

## Math 246, Calculus for Biological Sciences I, Fall 2005

**Class Time:** MTuWF 11-11:50a.m. in 102 Deady Hall  
**Instructor:** Dr. Marcin Bownik  
**E-Mail:** mownik@uoregon.edu  
**Homepage:** <http://www.uoregon.edu/~mownik>  
**Office:** 334 Fenton  
**Office Phone:** 346-5622  
**Office Hours:** 9:30-10:30a.m. Mon. and Fri., 12-1p.m. Wed., or by appointment  
**Textbook:** *Calculus for Biology and Medicine*,  
by C. Neuhauser, 2nd ed., Pearson Education, Inc.

- 1. Background and Goals.** This course introduces students to differential calculus from the applied point of view, how calculus works and how to use it, with emphasis on applications in the biological sciences. The course starts with the concept of sequences and its applications in discrete time models of population growth. Then, limits, continuity, and properties of continuous functions are studied. This is followed by the concept of derivative, basic rules of differentiations, and derivatives of trigonometric, exponential, and logarithmic functions. The final topics include applications of differentiation in finding extrema, monotonicity, and concavity of functions, and solving optimization problems. The course covers most of the chapters 2–5 of the textbook.
- 2. Exams.** There will be one midterm in-class exam on Wed. 11/2, and a final exam on Wed. 12/7, 10:15–12:15.
- 3. Discussions.** In addition to 3 weekly lectures on MWF, there is a discussion class on Tuesday.
- 4. Homework.** Homework problems will be assigned regularly and be due in class on Wednesday on the material of the previous week. No late homework will be accepted. Group work on homework is encouraged, but each student must individually write and turn in her/his own assignment.
- 5. Quizzes.** There will be a quiz each Wednesday (except the first week and exam week). Quizzes are meant to test understanding of the material from the last few classes including the content of the lecture on the day of the quiz. Therefore, active participation in the class is essential. There will be no make-up quizzes, since the lowest quiz grade will be dropped.
- 6. Grading.** The grading distribution will be as follows:

Homework:	20%
Quizzes:	20%
Midterm Exam:	20%
Final Exam:	40%