

Calculus for Life Sciences II (MAT286) Spring 2016

Course Description: This is the second and final course in a sequence designed to introduce you to the beauty of calculus and its power to describe the world around us. Applications to the life sciences are emphasized. Our goals include:

- Develop a clear and intuitive picture of single and multivariable integrals and first order differential equations. Solve them from a graphical, numeric, and algebraic point of view.
- Reason with integrals and differential equations and explain your reasoning clearly and precisely with correct mathematical notation.
- Apply integrals and differential equations to model the world, including applications in life sciences and business.
- Expand your critical thinking and problem solving skills to apply integrals and differential equations to unfamiliar problems.

This is the second course in the Quantitative Skills Sequence MAT 285-286 for liberal arts core. MAT 285 is a prerequisite. Students planning to major in a physical science, engineering, or mathematics should take the MAT 295-296-397 sequence.

Student Responsibility: As an adult, you are responsible for your own education. Your instructors and the math department are here to help, but the final result will depend more on you than on us. You will find the course much easier and more enjoyable if you attend every class and recitation on time and prepared. Be serious about your homework and studying. Ask questions and look for help regularly before you need it, not after. Come to office hours, review sessions, and the math department clinics (see <http://math.syr.edu/undergrad/math-help.html>).

Course Format: *Calculus for the Life Sciences* by Greenwell, Ritchey, and Lial (Pearson, 2nd edition). The course will cover Ch. 7, 8, 11, and part of 9.

A graphing calculator such as the TI-83+ or TI-84 is required. Students may use an equivalent calculator, but calculators capable of symbolic manipulation (such as the TI-89) will not be allowed on quizzes or exams.

New material will be introduced during lecture, and so attendance is mandatory. You will develop a more in-depth understanding of the material through homework, weekly quizzes, and exams (three during the semester and a cumulative final exam). Since learning from your mistakes is an essential part of the testing process, you will submit corrected solutions to all the exams problems missed (students receiving an A are exempted).

Evaluation and grading: Your two-hour final exam will be scheduled Monday, May 9 sometime between 8:00am and 2:30pm. You may not reschedule the final exam under any circumstances, and you may not miss an in-class exam without a note from a physician or the Dean's Office. Your final score will be computed from homework, quizzes, and attendance (35%); tests (45%); and the final exam (20%). Your instructor may curve the exams.

Grades will be assigned as follows: A 93-100; A- 90-92; B+ 87-89; B 83-86; B- 80-82; C+ 77-79; C 73-76; C- 70-72; D 60-69; F 0-59.

Academic Integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu>.

Students with Disabilities: If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

Religious observances policy: SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to are religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of class.

Resolving Problems: If you have any other request or concern related to this course, please see your instructor as soon as possible. If you cannot resolve it, contact the course coordinator, Dr. Margaret Doig (midoig@syr.edu, Carnegie 317H).