and text references refer to the custom published text and are the same in the full Venit, Bishop and Brown (1st ed.) text.
- Any changes to this list will be announced on the NEWS and/or Homework discussion boards.
- Answers to all assigned questions, and complete solutions for many, are posted on the course web site.