



DEPARTMENT OF SCIENCE

COURSE OUTLINE – WINTER 2019

MA1020 A3: APPLIED LINEAR ALGEBRA – 3.5 (3, 1, 0)

INSTRUCTOR: Dr. Selcuk Aygin **PHONE:** 780-539-2826

OFFICE: J206 **EMAIL:** saygin@gprc.ab.ca

OFFICE HOURS: R 13:00 – 14:30

CALENDAR DESCRIPTION:

Vectors and matrices, solution of linear equations, equations of lines and planes, determinants, matrix algebra, orthogonality and applications (Gram-Schmidt), eigenvalues and eigenvectors and applications, complex numbers will be covered in the course.

PREREQUISITE: MA1000

REQUIRED TEXT/RESOURCE MATERIALS: Open (free) textbook at www.lyryx.com.

Nicholson: Linear Algebra with Applications.

DELIVERY MODE(S):

Lecture:	A3	10:00 – 11:20	T, R	G111
Seminar:	AS1	14:00 – 14:50	M	J228
	AS2	14:30 – 15:20	M	J229

COURSE OBJECTIVES: This course covers basic topics in linear algebra such as: Systems of linear equations, vectors spaces, vector equations of lines and planes, matrix algebra, inverses and invertibility, introduction to linear transformations, subspaces of vectors spaces, Gram-Schmitt process, determinants, introduction to eigenvalues and eigenvectors, the dot product and orthogonality, applications in a variety of fields.

LEARNING OUTCOMES: The student should be able to demonstrate knowledge of the course objectives describe above.

TRANSFERABILITY:

University of Alberta *, University of Calgary *, University of Lethbridge *, Athabasca University *
Augustana Faculty, University of Alberta *, Concordia University College, Canadian University
College, Grant MacEwan University, King's University College.
Other (transfers in combination with other courses or to other institutions)

You may also check: <http://www.transferalberta.ca> or
<http://alis.alberta.ca/ps/tsp/ta/tbi/onlinesearch.html?SearchMode=S&step=2>

** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. **Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

- Attendance 2% (BONUS, if attendance is more than 65%.)
- Tutorials 10% (Based on the work delivered in the tutorials.)
- 3 Tests 40% (Each 13.3%, scheduled on **Jan 28, Mar 4 and Apr 1** in Seminar time.)
- Final Exam 50% (To be scheduled by the College)

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100		C+	2.3	67-69
A	4.0	85-89		C	2.0	63-66
A-	3.7	80-84		C-	1.7	60-62
B+	3.3	77-79		D+	1.3	55-59
B	3.0	73-76		D	1.0	50-54
B-	2.7	70-72		F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE: We will tentatively cover chapters 1-6, Appendix A, and sections 7.1, 9.1, 10.1-10.2 in the textbook.

STUDENT RESPONSIBILITIES: Students are required to attend classes (lectures and seminars). Missed tutorials and tests will result in mark zero unless the student provides a valid reason with proof, in this case the weight of the missed tutorial or test will be equally distributed over the remaining tutorials or tests. No calculators, cellphones, notes or textbooks are allowed during the tests or exams.

STATEMENT ON PLAGIARISM AND CHEATING: Refer to the Student Conduct section of the College Admission Guide at <http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at <http://www.gprc.ab.ca/about/administration/policies/>

**Note: all Academic and Administrative policies are available on the same page.