<div align="center">
Memorial University of Newfoundland
MATHEMATICS 2050: Linear Algebra I (Fall 2015), Section 002

Course Outline
</div>

Classrooms & Times: ED 3034B (MTuTh 13:00 - 13:50)

Instructor: Dr. Scott MacLachlan
           Office: HH 2019
           Tel : 864-8095
           Email: smaclachlan@mun.ca

Office hours: Tuesdays 10:30 - noon, Thursdays, 14:00 - 15:30
           Other times are available by appointment

Website: Class information, assignments, and solutions will be available on my home page as PDF files. The URL is `http://www.math.mun.ca/~smaclachlan/math2050_F15/`

Textbook: There are two options:
1. Linear Algebra: Pure & Applied, by Edgar G. Goodaire
    Publisher: World Scientific Publishing (Jan. 1 2013)
    ISBN-10: 9814508365, ISBN-13: 978-9814508360
2. Course Notes: Linear Algebra I, by Edgar G. Goodaire
    Publisher: Kendall Hunt (2012)

Outline of the Course:

Unit 1: Euclidean n-space

- Vectors and arrows; vector operations; linear combinations
- The span of vectors; the standard basis
- The dot product; lengths and angles; some inequalities
- The equation of a plane; the cross product
- The equation of a line
- Projections and distances
- Linear dependence and independence
- Complex numbers

Unit 2: Matrices and linear equations

- Matrix addition and scalar multiplication
- Matrix multiplication
- Systems of linear equations; row echelon form
- Homogeneous systems and linear independence
- The inverse of a matrix
- Elementary matrices

Unit 3: Determinants

- Minors and cofactors
- Properties of determinants
- Using elementary row operations to find determinants

Unit 4: The equation $Ax = \lambda x$

- Eigenvalues and eigenvectors
- Similarity and diagonalization for 2×2 matrices
- Applications

Evaluation: 10% Assignments, 15% Midterm 1, 15% Midterm 2, 60% Final Exam

Assignments:
- Homework assignments will be announced in class and posted to the course webpage. They must be handed in no later than 4:00pm on the due date. They may be submitted in class or placed in the marking box.

- In general, late assignments will not be marked. You are allowed two "freebies" in this system, where you can hand in an assignment 24 hours late and still receive credit. These cannot both be applied to the same assignment. To use a freebie, you must email me when you submit the late assignment to the marking box. If you do not email me to let me know when you use a freebie, the assignment will not be marked.

- If you require a longer extension, due to severe illness, bereavement, or other exceptional reason, please provide me with appropriate documentation (e.g. doctor's note, death notice) and a suggested timeline for completing the work.

Midterm Tests:
- Two midterm tests will be given, worth a total of 30% of your final mark.

- If you must miss a midterm exam for an acceptable reason, please provide me with appropriate documentation. For foreseeable circumstances, you must notify me in advance of the exam. No makeup midterms will be allowed; in the event of an excused absence for a midterm exam, the grading scheme will be adjusted to 15% for the other midterm and 75% for the final exam.

Final Exam:
- The final exam is a 2.5-hour comprehensive test during the formal examination period at the end of the semester. It will cover the entire course and determine 60% of your final mark.

- If you miss the final exam for unacceptable reasons, you will receive a final exam mark of zero.

Note:
- No notes, textbooks, or other aids are permitted. No electronic devices (including calculators and cell phones) are allowed at your desk or on your person during any examination. Possession of such a device will be considered an academic offense and shall be reported as such (see University Regulation 6.11 in the MUN Calendar).

Supplementary Exams: Students who have a passing term grade but a final mark of between 45–49F (inclusive) may apply to write a supplementary exam. If you pass the supplementary exam, your final mark will be recalculated using the supplementary exam grade in place of the original final exam grade; however, your new final mark cannot exceed your term grade.

Important Dates:

Wednesday, September 23	Last day to add courses
Monday-Tuesday, October 12-13	Midterm Break, no classes
Friday, October 16	Midterm Exam #1
Wednesday, October 28	Last day to drop courses without academic prejudice
Tuesday, November 17	Midterm Exam # 2
Friday, December 4	Last day of lectures

Midterm exam dates are tentative, and will be confirmed in class. In the event of a class cancellation on the date an exam is to be written, check the course website for rescheduling information.