

MAT 285 - CALCULUS FOR THE LIFE SCIENCES I

Section 1, Summer Session II 2015

Class Meetings: Monday, Tuesday, Wednesday & Thursday, 12:00pm – 1:45

Instructor: Samuel Leitermann

Office: Bowne Hall – Room 216

Office Hours: Tuesday & Thursday 3:00pm to 4:00pm,

Email: slleiter@syr.edu

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, limits, the derivative, tangent lines, curve sketching, exponential and logarithmic functions and the calculus of several variables. Applications to the life sciences are emphasized.

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

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.

Text: *Calculus for the Life Sciences*, by Greenwell, Ritchey and Lial; Addison Wesley, 1st Edition. The course will cover Chapters 1 - 6 and 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.

Final Examination: The final exam is comprehensive and accounts for 40% of the final grade. The exam will be given the last day of class (Thursday, August 7.)

Tests: There will be three exams: two non-cumulative “midterms” (20% of your grade) and a cumulative final exam (40% of your grade.) There will be **no makeup tests**. However, for excused absences, the corresponding portion of the final exam will be used in place of the missing test score. The exam dates are listed on the tentative course schedule.

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.

Homework & Quizzes: Homework problems will be assigned each class. There will be a quiz every day, covering the material from the day before. The questions will be made up of similar problems to the suggested homework problems and exam questions will be similar. I will drop the 3 lowest quiz grades, but because of this there will be no makeup quizzes.

Grading: The final score will be computed on a scale of 0 to 100 from the tests (80%), homework, quizzes and test corrections (20 %.) 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: 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://supolicies.syr.edu/ethics/acad_integrity.htm

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 me privately to discuss your academic needs although I cannot arrange for disability-related accommodations. Making arrangements with ODS takes time. Do not wait until just before the first test.

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.
- To develop critical thinking and problem solving skills.

Getting Help: Your instructor will be available regularly during their 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 (Room 233, Physics Building); you can obtain a copy of the schedule in the Math Dept. Office.

Contacting your Instructor: I am easily contactable by email, and check my email several times a

day. When contacting me, please make an effort to contact me ahead of time and to include a clear and concise subject message in your email.

Cell Phone and Electronics Policy: Cell phone and other electronics use is not permitted during class time. As an instructor I reserve the right to take away credit for the days assignment or dismiss you from class if cell phone use becomes a chronic problem. The use of cell phones in class is distracting to other students and detracts from your education. Calculators one cell phones are not to be used on tests or quizzes.

Resolving Problems: Please inform your instructor of any problems that you have with the course. Problems not satisfactorily resolved with your instructor should be brought to the attention of the Course Supervisor **without delay**. The Course Supervisor is Graham Leuschke, who can be reached at gjleusch@syr.edu.

Important Dates:

Add Deadline: July 8, 2014
 Academic Drop Deadline: July 19, 2014
 Withdrawal Deadline: August 6, 2014

Pass/Fail or Audit Deadline: July 9, 2014
 Financial Drop Deadline: July 13, 2014
 Final Exam: August 13, 2014

Tentative Class Calendar

	Date		Date	
July	6	1.1, 1.3	7	1.4, 2.1
July	8	2.2, 2.3	9	2.4, 3.1
July	13	3.2, 3.3	14	3.4
July	15	Review	16	Exam 1
July	20	3.5, 4.1	21	4.2, 4.3
July	22	4.3, 4.4	23	4.5, 4.6
July	27	5.1, 5.2	28	5.3
July	29	Review	30	Exam 2
Aug	3	6.1	4	6.2
Aug	5	6.3	6	6.4
Aug	10	9.1, 9.2	11	9.2, 9.3
Aug	12	Review	13	Final