DEPARTMENT OF SCIENCE

COURSE OUTLINE – WINTER 2017
MA 1020 A3 APPLIED LINEAR ALGEBRA – 3.5 (3-1-0) 60 HOURS

INSTRUCTOR: Thomas Kaip **PHONE:** (780) 539-2963

OFFICE: J218 **EMAIL:** tkaip@gprc.ab.ca

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:

Nicholson: Linear Algebra With Applications 7 E, (or6th) McGraw-Hill Ryerson 2013

DELIVERY MODE(S):

| Lecture: | A3 | 10:00 – 11:20 | T R | J228 |
| Seminar: | AS1 | 14:30-15:20 | M | J228 |

COURSE OBJECTIVES: This course provides an introduction to linear algebra and their applications. The main topics are: 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, Grant MacEwan University, King's University College. (From the GPRC course catalog)

* An asterisk (*) beside any transfer institution indicates important transfer information. Consult the Alberta Transfer Guide

Note: A 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.

GRADING CRITERIA:

GRANDE PRAIRIE REGIONAL COLLEGE			
GRADING CONVERSION CHART			
Alpha Grade	**4-point Equivalent**	**Percentage Guidelines**	**Designation**
A+	4.0	95 – 100	**EXCELLENT**
A	4.0	90 – 94	
A−	3.7	85 – 90	**FIRST CLASS STANDING**
B+	3.3	80 – 84	
B	3.0	75 – 79	**GOOD**
B−	2.7	70 – 74	
C+	2.3	66 – 69	**SATISFACTORY**
C	2.0	62 – 65	
C−	1.7	58 – 61	
D+	1.3	55 – 57	**MINIMAL PASS**
D	1.0	50 – 54	
F	0.0	0 – 49	**FAIL**
WF	0.0	0	**FAIL, withdrawal after the deadline**

EVALUATIONS:

Assignments: 10%

Quizzes: 15%

Midterm: 25%

Final Exam: 50%   (Cumulative and scheduled during exam period, TBA)

Note: There will be no make-up quizzes or exams. If a quiz/test is missed for a valid reason and proper documentation is provided, then the weight of the quiz/test will be transferred to another component.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Not all topics from the individual chapters will be covered

1.	Chap 1	1 weeks
2.	Chap 2	1.5 weeks
3.	Chap 3.	1.5 weeks
4.	Chap 4	1.5 weeks
5.	Chap 5, 6,Appendix A	3 weeks
6	Section 7.1, 9.1, 10.1-10.2	2.5 weeks

ASSIGNMENTS: Most weeks an assignment will be handed out and will be due one week later.

QUIZZES: Quizzes will be held on the day an assignment is due, based on the assignment..

CALCULATORS: Use of calculators is not permitted on the quizzes or exams.

STUDENT RESPONSIBILITIES:

Attend all lectures and seminars. If a lecture or seminar is missed, it is the student's responsibility to catch up on the material and obtain the missing lecture notes.

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 www.gprc.ab.ca/about/administration/policies/