MAT 285   LIFE SCIENCES CALCULUS I   Fall 2018

Syllabus for Section 11

Instructor: Professor Stephan Wehrli

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Class Meetings: Tuesday and Thursday 9:30 AM – 10:50 AM, 219 Carnegie

Office Hours: Tuesday and Thursday 11:00 AM – 12:00 PM

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: 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.

Text: *Calculus for the Life Sciences,* by Greenwell, Ritchey and Lial; Pearson, 2nd Edition. The course will cover Chapters 1 - 6 and most of Chapter 9 of the text.

Calculator: A graphing calculator is required. The TI-84 calculator is the recommended graphing calculator for this 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. Calculators with symbolic calculus capability (such as the TI-89, TI-92, or TI-Nspire) are not allowed for exams and quizzes.

Cell Phones: 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.

Homework: The last page of this syllabus contains homework problems for each section. Homework is for your practice and will not be collected or graded. However, you should make sure you know how to solve all of the homework problems.

Quizzes: There will be a closed book quiz at the end of one of the classes in each non-exam week. The quiz problems will be very close to the homework problems from sections covered in the previous week of classes. Quizzes together with test corrections will account for 20% of your final grade. Your total quiz grade will be composed of the average of your 10 highest quiz grades. There will be **no makeup quizzes**.

Tests: There will be three tests during the semester, each accounting for 20% of your final grade. The tentative dates for these tests are:

      Test 1: Tuesday, October 2
      Test 2: Tuesday, October 30
      Test 3: Tuesday, December 4

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.

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. Corrections will count for the quiz score for the corresponding test week (as we will not have a quiz in those weeks). If a student received an A on the test, they may submit a problem of their choosing from the list of assigned problems from the exam material. (This will ensure that everyone is able to get a quiz grade for test weeks.) Corrections for the first two tests will be due one week after the test is returned. Corrections for the third test can be given to me (or left in my mailbox) at any time before the final exam.

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 12, 2018. The MAT 285 final exam will be scheduled for a two-hour period during this block. The precise time and location of the final exam will be announced in class later.

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**STUDENTS MUST TAKE THE FINAL EXAM AT THE LISTED TIME.
DO NOT PLAN TO LEAVE CAMPUS BEFORE 2:30 PM ON WEDNESDAY,
DECEMBER 12, 2018. THERE ARE NO PROVISIONS FOR TAKING THE FINAL
EXAM AT ANY OTHER TIME!**

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Help: I will be available regularly during my 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. Center for Learning and Student Success (CLASS) offers free group tutoring sessions for MAT 285. Visit http://class.syr.edu/ to learn more and register for a session.

Students with Disabilities: If you believe that you need academic adjustments (accommodations) for a disability, please contact the Office of Disability Services (ODS), visit the ODS website– http://disabilityservices.syr.edu, located in Room 309 of 804 University Avenue, or call (315) 443-

4498 or TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting academic adjustments. ODS is responsible for coordinating disability-related academic adjustments and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since academic adjustments may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

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 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 work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. 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. The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see http://class.syr.edu/academic-integrity/

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 are 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 MySlice (Student Services → 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 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.

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

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

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.

Course Supervisor: Professor Jeffrey Meyer (**This person is _not_ your instructor.**)

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Important Dates:

Add Deadline: Tuesday, September 4, 2018; Financial/Academic Drop Deadline: Monday, September 17, 2018; Withdrawal Deadline: Friday, November 16, 2018.

Tentative Class Calendar:

Month	Date	Sections	Date	Sections
Aug	28	1.1, 1.3	30	1.4, 2.1
Sept	4	2.2, 2.3	6	2.3
Sept	11	2.4	13	3.1, 3.2
Sept	18	3.2, 3.3	20	3.4
Sept	25	3.5	27	Review
Oct	2	**Test 1**	4	4.1, 4.2
Oct	9	4.3, 4.4	11	4.5
Oct	16	4.6, 5.1	18	5.2
Oct	23	5.3	25	Review
Oct / Nov	30	**Test 2**	1	6.1
Nov	6	6.2	8	6.3
Nov	13	6.4	15	9.1, 9.2
Nov	20	No Class	22	No Class
Nov	27	9.2, 9.3	29	9.3 & Review
Dec	4	**Test 3**	6	Review
Dec	12 (Wed)	**Final Exam**		

Homework Assignments for MAT 285 Section 11:

The assignments are made from the 2nd edition of the text and do not always match with the problems in the 1st edition with the same number. You are responsible for working on the correct problems.

Section:	**Pages:**	**Assigned Problems:**
1.1	13-17	Every 7th from 7 to 70; every 3rd starting with 72.
1.3	37-40	Every 7th from 7 to 63; every 2nd starting with 67.
1.4	48-51	Every 7th from 7 to 49; every 3rd starting with 50.
2.1	80-84	Every 7th from 7 to 35; every 3rd starting with 37.
2.2	92-96	Every 7th from 7 to 70; every 3rd starting with 75.
2.3	100-102	Every 5th from 5 to 25.
2.4	114-117	Every 7th from 7 to 77; every 3rd starting with 78.
3.1	142-146	Every 7th from 7 to 98.
3.2	152-155	Every 5th from 5 to 45.
3.3	164-167	Every 5th from 5 to 45.
3.4	181-185	Every 5th from 5 to 55.
3.5	189-191	Every 3rd from 3 to 24.
4.1	209-213	Every 5th from 5 to 50; every 3rd starting with 51.
4.2	218-220	Every 5th from 5 to 40; every 3rd starting with 42.
4.3	227-229	Every 5th from 5 to 50; every 3rd starting with 51.
4.4	235-239	Every 5th from 5 to 65.
4.5	244-246	Every 5th from 5 to 55; every 3rd starting with 57.
4.6	253-254	Every 5th from 5 to 37; every 3rd starting with 39.
5.1	270-273	Every 5th from 5 to 50; every 3rd starting with 51.
5.2	281-284	Every 5th from 5 to 40; every 3rd starting with 45.
5.3	294-298	Every 7th from 7 to 77; every 3rd starting with 78.
6.1	323-325	Every 5th from 5 to 40; every 3rd starting with 45.
6.2	333-336	Every 5th from 5 to 40.
6.3	341-342	Every 5th from 5 to 35; every 3rd starting with 39.
6.4	347-349	Every 3rd starting with 3.
9.1	472-476	Every 5th starting with 5.
9.2	482-486	Every 5th from 5 to 45; every 3rd starting with 48.
9.3	493-496	Every 5th starting with 5.