**Instructor:** Mykhailo Kuian  
**Email:** mkuian@umn.edu

**Time:** MWF 11:15 – 12:05  
**Place:** 101 Fraser Hall.

**Office Hours:** T,TR 12:00-13:00, or by appointment.

**Textbook:** Edwards and Penney, DIFFERENTIAL EQUATIONS AND LINEAR ALGEBRA (4th edition)

**Course description:** The course is divided into two parts:

Linear algebra: matrices and matrix operations, Gaussian elimination, matrix inverses, determinants, vector spaces and subspaces, dependence, Wronskian, dimension, eigenvalues, eigenvectors, diagonalization.

ODE: Separable and first-order linear equations with applications, 2nd order linear equations with constant coefficients, method of undetermined coefficients, simple harmonic motion, 2x2 and 3x3 systems of linear ODE’s with constant coefficients, solution by eigenvalue/eigenvectors, nonhomogenous linear systems; phase plane analysis of 2x2 nonlinear systems near equilibria.

We will cover almost all from of Chapters 1-7 of the book.

**Quizzes:** There will be 12 quizzes in your discussion sections; the lowest two quizz scores will be dropped; there will be no make-ups for missed quizzes. Each quizz will cover the material discussed in class during the preceding week. The quizzes are handled by your TA.

**Grading Policy:** Grades will be based on quizzes, three midterm exams, and final exam, contributing as follows: quizzes (20%), midterm 1 (15%), midterm 2 (15%), midterm 3 (15%), final (35%). If your cumulative score is at least 90% you will get A, for 75% you will get B-, and for 60% C-.

**Calculator and Exam policy:** A calculator is useful for homework. Only scientific calculators (no graphing calculators!) will be allowed but no books or notes for the midterms and final exams.

**Schedule of Exams:**
Midterm Exam 1 Thursday, October 3.
Midterm Exam 2 Thursday, October 31.
Midterm Exam 3 Tuesday, November 26.

All midterms will be in your discussion sections.

The final exam will cover all sections of the course. It will be given on **Friday, December 13, from 12:00 to 15:00**.

**Homework:** Homework will be assigned every class, but it will be neither collected, nor graded. **However it is strongly recommended to do your homework if you want to pass this class!** The quizzes and midterm exams will consist of problems very similar to the ones assigned for homework.
Missed exams policy: Missing an exam is permitted only for very serious and unavoidable circumstances. And you must notify me in advance. Only a written excuse can be accepted, otherwise you will get 0 on the exam. There will be no make-ups for missed quizzes. Except in truly exceptional situations, a student who misses the final exam will fail the course.

Incompleteness: These will be given only in extraordinary circumstances, and are at my latitude. More precisely, I will consider giving you an incomplete if you have successfully completed all but a small portion of the work of the course and some severe, unexpected event prevents you from completing the course. This means that you must have taken the three midterms and must be doing work at the C level or better. You will have to sign a contract detailing what you have to do to complete the course. I will not give you an incomplete simply because you are behind in your work; in the latter case you should try to drop the course.

Attendance: Attendance will not be taken into account towards the final grade for this class, however it is very highly recommended. You are responsible for all material covered in class and all assignments. Experience shows that poor attendance most often results in a poor grade.