

Instructor: Andrew Wray
Office: Deady 12 (Basement of Deady)
Email: awray3@uoregon.edu (preferred)
Phone: 541-346-4711 (strongly not preferred)

Office Hours:
Monday, 1-2pm
Thursday, 1-2pm
Friday 12-2pm
and by appointment

Class Meetings: 8-8:50 am, MTWF, Friendly 214

Course Goals: A student successfully completing this course should learn

- How to recognize differential equations,
- How to explicitly solve simple ODEs: i) Basic Integrable, ii) 1st Order Separable, iii) 1st Order Linear, iv) 2nd Order Linear Homogeneous (with Constant Coefficients or Euler Form), v) 2nd Order Linear Nonhomogeneous, vi) Higher Order Linear Homogeneous (with Constant Coefficients or Euler Form), vi) 1st Order Linear Systems
- Identify when ODEs can or cannot be solved uniquely
- Linear algebra sufficient to solve linear systems of first order ODEs
- How to analyze the stability and long-time behavior of solutions of general 1st order ODEs
- How to use ODEs for modeling and predicting the behavior of physical, biological and other systems
- (If time) How to numerically approximate solutions to ODEs

Text: *Elementary Differential Equations*, 11th edition, by William E. Boyce, Richard C. DiPrima.

Recommended: A graphing calculator. TI 83, 84 is best. No TI 89 or Nspire (any calculator with symbolic integrator).

Homework: Homework will consist of written homework. Written assignments will usually be due in class on Tuesdays. My expectations for written assignments are:

- neat handwriting,
- clear steps shown in your solution,
- complete sentences explaining your solution
- a staple, should it go more than one page,
- no frilly edges or scribbles. (Frilly edges are what you get when you rip it out of a spiral notebook.)

Points will be deducted for not following these rules.

At the end of the term I may give bonus points to your homework score to cover life's little misfortunes that might cause to you miss an assignment or two. I encourage working together on homework, but you *must* be able to answer the questions on your own.

A note on late homework: If you need an extension for homework, come see me during office hours before the assignment is due and I may give you an extension. However, I reserve the right to revoke this if I notice it becomes a habit for you. I will not accept late work after it is due except for outstanding circumstances.

Quizzes: There will be a 20 minute quiz every Friday during the first 20 minutes of class. Material up until the Wednesday before will be fair game.

Exams:

Exam 1:	Friday, April 26 (week 4)
Exam 2:	Friday, May 17 (week 7)
Final Exam:	Tuesday, June 11, 10:15 am (Week 11)

A note on exams: unless there are documented, extreme circumstances, no late work will be accepted, nor make-up exams given.

The final exam will be on Tuesday, June 11th. If you cannot make this time for any reason, you must arrange a different time to take it by the end of week 2.

A student receiving a grade of D+ or lower on the final exam can receive at most a D+ in the course.

Grading: Course grades are weighted according to the following scheme.

Homework	20%
Quizzes	25%
Midterm Exams (2)	25% (12.5% each)
Final Exam	30%

Standard grade assignments will be made (e.g. grades in the 80% to 90% range will be B's, those in the 70% to 80% range are C's, etc.)

Plus and minus grades will be awarded in the upper and lower 3% of a bracket. (e.g. A grade of B+ is awarded between 88% and 90%; B- between 80% and 82%). I reserve the right to apply a course adjustment to grades at the end of the term.

Again, a student receiving a grade of D+ or lower on the final exam can receive at most a D+ in the course.

Lectures: I don't take attendance, but I assure you that coming to lectures and participating will only benefit your learning. I encourage you to participate in lectures by asking questions and working on the handouts I give you. I also ask that you turn off your phones and keep laptops put away.

Accessibility: The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of the instruction or design of this course that result in disability-related barriers to your participation. You are also encouraged to contact the Accessible Education Center in 164 Oregon Hall at 541-346-1155 or uoaec@uoregon.edu.

Sexual Violence: I am a student-directed employee. For information about my reporting obligations as an employee, please see Employee Reporting Obligations. Students experiencing any form of prohibited discrimination or harassment, including sex or gender based violence, may seek information on safe.uoregon.edu, respect.uoregon.edu, titleix.uoregon.edu, or aaeo.uoregon.edu or contact the non-confidential Title IX office (541-346-8136), AAEO office (541-346-3123), or Dean of Students offices (541-346-3216), or call the 24-7 hotline 541-346-SAFE for help. I am also a mandatory reporter of child abuse. Please find more information at Mandatory Reporting of Child Abuse and Neglect.

Student Conduct: I plan to treat every student with respect and, as such, expect my students to show respect for me and for the class as a whole. Violations of the student conduct code results in the incident being included on your student conduct record as well as academic sanctions such as a failing grade on any coursework related to the violation or simply a failing grade in the course. The University of Oregon requires all instances of cheating be reported, no matter how small. Cheating includes, but is not limited to:

- Looking at another student's exam during a test
- Copying the work of another person (student or otherwise) and submitting it as your own
- Using any materials except those explicitly approved during a test-taking situation
- Resubmitting graded work that was altered after being returned

Any kind of cheating will result in a grade of 0 on the assignment. For a list of other descriptions of cheating, see the Student Conduct Code.

Suggestions for Successful Study:

- Don't get behind in your reading, homework, etc.
- Participate in class, ask questions, and make use of my office hours.
- Form a study group with others in the class. Work together on homework - but everyone must join in and submit their own work.
- Read ahead in the book. Even reading the first few pages of each lesson will help the material sink in quicker during lecture and allow you to ask meaningful questions.
- Keep all your old exams, worksheets and quizzes. You'll find them useful when youre studying for tests.
- If you think you'll need extra help, establish a tutoring plan right away. Check with the Teaching and Learning Center (Room 68 in the Basement of PLC) for free or private tutoring.

Important Dates: Drop deadlines and W deadlines can be found on classes.uoregon.edu. See the calendar on Registrar's website for other deadlines.

Getting Help From...

Me: You should make use of my office time whenever possible. Tutors: The Teaching and Learning Center (Room 68 in the Basement of PLC) has both free and private tutors available during most business hours. Free tutoring is also available in the Math Library Reading Room (across the hall from the math office in Fenton Hall) on weekdays and Sundays.