

University of Colorado Boulder
Department of Mathematics
MATH 3430 - Ordinary Differential Equations
Fall 2015

Course Information:

Section: 002

Time & Location: MWF 2:00-2:50pm in MUEN E431

Course Website:

<http://euclid.colorado.edu/~jowa8403/math3430f15/index.php>

Instructor Information:

Instructor: Jordan Watts

Email: jordan.watts@colorado.edu

Office Hours: **tentatively** MW 10:00-10:50am or by appointment (via email)

Office: MATH 202

Brief Course Description:

We will cover first order differential equations, including the existence and uniqueness theorem; second order linear differential equations; and systems of differential equations. We will also cover topics such as the Laplace transform, mechanical vibrations, the Dirac delta, and series solutions.

Prerequisites and Restrictions:

Calculus 3 (MATH 2400 or APPM 2350) and Linear Algebra (MATH 3130, APPM 3310, or APPM 2360)

In more detail, you should be comfortable with partial differentiation, basic linear algebra (matrices and eigenvalue/eigenvector problems), and basic arithmetic of complex numbers.

Text:

Martin Braun, *Differential Equations and Their Applications*, 4th Edition, Springer, 1993.

Grading:

The breakdown of your overall grade into categories is given below. Extra credit is NOT available.

Assessment	Percent of Final Grade
Final Exam	30%
Term Tests (3)	45% (15% each)
Quizzes (6)	25%

- *Final Exam:* A comprehensive final will be administered at the end of the course. The date and time are (tentatively) **Sunday, Dec. 13, 4:30-7:00pm**. The final examination policy can be found at <http://www.colorado.edu/policies/final-examination-policy>.
- *Term Tests:* There will be three 50-minute in-class term exams, each worth 15% of your overall grade:
 1. Term Test 1: Friday, Sept 18 (held in class)
 2. Term Test 2: Friday, Oct 16 (held in class)
 3. Term Test 3: Friday, Nov 20 (held in class)
- *Quizzes:* There will be five (short) in-class quizzes, and one take-home quiz; the best four are worth 25% of your overall grade:
 1. Quiz 1: Friday, Sept 4 (held in class)
 2. Quiz 1.5: Friday, Sept 11 (held in class)
 3. Quiz 2: Friday, Oct 2 (held in class)
 4. Quiz 3: Friday, Nov 6 (held in class)
 5. Quiz TH: (take-home)
 6. Quiz 4: Friday, Dec 4 (held in class)
- *Regrading:* If you feel that there is an error in the grading of your quiz or exam, please see your instructor immediately after your graded work is returned to you. After you leave the classroom with your quiz or midterm, regrading is no longer possible. There is no need to explain what you “meant” since your solutions should be sufficiently clear to begin with. **Note that regrading is very strict, and your grade will be lowered if it is found that the graders were overly-generous or that you are simply trying to get extra points without good reason.**

Attendance Policy:

Students are expected to attend all classes and are responsible for all information presented. If you miss a class, it is your responsibility to get notes on what you missed. If you miss a quiz or exam due to absence, please see your instructor as soon as possible with appropriate documentation (note: see below for medical-related absence and religious observance). In excusable cases, your grade for any missed work typically will be based on your grade on the final exam, or the grade breakdown for your work will be re-weighted.

Disabilities and Medical Issues:

If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability

Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu. If you have a temporary medical condition or injury, see Temporary Injuries guidelines under the Quick Links at the Disability Services website <https://disabilityservices.colorado.edu/> and discuss your needs with your professor.

Religious Observances:

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. For this class, please email your professor within two weeks of any scheduled exam or quiz that you will miss for these reasons, and appropriate accommodations will be made. For more details on university policy, see <http://www.colorado.edu/policies/observance-religious-holidays-and-absences-classes-and>

Behaviour in and out of the Classroom:

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioural standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, colour, culture, religion, creed, politics, veterans status, sexual orientation, gender, gender identity, gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. Your instructor will gladly honour your request to address you by an alternate name or gender pronoun. Please advise your instructor of this preference early in the semester so that they may make appropriate changes to their records. See policies at <http://www.colorado.edu/policies/student-classroom-and-course-related-behavior> and at http://www.colorado.edu/osc/sites/default/files/attached-files/osc_handbook_2015-16.pdf.

Moreover, the University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working, and living environment. CU-Boulder will not tolerate acts of discrimination or harassment based upon Protected Classes or related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected Classes" refers to race, colour, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy. Individuals who believe they have been discriminated against should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or the Office of Student Conduct and Conflict Resolution (OSC) at 303-492-5550. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/institutionalequity/>. The full policy on discrimination and harassment contains additional information: <http://www.colorado.edu/policies/discrimination-and-harassment-policy-and-procedures>

Academic Integrity:

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution: <http://www.colorado.edu/policies/academic-integrity-policy>. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behaviour. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <http://www.colorado.edu/policies/student-honor-code-policy> and at the Honor Code Office <http://honorcode.colorado.edu>.

Calculators and Other Electronic Devices:

No calculators (or other electronic aids) are permitted on quizzes and exams, so study accordingly. The use of any portable electronic device (phones, tablets, e-readers, etc.) during a quiz or exam without prior permission of the instructor is prohibited.

Last updated October 26, 2015.