

MAT 285 - CALCULUS FOR THE LIFE SCIENCES II

Section 1, Summer Session II 2014

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

Instructor: Samuel Leitermann

Office: 105A in Archbold

Office Hours: Tuesday, Wednesday & Thursday 10:00am to 11:00am,

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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 of 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 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: Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students must be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498, and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance. 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.

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 (215 Carnegie Hall); 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.

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**.

Important Dates:

Add Deadline: July 2, 2014

Academic Drop Deadline: July 23, 2014

Withdrawal Deadline: August 1, 2014

Pass/Fail or Audit Deadline: July 3, 2014

Financial Drop Deadline: July 8, 2014

Final Exam: August 8, 2014

Tentative Class Calendar

	Date		Date	
June/July	30	1.1, 1.3	1	1.4,2.1
July	2	2.2, 2.3	3	2.4, 3.1
July	7	3.2, 3.3	8	3.4
July	9	Review	10	Exam 1
July	14	3.5, 4.1	15	4.2, 4.3
July	16	4.3, 4.4	17	4.5, 4.6
July	21	5.1, 5.2	22	5.3
July	23	Review	24	Exam 2
July	28	6.1	29	6.2
July	30	6.3	31	6.4
Aug	4	9.1,9.2	5	9.2, 9.3
Aug	6	Review	7	Final