Math 155. Calculus for Biological Scientists
Fall 2009

Course Website: `www.math.colostate.edu/~shipman/math155`
Please review the course website for details on the course and policies.

Living organisms grow, reproduce, and move around. They change. With Calculus, we will study the nature of this change and quantify it by asking questions such as How fast is it changing? How much? and Into what? Biological examples motivate mathematical concepts, which in turn lead us to ask new questions about biology. Math 155 is a math course, but one that is also a science course.

Section 1
Class Meeting Time and Place: MTWF 8:00-8:50 am, Engineering E204

Instructor: Hilary Smallwood
Office: Weber, Room 17
Office Hours: TBA
          See the course website for open office hours of other Math 155 instructors.
Email: `smallwoo@math.colostate.edu`

Prerequisites: Basic courses in logarithmic and exponential functions (such as Math 124) and trigonometry (such as Math 125).

Course Materials:

• *Required:* Frederick R. Adler. *Modeling the Dynamics of Life: Calculus and Probability for Life Scientists* 2nd Ed. Thompson, 2005. `ISBN 0-534-40486-3`.

• *Optional:* A graphing calculator such as the TI-83 or TI-84 is recommended. These are available in the bookstore. It is important that you have the manual for your calculator. You will not be allowed to use a TI-89 or any calculator that does symbolic manipulation on the exams or quizzes. It is prohibited to use your cell phone or a palm pilot as your calculator. The instructor or exam proctor has the right to check your calculator during the exam and any programs you have put on it to be sure they are permissible.

• *Optional:* G. Mueller, R. I. Brent. *Just-in-Time Algebra and Trigonometry for Calculus*, 3rd Ed. Pearson, 2005.

Syllabus: We will cover most of Chapters 1-4 of the Adler book. A detailed syllabus is available at the course website. You are expected to read each section of the book that is covered.

Grading:

Grades will be based on

    Homework: 100 points total

    Quizzes: 100 points total

    Midterm examination 1 (Thursday, Oct. 1, 5:15-7:00 pm): 100 points

    Midterm examination 2 (Thursday, Nov. 5, 5:15-7:00 pm): 100 points

    Final Exam (Monday, Dec. 14, 5:50-7:50 pm): 100 points

Exams: There will be two common exams and a final. *Note* that the common exams are held in the evening and you are REQUIRED to be there. The rooms will be announced in class; the dates are noted above. The final exam will be comprehensive. The ONLY excused absences from these exams are official university approved absences. If you need to request an alternate exam time you must use the *alternate exam time request form* linked on the course website. This form must be submitted at least one week prior to the exam. DO NOT make travel plans to leave before the final exam because an alternate exam will NOT be given.

Homework: Homework (HW) is posted on the course webpage. Some problems will be designated as practice problems, and some problems will be assignments to be handed in. Assigned HW will be collected on Fridays and graded. See the syllabus for the HW Schedule. One HW assignment will be dropped. If you fail to hand in a HW assignment, you will receive a zero. No late HW will be accepted. On Tuesdays you will have the opportunity to ask questions about the HW in class. Please come to office hours for other HW questions. Grading policy: Each assignment is worth 10 points. 2 points overall for completeness and 8 points for 4 homework problems that are graded, each out of 2 points. 2/2 = mostly correct or perfect, 1/2 more than half right, 0/2 completely wrong.

Homework that is to be turned in should NOT look like scrapwork. It should show all of your *relevant* work clearly and legibly, multiple pages must be stapled and ragged edges must be removed.

Quizzes: A quiz will be given in class every Tuesday as indicated on the syllabus. If you miss a quiz, you will receive a zero (no make-ups). However, your lowest three quiz grades will be dropped, which includes any zeros. This includes missed quizzes due to illness or emergencies. Missing a quiz is strongly discouraged.

Readings: A weekly reading will be assigned on a topic of mathematics in biology. The weekly readings are available at the course website (see the calendar or the class resources page). You may earn one extra credit point (up to a maximum of 10 extra credit points) by correctly answering a question on the quiz pertaining to the reading or some other extra credit problem.

Academic Integrity: The University Policy on Academic Integrity (see CSU General Catalog) is enforced in this course. Misrepresenting someone else's work as your own (plagiarism) and possessing unauthorized reference information in any form that could be helpful while taking an exam are examples of cheating. Submitting work from a Solutions Manual or an on-line homework web site as your own are examples of plagiarism. Students judged to have engaged in cheating may be assigned a reduced or failing grade for the assignment or the course and may be referred to the Office of Conflict Resolution & Student Conduct Services for additional disciplinary action.

Students with Disabilities: Students with disabilities have equal access and equal opportunity in this course. If you require reasonable accommodations to fully participate in course activities or meet course requirements, you must register with Resources for Disabled Students (RDS), 100 General Services Building, (970)-491-6385. If you qualify for services, bring your letter of accommodation to me as soon as possible.