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**Instructor:** Dr. Yunrong Zhu    **Office:** PS 328B    **Phone:** 282-3819    **E-Mail:** [zhuyunr@isu.edu](mailto:zhuyunr@isu.edu)

**Course Website:** [MOODLE](#)                      **Office Hours:** MF 4:00 pm - 5:00 pm, or by appointment

**Textbook:** *Elementary Differential Equations*, by William F. Trench, Open Access Textbook. A student solutions manual can be found at <http://digitalcommons.trinity.edu/mono/10/>. We will cover most of Chapters 2, 5, 7, 8, 9 and part of Chapter 10.

**References:**

- Kenneth Ross, *Elementary Differential Equations*, 10th Edition, Wiley, 2012.
- William E. Boyce and Richard C. DiPrima, *Elementary Differential Equations*, 10th Edition, Wiley 2012.

**Prerequisites:** Math 1175 (Calculus II) with a grade of C- or better.

**Course Objectives:** This course provides an introduction to the theory, solution and application of *ordinary differential equations* – the equations involving the derivative of a single independent variable. Topics discussed in this course include methods of solving first-order differential equations, higher-order differential equations, modeling with first-order and higher-order differential equations, series solution of linear equations, systems of linear first order differential equations, and numerical solutions of ordinary differential equations. Applications of differential equations in sciences are presented.

**Homework/Quizzes:** The homework problems will be posted on [MOODLE](#) as recommended exercises. Quizzes will be given regularly throughout the semester. The questions on the quizzes will be based on the homework and examples shown in class. You must be present in the class to take the quizzes, and **NO make-up** will be given for any reason. Your two lowest quiz scores will be dropped.

**Exams:** There will be three in-class exams with the tentative schedule as follows:

**Exam #1: Monday, Feb. 4**

**Exam #2: Monday, Mar. 11**

**Exam #3: Monday, Apr. 15**

A **Comprehensive Final Exam** will be held on **Wednesday, May 1, 12:30-2:30 p.m.** All these exams will be held in PS 304. You must take the exam at the scheduled time. You are allowed to use one hand-written 3" × 5" notecard (both sides) for all the exams.

**Makeup Exams:** There will be **NO** makeup exams. Exceptional and well-documented circumstances will be considered on an individual basis. Any missed exam will be 0.

**Calculators:** The calculator and other electronic devices are **NOT** allowed in the quizzes and exams. Using such devices or other form of unauthorized materials during an exam amounts to cheating.

**Grading:** : Students course grade will be based on quizzes, three in-class midterm exams, and the final exam. There will be NO “extra credit” work. The weights are distributed as follows:

**25% quizzes+ 45% Midterm Exams + 30% Final.**

A+	93% and above	C	73%–76%
A-	90%–92%	C-	70%–72%
B+	87%–89%	D+	67%–69%
B	83%–86%	D	63%–66%
B-	80%–82%	D-	60%–62%
C+	77%–79%	F	59% and below

**Attendance Policy:** Class attendance is required. Please make sure to sign the daily attendance sheet. **A student who earns a failing grade via course work (exams, homework, etc.) and has unexcused absences that total more than 30% of class meetings will receive a grade of “X”.**

**Academic Integrity and Dishonesty:** Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is expected of all individuals in academe. Academic dishonesty in any form is unacceptable. Academic dishonesty includes, but is not limited to, cheating and plagiarism. All Idaho State University Policies regarding ethics and honorable behavior apply to this course (see <http://www2.isu.edu/policy/4000/index.shtml>).

**Extra Help:** Do not hesitate to come to my office during office hours or by appointment to discuss a homework problem or any aspect of the course. Free tutoring is available from the Math Center in the Student Success Center, Rendezvous 327 in Pocatello and CHE Room 220 in Idaho Falls. Information is available at <http://www.isu.edu/success/math/index.shtml>.

**ADA Policy:** Idaho State University is committed to providing equal opportunity in education for all students. If you have a diagnosed disability or if you believe you have a disability (physical, learning, hearing, vision, psychiatric) that might require reasonable accommodation in this course, please contact the Disability Services Center, Rendezvous Building, Room 125 (282-3599) <http://www.isu.edu/disabilityservices>.