

MAT 285 – CALCULUS FOR THE LIFE SCIENCES I
Summer Session II 2013

Course Description: This is the first course in a two-course, terminal calculus sequence. It is designed to introduce students to the beauty and power of calculus. Topics include functions and their graphs, derivatives and their applications, differentiation techniques, the exponential and logarithm functions, and multivariable differential calculus.

Course Restrictions: MAT 285 may not be taken for credit after successful completion of MAT 284 or MAT 295. Students planning to major in a physical science, engineering or mathematics should take MAT 295.

Prerequisites: MAT 194 or an equivalent pre-calculus course must be successfully completed before taking MAT 285.

Liberal Arts Core: This course is the second course in the Quantitative Skills sequence MAT 194-285. This course is the first course in the Quantitative Skills sequence MAT 285-286.

Instructor: Eric Ottman (But please just call me Eric)
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Office Hours: Mon-Thurs 11-12 and by appointment
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Text: *Calculus for the Life Sciences*, by Greenwell, Ritchey and Lial; Addison Wesley, 1st Edition. The course will cover Chapters 1-6 and some of Chapter 9 of the text.

Calculator: A graphing calculator is required. The TI-84 or TI-83 calculator is the recommended graphing calculator for the course. 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. All electronic devices other than the calculator should be turned off and put away during class. Calculators on cell phones are not to be used on tests or quizzes.

Quizzes: There will be a quiz every class (except the first day and exam days). These quizzes will cover the material from the previous day's class. The questions on them will look very similar to the suggested homework problems and exam questions. I will drop at least your 4 lowest quiz grades, but because of this, quizzes may not be made up for ANY reason. A missed quiz is simply one of your dropped quizzes.

Tests: There will be three exams: 2 noncumulative "midterms" and a cumulative final. The dates for these exams (every second Thursday) are listed on the Tentative Class Calendar on the last page, but may be subject to change (I will let you know well in advance if they change).

Test Corrections: An essential part of the testing process is to learn from your mistakes. Hence students scoring below a 90 on a test have the option to submit correct solutions to all of the problems missed. Submitting satisfactory corrections will add 5 percentage points to the score for that test.

Final Examination: The final exam is comprehensive and accounts for 40% of the final grade. The exam will be given on the last day of class (Thursday, August 8).

Grading: The final score will be computed on a scale of 0 to 100 from the midterm exams (20% each), quizzes (20%), and the final exam (40%). The final letter grade will be determined 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: Syracuse University sets high standards for academic integrity. Those standards are supported and enforced by students, including those who serve as academic integrity hearing panel members and hearing officers. The presumptive sanction for a first offense is course failure, accompanied by the transcript notation "Violation of the Academic Integrity Policy". The standard sanction for a first offense by graduate students is suspension or expulsion. Students should review the Office of Academic Integrity online resource "Twenty Questions and Answers About the Syracuse University Academic Integrity Policy" and confer with instructors about course-specific citation methods, permitted collaboration (if any), and rules for examinations. The Policy also governs the veracity of signatures on attendance sheets and other verification of participation in class activities. Additional guidance for students can be found in the Office of Academic Integrity resource: "What does academic integrity mean?"

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 Accommodations Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

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 a religious observance provided they notify their instructors before the end of the second week of classes.

Resolving Problems: Please inform me of any problems that you have with the course. Problems not satisfactorily resolved with me should be brought to the attention of the Course Supervisor without delay.

Course Supervisor:	Professor Andrew Vogel
Office:	229F Physics Building
Phone:	(315) 443-1584
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Help: I will be available regularly during my office hours. You can also seek help at the Math Clinic in 233 Physics Building. The Clinic hours are posted outside 215 Carnegie Hall and online at <http://math.syr.edu/Help.htm>, or you can obtain a hard copy of the schedule in the Math Department Office.

Course Objectives and Learning Goals:

- To reinforce prior understanding of functions, including linear, polynomial, exponential, logarithmic, and trigonometric functions.
- To understand what a derivative is, how to find derivatives (limits, formulas), and how derivatives can be used.
- To correctly use and understand the usage of mathematical notation.
- (This one's extra important!) To develop critical thinking and problem solving skills.

Tentative Course Calendar

	Date	Sections	Date	Sections	Date	Sections	Date	Sections
July	1	1.1, 1.3	2	1.4, 2.1	3	2.2, 2.3	4	No Class
	8	2.4, 3.1	9	3.2, 3.3	10	3.4	11	Exam 1
	15	3.5, 4.1	16	4.2, 4.3	17	4.3, 4.4	18	4.5, 4.6
	22	5.1, 5.2	23	5.3	24	6.1	25	Exam 2
July/Aug	29	6.2	30	6.2	31	6.3	1	6.4
August	5	9.1, 9.2	6	9.2, 9.3	7	Review	8	Final

Important Dates:

Add Deadline:	Wednesday, July 3, 2013
Pass/Fail and Audit Deadline:	Friday, July 5, 2013
Financial Drop Deadline:	Tuesday, July 9, 2013
Academic Drop Deadline:	Wednesday, July 24, 2013
Withdrawal Deadline:	Friday, August 2, 2013
Final Exam:	Thursday, August 8, 2013