

CALCULUS FOR BIOLOGY AND MEDICINE

MATH 17C Sections F01-02 Spring 2015

Website:

The course website is available through *SmartSite* (<https://smartsite.ucdavis.edu>).

Instructor:

Prof. Tim Lewis MSB 2146 e-mail: tjlewis@ucdavis.edu

Teaching Assistants:

Evan Smothers MSB 2137 e-mail: ebsmothers@ucdavis.edu

Note: Questions concerning course material or general logistics of the course should be directed to the class *Chat Room*, which is available through the course *SmartSite*. Emails concerning issues of a more personal nature should be sent to both your TA (Smothers) and the instructor (Lewis). However, before sending an email that concerns logistics, please check the *Syllabus* and *Announcements* on the course *SmartSite* for relevant information.

Class Meeting Times:

Lectures:

MWF 12:10-1:00PM PHYSICS 148 (Lewis)

Discussion Sections:

Section 01 R 6:10-7:00PM BAINER 1134 (Smothers)

Section 02 R 7:10-8:00PM BAINER 1134 (Smothers)

Office hours/Calculus Room hours/SASC Resources:

- Office hours: Schedule **TBA**
- TAs for MAT17A will be available to answer questions Wednesday, Thursday, Friday 1:00-7:00PM in EPS 1317
- The Student Academic Success Center (SASC) offers a MAT17C workshop Tuesday & Thursday 1:10-2:00PM in 32168 Dutton Hall.
- Drop-in tutoring is also available through the SASC. See schedule at <http://success.ucdavis.edu/academic/dropin.html>

Textbook:

Neuhauser "Calculus for Biology and Medicine" (3rd ed.) 2011, ISBN 9780321644688.

Course Outline:

This course covers Multivariable Calculus (chapter 10 sections 10.1-10.5 and 10.6.2) and additional material on double integrals, Systems of Differential Equations (chapter 11), Probability (chapter 12.1-3). For detailed syllabus, see the MAT17A syllabus at <http://www.math.ucdavis.edu/courses/syllabi/>

Prerequisites: MAT17B or permission by Instructor.

GRADING

Grades will consist of three elements: ~weekly quizzes, ~daily homework, two midterm exams, and a final exam.

Quizzes: 15 %

Homework: 5 %

Midterms: 40 %

Final Exam: 40 %

Homework and Quizzes:

Two different sets of homework problems will be assigned: (1) before each class, and (2) each week. This homework assigned before each class will be collected randomly and checked for completeness. The homework assigned weekly will not be collected. Each week during the first ~15 minutes of the Discussion Section, there will be a quiz. Problems on the quizzes will be similar to weekly assigned homework problems and will be collected and graded. It is your responsibility to consult the class SmartSite to see the homework problems that are assigned.

Midterms:

Midterm 1 (Chapter 10 - Multivariable Calculus) will be held in class on Friday, April 24, 12:10-1:00PM.

Midterm 2 (Chapter 11 - Systems of Differential Equations) will be held in class on Wednesday, May 20, 12:10-1:00PM.

Final Exam:

The final exam will be held on Wednesday, June 10 at 6:00PM. Note that the final exam is *cumulative*.

Solutions:

Quiz and exam solutions will be available through the *Resources* page on the course SmartSite. Solutions to *most* homework problems from “handouts” and the textbook will either be posted on the SmartSite *Resources* page or found at

<https://www.math.ucdavis.edu/~kouba/Math17CHWSolutions.html>

(courtesy of Dr. Duane Kouba).

CLASS POLICIES

Ten days after graded papers are returned the grade becomes final. You should have any grading “errors” corrected during those ten days. If you have any dispute with the grading, you should contact the TA during the week after graded papers are returned.

Calculators are allowed on exams and quizzes. Books, notes, laptops, cell phones, etc are not allowed. If you want a clock/watch during exams, be sure to bring one, but you will not be allowed your cell phone as a clock. A missed exam or quiz without a valid reason counts as 0 points. Only reasons involving major medical incidents, grave family emergency and university athletics are valid excuses for missing an exam or quiz, and students must provide appropriate documentation. Whenever possible, advanced notice must be provided. Missing the final exam without a valid excuse will result in failing the course.

At all times, students are expected to adhere to the UCD Code of Academic Conduct, (<http://sja.ucdavis.edu/cac.html>). If a student is suspected of cheating, a letter will be sent to the UCD Student Judicial Affairs office, and they will handle the issue.

Students must inform the instructor of any essential information as soon as possible. Two examples of "essential information" are:

Disabled Students: Disabled students would need a longer period of time for exams (as determined by the Student Disability Center) should contact the instructor at the start of the course. You will not be given extra time if you present this information just before an exam.

Student Athletes, etc.: Students participating in an official university athletic, musical, or similar event, which will cause them to miss an exam, should contact the instructor as soon as they know of a scheduling conflict.

GENERAL ADVICE

Read the textbook regularly. For each hour of the lecture, you should read the corresponding sections of the book for at least 1 hr and spend another 1-3 hours solving homework problems - not necessarily only those problems that have been assigned. (Note: According to the Carnegie Rule, 8-12 hours of outside-of-classroom study time is required to succeed in a typical 4 hour/week college course.)

Pay attention to word problems/applications. One of the goals of this course is to teach you to translate verbal descriptions of biological phenomena into mathematical language, solve problems and relate mathematical conclusions back to the biology.

In the homework problems and tests, explain your train of thought by writing clearly, orderly and legibly.

Attend the discussion sections regularly. Discussion sections are an integral part of the course. During the lectures, the material will be explained and only a few problems will be solved. During the discussion sections, the TAs will focus on solving problems. Without solving these problems, it could be difficult to understand the material.

Attend office hours as much as possible - they can be amazingly helpful. To make the most of them, you should first read the text and try the homework problems yourself before coming to office hours,.

Discuss the material/homework problems with other students in the class. Form study groups.

Seek help through the UCD learning skills center (see below).

Other Resources:

UCD Student Academic Success Center (formally the Learning Skills Center) runs workshops for pre-calculus and calculus, as well as provides free tutoring and many other resources (see <http://success.ucdavis.edu/>) . There are workshops specifically for MAT17C. For schedule and location, see

<http://success.ucdavis.edu/academic/workshops-math-sci.html> .

Drop-in tutoring is available in 125 South Hall - For schedule and location, see

<http://success.ucdavis.edu/academic/dropin.html>.

Students may also sign up for small group tutoring.

Calculus information of all types can be found at calculus.org.

UCD Counseling Center, 219 North Hall, Phone: 752-0871.