Ordinary/Elementary Differential Equations - MATH 215/255
MTF 1:00 - 3:00 PM, W 1:00 - 2:00 PM — MATH 100

Instructor: Lee Troupe (`ltroupe@math.ubc.ca`)

Office Hours: MTF 3:00 - 4:00 PM in LSK 300

Textbook: *Elementary Differential Equations and Boundary Value Problems (11e)*, Boyce, diPrima, and Meade

Course Websites: All course materials will be posted to Canvas (`https://canvas.ubc.ca`). You will also find links to WeBWorK homework assignments on Canvas.

Grade Policy and Assignments: Homework will be assigned through WeBWorK. Links to each WeBWorK assignment will be posted on Canvas. **You must access these homework assignments through Canvas, not directly through WeBWorK.** All WeBWorK assignments are weighted the same, regardless of how many problems are in the assignment. Your lowest homework score is automatically dropped. In addition to homework, on each Wednesday (except for the first Wednesday, 5/16), there will be a 20-minute quiz at the end of class.

Your grade will be computed as follows: WeBWorK homework is worth 10% of your grade. The five quizzes are worth 30% of your grade altogether. The final exam is worth 60% of your grade.

Missed Assessment: If a student misses a quiz, that student shall provide a documented excuse; otherwise a mark of zero will be entered for that quiz. Examples of valid excuses are an illness which has been documented by a physician and Student Health Services, or an absence to play a varsity sport (your coach will provide you with a letter). A physician's note must specifically state that the student was medically unfit to write the missed assessment on the date of the exam. Absence of this exact information will result in a mark of 0. You must let me know **within 48 hours** of such an absence and appropriate documentation should be produced **within 7 days**. Failure to comply with these time limits will result in a mark of zero. **There will be no make-up quizzes, and the weight of the missed quiz will be transferred to the final examination.**

Finally, please note that a student may NOT have 100% of their assessment based on the final examination. A student who has not completed a substantial portion of the term work normally shall not be admitted to the final examination.

Missed final exams are not handled by me. If you miss the final exam, contact your faculty advisor as soon as possible.

Course Outline:

- Week 1: First order ODEs (1.1 - 1.3, 2.1 - 2.5, 2.7)

- Week 2: Second order ODEs (3.1 - 3.4)

- Week 3: Second order ODEs (3.5 - 3.8) & Laplace transforms (6.1)

- Week 4: Laplace transforms (6.2 - 6.5) & Linear systems of ODEs (7.1, 7.4 - 7.5)

- Week 5: Linear systems of ODEs (7.6, 7.8) & Nonlinear systems (9.1 - 9.3)

- Week 6: Nonlinear systems (9.4) & Numerical methods (8.1 - 8.3)

Mandatory Disclaimer: The course outline is a general plan for the course; deviations announced to the class by the instructor may be necessary.