

**Math 3430–001, Introduction to Ordinary Differential Equations  
Spring 2017**

**Class meetings:** MWF 9:00-9:50 p.m. in HALE 260

**Instructor:**

Dr. Judith Packer  
MATH 227  
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<http://spot.colorado.edu/~packer/math3430.html>

**Office hours:** MWF, TBA, or by appointment opology

**Prerequisites:** This course has as a prerequisite the courses Math 2400 Calculus 3, and Math 3130 or APPM 3310 (min grade C). Similar to APPM 2360.

**Text:** “*Differential Equations and their Applications*”, Martin Braun, Fourth Edition, Springer Verlag, 1992. We will cover most of Chapters 1 through 4 of the text.

**Course outline:** This course is meant to familiarize the student with the elements of the theory of ordinary differential equations. It gives an elementary systematic introduction to first-order scalar differential equations,  $n$ th-order linear differential equations, and  $n$ -dimensional linear systems of first-order differential equations. Additional topics are chosen from equations with regular singular points, Laplace transforms, phase plane techniques, basic existence and uniqueness, and numerical solutions. If time permits we will cover more material from the textbook, depending on the interests of the students and the instructor. Other topics will be covered as time permits.

**Assessment:** Grades will be assigned based on performance in homework assignments (20%), an in-class midterm on Wednesday, Feb. 22, 2017 (25%), and in class midterm on Wednesday April 5, 2017 (25 %) and a final exam on Thursday, May 11, 2017, 7:30 p.m. - 10 p.m. (30%).  
THERE WILL BE NO MAKE-UP EXAMS, so make sure now that you have no conflicts!

**Homework:** 20% of your final grade will be come from your performance on homework, which will be assigned every three weeks or so. From time to time I will ask people to present solutions to the problems in class. It is fine to work together on homework, although each student must submit an individual write-up. **Late homework will not be accepted**, but the lowest grade of your regular homework assignments will be dropped.

**Important Dates:**

- **February 1, (Wed.):** Last day to drop a course without Tuition/Fee charges and without a “W” appearing on your transcript.
- **March 24 (Fri.):** Last day to drop a course via MyCUInfo; Last day for students to make arrangements with their instructor if they have three or more final exams on the same day or two final exams scheduled to meet at the same time.
- **May 5 (Fri.):** Last day for students to withdraw from the university for Spring semester. All withdrawals are assessed 100% of tuition and fees (\$0 refund) and W grades are posted to transcripts.

**Accommodations for disabilities:** If you qualify for accommodations because of a disability, please submit to me 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](mailto:dsinfo@colorado.edu).

If you have a temporary medical condition or injury, see Temporary Injuries under Quick Links at Disability Services website (<http://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. In this class, assignments will either be rescheduled or dropped from grading calculations depending on the nature of the conflict. If you have a conflict, please advise me as soon as possible so that arrangements can be made. See full details at [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

### **Miscellaneous University Rules & Regulations:**

- **Honor Code:** All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council ([honor@colorado.edu](mailto:honor@colorado.edu); 303-725-2273). 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/honor.student-honor-code-policy>.
- **Student Classroom and Course-Related Behavior:** Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at <http://www.colorado.edu/policies/student-classroom-and-course-related-behavior>.
- **Statement on Discrimination and Harrassment:** The University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working, and living environment. The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, veteran status, political affiliation or political philosophy in admission and access to, and treatment and employment in, its educational programs and activities. (Regent Law, Article 10, amended 11/8/2001). 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, color, 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 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/>