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

Office Hours:
TBD

Class Meetings: 9-9:50 am, MTWF, Deady 106

Course Goals: A student successfully completing this course should, in a general sense, have...

- facility with the computation of first and second derivatives and the interpretation thereof,
- knowledge of the difference between functions on discrete domains and continuous domains and the practical implications of each,
- repeated exposure to applications in population, reproduction, drug concentration, vascular function, gas exchange, selection, and food intake using all the learning outcomes.

The student can model the mathematical topics described among the learning outcomes in words, then solve or simplify the relevant equations and/or expressions, and finally write a summary statement of the solution.

Learning Outcomes: A successful student can...

- compute and interpret limits at finite values and infinity,
- evaluate the continuity of a function on an interval,
- determine when it is appropriate to use L' Hôpital's Rule and compute it in those instances,
- compute and interpret first and second derivatives for polynomial, logarithmic, exponential, and trigonometric functions,
- use product, quotient, and chain rules to compute derivatives,
- use graphical, numerical, and algebraic means to identify equilibria of discrete systems and classify their stability,
- find and interpret extrema of continuous and discrete functions,
- use the Extreme Value Theorem to draw conclusions about extrema of continuous functions.

Most importantly, the student can model the mathematical topics described among the learning outcomes in words, then solve or simplify the relevant equations and/or expressions, and finally write a summary statement of the solution.

Text: *Modeling the Dynamics of Life: Calculus and Probability for Life Scientists,* 3rd edition, by Frederick Adler.

Recommended: A graphing calculator (TI 83/84's are a great choice, and I will be able to help you use it if needed).

Homework: Homework will mainly consist of written turn-in homework. On written homework, I expect:

- 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. **I reserve the right to not accept homework that does not follow these guidelines.** You may get help from me or others on the homework, but you *must* be able to answer the questions on your own. The work you submit must be your own writing; copying will be subject to punishment (see Student Conduct below). A note on late homework: If you need an extension for homework, come see me **during office hours** 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 otherwise not accept late homework**.
A smaller portion of the homework will be from Webwork. I will mainly use this to give you a bunch of practice problems. Expect this to taper off as the quarter progresses.

Quizzes: There will be a short quiz each day we meet, usually at the beginning of class. These will usually just be a problem or two from the previous day that will serve as a check that you are keeping up with the class. A few of the lowest quiz scores will be dropped from your grade.

Exams:

Exam 1:	Friday, Oct 19th (Friday of Week 4)
Exam 2:	Friday, Nov 9thrd (Friday of Week 7)
Cumulative Final Exam:	Wednesday, December 5th (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 Wednesday, December 5th at 10:15 am. If you cannot make this time for any reason, you must arrange a different time to take it by the end of week 2.

Grading: Course grades[1] are weighted according to the following scheme.

Homework	20%
Quizzes	20%
Midterm Exams (2)	30% (15% 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.

[1] A student who achieves adjusted grades of D or F on *all* of the exams may be eligible for a maximum grade of D.

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
- Cooperating on written work for the course without being explicitly allowed to do so

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:

Monday of week 2 (Jan 15)	Last day to drop without a "W"; also MLK Jr. Day, No class
Wednesday of week 2 (Jan 17)	Last day to add a class
Sunday of week 7 (Feb 25)	Last day to change to P/NP or withdraw

See the calendar on Registrars website for other deadlines

Getting Help From...

Me: You should make use of my office time whenever possible. For WebWork problems, please make use of the "Email Instructor" button on questions you've had difficulty with. Alternatively, you may use Canvas' messaging system to send me messages.

Tutors: The Teaching and Learning Center 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.