

DEPARTMENT OF SCIENCE

COURSE OUTLINE-Winter 2018

MA1020 A3: Applied Linear Algebra – 3.5 (3, 1, 0) 60 Hours

INSTRUCTOR: Dr. Shohreh Rahmati **PHONE:** 780-539-2945

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OFFICE HOURS: TBA

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: MA 1000

REQUIRED TEXT/RESOURCE MATERIALS:

Open (free) textbook at www.lyryx.com. Nicholson: Linear Algebra with Applications

DELIVERY MODE(S): Lecture **T, R** 10:00-11:20 **J228** (A3)

Seminar M 11:30-12:20 J228 (AS1)

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:

Assignments 10%
 Quizzes 20%
 Midterm 25%

• Final Exam 45% (cumulative)

GRADING CRITERIA:

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

Alpha	4-point	Percentage	Alpha	4-point	Percentage
Grade	Equivalent	Guidelines	Grade	Equivalent	Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	С	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
В	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). Assignments must be submitted on time. No late assignments will be accepted. Late or missed quizzes or tests will result in mark zero unless the student provides a valid reason. No calculators, cellphones, notes or textbooks are allowed during the exams. **Cell phones are to be turned off and not used during class.**

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.