

DEPARTMENT OF SCIENCE

COURSE OUTLINE – FALL 2019 MA 1200 A2 LINEAR ALGEBRA I 3(3-1-0) 60 Hours 15 Weeks

| INSTRUCTOR: | Tom Kaip | PHONE: | (780) 539-2963 |
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| OFFICE: | J218 | EMAIL: | tkaip@gprc.ab.ca |
| OFFICE HOURS: | TBA | | |

PREREQUISITE: Mathematics 30-1 or equivalent

REQUIRED TEXT/RESOURCE MATERIALS:

Online textbook

CALENDAR DESCRIPTION:

Systems of linear equations, vectors in n-space, vector equations of lines and planes, matrix algebra, inverses and invertibility, introduction to linear transformations, subspaces of n-space, determinants, introduction to eigenvalues and eigenvectors, the dot product and orthogonality, applications in a variety of fields.

DELIVERY MODE(S):

| Lecture: | | 10:00 - 11:20 | M W | J202 |
|----------|----|---------------|-----|------|
| Seminar: | A2 | 10:00 - 10:50 | F | J201 |
| | B2 | 08:30 - 09:20 | F | J203 |

COURSE OBJECTIVES: This course provides an introduction to linear algebra and their applications. The main topics are: Systems of linear equations, vectors in n-space, vector equations of lines and planes, matrix algebra, inverses and invertibility, introduction to linear transformations, subspaces of n-space, 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 (From GPRC course catalog)

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

Note: 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 | | | |
| Α | 4.0 | 90 – 94 | EXCELLENT | | |
| A⁻ | 3.7 | 85 – 89 | | | |
| B ⁺ | 3.3 | 80 - 84 | FIRST CLASS STANDING | | |
| В | 3.0 | 75 – 79 | | | |
| B⁻ | 2.7 | 70 – 74 | GOOD | | |
| C⁺ | 2.3 | 66 - 69 | | | |
| с | 2.0 | 62 - 65 | SATISFACTORY | | |
| C- | 1.7 | 58 - 61 | | | |
| D+ | 1.3 | 55 – 57 | | | |
| D | 1.0 | 50 – 54 | MINIMAL PASS | | |
| F | 0.0 | 0 – 49 | FAIL | | |
| WF | 0.0 | 0 | FAIL, withdrawal after the deadline | | |

EVALUATIONS:

| Quizzes: | 20% | |
|-------------|-----|--|
| Midterm: | 30% | TBA |
| 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. Late assignments will not be accepted.

QUIZZES: Quizzes will be held roughly every 2nd week.

FINAL EXAM: The final exam will be written during the exam period, between Dec 10-19 inclusive including Saturdays and evenings. It is the student's responsibility to be available to write the exam at the scheduled time. Writing early is not permitted.

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/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/** **Note: all Academic and Administrative policies are available on the same page.