



MAT 286 – CALCULUS FOR THE LIFE SCIENCES II FALL 2016

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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 a written excuse, the score of the final exam will be used to determine the score of the missing test.

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 Wednesday, December 14, 2016. 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 WEDNESDAY, DECEMBER 14, 2016. 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

Academic Integrity: Syracuse University’s academic integrity policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The university policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same written work in more than one class without receiving written authorization in advance from both instructors. The presumptive penalty for a first instance of academic dishonesty by an undergraduate student is course failure, accompanied by a transcript notation indicating that the failure resulted from a violation of academic integrity policy. The presumptive penalty for a first instance of academic dishonesty by a graduate student is suspension or expulsion. SU students are required to read an online summary of the university’s academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice. 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, TDD: (315) 443-1371 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.

Diversity and Disability: Syracuse University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are useable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, you are invited to meet with your Instructor to discuss additional strategies beyond accommodations that may be helpful to your success.

Religious observances Notification and policy: SU religious observances notification and policy, found at <http://hendricks.syr.edu/spiritual-life/index.html>, 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 regular session classes and by the submission deadline for flexibly formatted classes.

For fall and spring semesters, an online notification process is available for students in **My Slice / StudentServices / Enrollment / MyReligiousObservances / Add a Notification**. Instructors may access a list of their students who have submitted a notification in My Slice Faculty Center.

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 Deadline: Tuesday, September 06, 2016
- Financial Drop Deadline: Monday, September 19, 2016
- Academic Drop Deadline: Monday, October 24, 2016
- Withdrawal Deadline: Friday, November 18, 2016

Tentative Schedule

Day	Date	Section(s)
Tuesday	08/30	7.1
Thursday	09/01	7.1 & 7.2
Tuesday	09/06	7.2 & 7.3
Thursday	09/08	7.3
Tuesday	09/13	7.4
Thursday	09/15	7.5
Tuesday	09/20	7.5
Thursday	09/22	Review
Tuesday	09/27	Test1
Thursday	09/29	8.1
Tuesday	10/04	8.2
Thursday	10/06	8.2 & 8.3
Tuesday	10/11	8.4
Thursday	10/13	8.4
Tuesday	10/18	9.5
Thursday	10/20	9.5
Tuesday	10/25	Review
Thursday	10/27	Tes2
Tuesday	11/01	11.1
Thursday	11/03	11.1
Tuesday	11/08	11.2
Thursday	11/10	11.3
Tuesday	11/15	11.6
Thursday	11/17	11.6
Tuesday	11/29	Review
Thursday	12/01	Test3
Tuesday	12/06	Catch up
Thursday	12/08	Catch up
Wednesday	12/14	Final Exam