

Math 2400      **Introduction to Differential Equations**      Spring 2019

**Course Schedule:** Tuesday and Friday, 12:00pm–1:20pm. West Hall Auditorium

**Instructor:** Joe Klobusicky (klobuj@rpi.edu, Amos Eaton 412)

**Office Hours:** Tuesday 1:30-3:30, Thursday 1:30-2:30 in Amos Eaton 412

**Teaching Assistant:**

**Course Web Site:**

`joeklobusicky.net/fall-2018-differential-equations`

**Textbook:**

- Elementary Differential Equations and Boundary Value Problems (10th ed.), W.E. Boyce and R.C. DiPrima, Wiley, 2012.

**Outline and Text Reading:** The following is the *tentative* schedule for topics covered. Sections in parentheses will be covered, time permitting.

1. Introduction and First Order Differential Equations: Sect. 1.3, 2.1 - 2.3, 2.5
2. Second Order Linear Eqns: Sect. 3.1 – 3.8, 5.4
3. Systems of First Order Linear Eqns: Sect. 7.1 – 7.3, 7.5 – 7.6
4. Nonlinear Differential Eqns and Stability: Sect. 9.1, (9.3 – 9.5)
5. PDEs and Fourier Series: Sect. 10.1 – 10.8
6. Laplace Transforms: Sect. (6.1 – 6.5)

**Grading Policy:** Attendance is not required but is strongly recommended. Homework assignments are usually *suggested* and not graded, unless stated otherwise. On exams, you are allowed one handwritten sheet (8.5 by 11 inches) of notes. No other aids (books, notes, calculators, laptops, cell phones, etc.) are allowed. Your final grade will consist of the following:

- 3 Exams: 75% of course grade.
- Optional Final Exam (during finals week): 25% of course grade. This score can only be used to help your final grade. If your average drops (or you don't take the exam), the first three exams will be averaged for your final grade.

In addition, you will have an opportunity during recitation to gain some bonus points on the exam with quiz questions. Quizzes will be given in recitation, and I will announce when they will be given ahead of time. These are 'all or nothing' type quizzes (no partial credit), with problems often drawn from homework sets. Since quizzes are purely extra credit, there will be no makeups.

**Grading appeals** If you would like to appeal a grade, please submit your request in writing, either through email or on a sheet of paper. Explain in detail why you believe your exam has not been correctly graded. Arguments over how much partial credit you should obtain will not be entertained. If you write your complaint on paper, you can submit either in class or during office hours. I'll usually respond in a day or two with a decision.

**Missing an exam** If you miss an exam, you will only be permitted to make up the exam if you obtain an explanatory note from the **Student Experience Office** (4th floor of Academy Hall, x8022, se@rpi.edu) indicating that you had a valid excuse (such as serious illness).

In any event, you must contact me within 24 hours of a missed exam with at least a preliminary explanation if you wish to make it up. Unexcused absences (including "forgetting" about the exam) will result in a 0 score for that exam.

**Academic Integrity:** All matters involving academic integrity will be taken very seriously. The breach of trust between a student and teacher is a disservice to RPI faculty, students, and alumni. The Rensselaer Handbook of Student Rights and Responsibilities defines various forms of Academic Dishonesty and you should make yourself familiar with these.

Among other violations laid out in the Handbook, copying from fellow students' work or from unallowed aids during a quiz or an exam, as well as using electronic means to contact anyone outside the examination room, is a breach of academic integrity. If caught, you will be sent to the Dean of Students with the recommendation that you be expelled from the class with a failing grade. The same expulsion policy applies if you resubmit a quiz or test for regrading with changed answers. Standard Institute procedure for academic integrity breaches will be followed.