MAT 286 – CALCULUS FOR THE LIFE SCIENCES II
Spring 2017

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(Problems you cannot resolve with your instructor should be brought to the attention of the course supervisor.)

Course Description: This is the second course in a two-course, terminal calculus sequence. It is designed to introduce students to the beauty and power of calculus. Topics include anti-differentiation, integration, areas and volumes, double integrals and differential equations. Applications to the life sciences are emphasized.

Course Restrictions/ Prerequisites: MAT 285 must be successfully complete before taking MAT 286. Students planning to major in a physical science, engineering or mathematics should take MAT 295-296-397 sequence.

Liberal Arts Core: This course is the second course in the Quantitative Skills sequence MAT 285-286.

Text: *Calculus for the Life Sciences*, by Greenwell, Ritchey and Lial; Addison Wesley, 2nd Edition. The course will cover Chapters 7, 8, part of Chapter 9 and Chapter 11.

Calculator: A graphing calculator is required for this course and the TI-84 or TI-83 calculator is recommended. Students who already own and know how to use another equivalent calculator (e.g. TI-85 or TI-86) are free to use it. A calculator with symbolic calculus capability (such as the TI-89 or TI-92) is not allowed for exams and quizzes.

Homework and Quizzes: Your Instructor will announce the homework and quiz policies for your section of the course.

Tests: There will be three in-class midterm exams and a final exam during the semester, each accounting for 20% of your final grade. There will be **no makeup tests**, and a missed examination counts as a zero unless you present a valid excuse from a physician or the Dean's office. With the written excuse, the score of the final exam will be counted twice, towards the missing test and the final exam.

Test Corrections: An essential part of the testing process is to learn from your mistakes. Hence students not getting an A on a test are required to submit correct solutions to all of the problems missed.

Final Examination: The final exam is comprehensive and accounts for 20% of the final grade. All MAT 400 and lower have a departmental final exam during the time block 8:00 AM to 2:30 PM on Monday, May 08, 2017. The MAT 286 final exam will be scheduled for a two-hours period during this block. The precise time and location of the final exam will be announced in class later. **STUDENTS MUST TAKE THE FINAL EXAM AT THE LISTED TIME. DO NOT PLAN TO LEAVE CAMPUS BEFORE 2:30 PM ON MONDAY, MAY 08, 2017. THERE ARE NO PROVISIONS FOR TAKING THE FINAL EXAM AT ANY OTHER TIME!**

Grading: The final score will be computed on a scale of 0 to 100 from the tests (60%), homework, quizzes and test corrections (20%), and the final exam (20%). The final letter grade will be determined as follows:

0–59%	60–69%	70–72%	73–76%	77–79%	80–82%	83–86%	87–89%	90–92%	93–100%
F	D	C-	C	C+	B-	B	B+	A-	A

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 for 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 your Instructor to discuss your academic needs although he/she cannot arrange for disability-related accommodations.

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/.

Religious observances Notification and 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 a 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 **My Slice (StudentServices / Enrollment / My Religious Observances)** from the first day of class until the end of the second week of class.

Course Objectives and Learning Goals:
- To reinforce prior understanding of functions, including linear, polynomial, exponential, logarithmic and trigonometric functions.
- To understand what an integral is, how to compute integrals (limits, formulas), and how integrals can be used.
- To correctly use and understand the usage of mathematical notation.
- To develop critical thinking and problem solving skills.

Help: Your instructor will be available regularly during his office hours. You can also seek help at the Calculus Help Center. The location and hours of operation will be posted outside of the Math Department Office (215 Carnegie Hall); you can obtain a copy of the schedule in the Math Dept. Office.

Important Dates:

- Add Class Deadline: Tuesday, January 24, 2017
- Financial Drop Deadline: Tuesday, February 07, 2017
- Academic Drop Deadline: Tuesday, March 21, 2017
- Withdrawal Deadline: Tuesday, April 18, 2017

Suggested Homework Problems:

Section	Problems
7.1	5, 9, 13, 15, 17, 21, 25, 27, 29, 33, 37, 39, 41, 45, 46
7.2	3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 37
7.3	3, 7, 9, 11, 13, 15, 17, 19, 20
7.4	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 29, 31, 33, 35, 37, 39, 41, 43, 53, 55
7.5	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 28
8.1	1, 3, 5, 7, 9, 11
8.2	1-16, 19-30
8.3	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 27, 29, 31, 35
8.4	1, 3, 5, 7, 9, 13, 17, 21, 25, 27, 29, 31, 33, 35
9.5	1-10, 13, 17, 19, 21, 23, 27, 31, 33, 37, 39
11.1	1, 3, 5, 7, 9, 13, 17, 19, 21, 23, 25, 27, 29, 31, 33
11.2	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25
11.3	1, 3, 5, 7, 9, 11, 13
11.6	4, 6, 7, 10, 14

Tentative Schedule

Week	Section(s)
Week of January 16-20	7.1
Week of January 23-27	7.2 & 7.3
Week of January 30 - February 03	7.3 & 7.4
Week of February 06-10	7.5 & Review for Test1
Week of February 13-17	Test1 & 8.1
Week of February 20-24	8.2 & 8.3
Week of February 27 - March 03	8.4
Week of March 06-10	9.5
Week of March 20-24	9.5 & Review for Test2
Week of March 27-31	Test 2 & 11.1
Week of April 03-07	11.1 & 11.2
Week of April 10-14	11.2 & 11.3
Week of April 17-21	11.6
Week of April 24-28	Review for Test3 & Test3
Week of May 01-02	Catch up
Monday May 08	Final Exam