Math 3410 Differential Equations for Applications
Fall 2026

- **Course Content**: Existence and uniqueness theorem for initial value problems, oscillatory behavior for solutions of ODEs, Sturm-Liouville eigenvalue theory, series solutions of differential equations, Bessel functions, partial differential equations, phase plane analysis for nonlinear differential equations.
- **Instructor:** Damin Wu
  - **Class Meetings:** TuTh 2:00pm–3:15pm at MONT 421.
  - **Office Hours:** Thursday 10:00am–11:00am at MONT 335.
- **Grader:** Nysa Sureka
- **Textbook and References:**

  [1] *A Textbook on Ordinary Differential Equations*, by S. Ahmad and A. Ambrosetti, 2nd ed. 2015, download free through library.
- **Grades & Exams:**
  - Homework (30%): Announced and Posted at `HuskyCT`.
  - Midterm 1 (20%): Tuesday, Sep 29, 2:00pm–3:15pm.
  - Midterm 2 (20%): Tuesday, Nov 03, 2:00pm–3:15pm.
  - Final (30%): TBA.

  For a problem to receive full credit, you must show complete work, explain your work as necessary, and present your work in a clean and clear format that is easily understood. Although you are encouraged to discuss homework problems with your classmates, you have to write up your work based on your own understanding and using your words.

  To receive credit, you must submit your homework assignment via HuskyCT before the deadline. Late homework, or homework submitted via email, would NOT be accepted.
- **LaTeX**: LaTeX is a high-quality typesetting system designed for scientific especially math documentation, and it is free. A *latex template* for our homework assignment is posted at `HuskyCT`. For latex editors, one can use `TeXShop` for Mac only, or `TeXworks`, or try for example `Overleaf` online.

  A homework assignment typesetted by LaTex receives 10% bonus point.