

Mth U151 **Calculus and Differential Equations Sequence for Biology Majors** Fall 2007

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Text: Calculus and Its Applications by Goldstein, Lay, and Schneider (11th edition) and other material on Blackboard

Course Description: MTH U 151 is the first semester of the two semester Calculus and Differential Equations Sequence for Biology Majors. The course will cover the first four or five chapters of the “text” roughly (and I do mean roughly) as a (re)introduction to Differential Calculus, in order to get quickly into Differential Equations commonly used by biologists, which form the main body of the course. This is a totally innovative “Mathematics for Biologists” course, which explains the use of quotes around the word text. There just is no book yet doing what we want to do at the level we need. Goldstein et al is mainly there as a security blanket.

Prerequisites: YOU MUST KNOW HIGH SCHOOL ALGEBRA COLD! If you are weak in this area you'll be better off in MTH U121. If you have had no calculus at all and feel unsure about your math skills you you'll be better off in MTH U141.

Grading:

Quizzes	50%
Final	50%
Class Participation, Homework, Neatness, Brownie Points etc.	10%

Homework: You're old enough to do this without my collecting it and checking up on you. You are responsible for having done the problems at the end of the section discussed in last class, even if I don't specifically assign them. Discussion of the homework will form the first part of the class.

Class participation: Encouraged but not required. Don't feel bad about coming in late, just try not to disrupt the class. If for some reason you must leave early see me before class, no other early departures will be tolerated with the exception of severe (= life-threatening) medical problems.

Quizzes: There will be no make-ups. Only excuses for documented, severe (see definition above) medical problems will be accepted. Quizzes will be every other week or so and will be on one sheet of paper. (A typical sheet of paper has two sides: the “front” and the “back” and four edges: “top”, “bottom”, “left” and “right”. You are responsible for checking whether there are questions on the back - there will be no questions on the edges). There will be no make-ups.

Final: The final will be cumulative. The date for the final has been tentatively set for Wednesday December 12 at 3:30. The date of the final may change and you should be prepared to be on campus until the last day of final's week. **You will not be able to take the final at a separate time unless you have a legitimate conflict** (This would include having another final scheduled at the same time or three finals on the same day. It would NOT include early travel plans.)

If you have any concerns about the course or Instructor: You should first try to resolve it with the course coordinator Prof Sandy Blank (x5644 blank@neu.edu 535 LA). If this does not resolve the issue you can also talk to the Undergraduate Director Prof. Alex Martsinkovsky (x5510, alexmart@neu.edu, 471 LA).

Withdrawing: The last day to drop a course without a W grade is Friday September 21. The last day to drop a course with a W grade is Friday November 16, for this grade you will have to see your instructor.

Tutoring: Free tutoring is available in 540B NI starting Monday September 17 (Mon - Wed 10am- 9 pm, Thurs 10am - 6 pm, Fri 10am -1 pm). Tutoring is done on a first come first served basis.

Calculators: A “sin” calculator is required. A graphing calculator is useful but not required

Closing remarks: Don't fall behind. If you do, you're roadkill.

This syllabus is subject to change. You are responsible for changes announced in class.

Problems from Text

Chap	Sec	Page	Problems (odd problems only unless otherwise specified)	
0	1-6		You know this stuff already, right?	
1	1	68	3, 5, 7, 9, 15, 17, 19, 23, 25, 27, 31, 33, 37, 39, 41, 43, 58, 59, 60 (You know this stuff too)	
	2	75	1-13 (all), 19, 23, 25	
	3	89	1-15, 19, 21, 27-33, 37, 43, 45	
	6	116	1-37(odd), 41, 47, 49, 51	
	7	124	1-25(odd), 29, 33	
	8	133	1, 7, 10, 19, 22	
	2	1	149	1-18 (all), 19, 21, 29, 34, 35-42 (all)
		2	158	1-6 (all), 7-17, 39, 41, 44
*3		171	1-5, 11, 15, 17, 23, 41	
*4		178	1-7, 9, 19, 21, 23, 27, 29, 31, 37, 38	
*6		197	23	
3	1	221	3, 5, 9, 13, 17, 21, 25, 31, 33, 37, 39, 43, 55, 57, 59	
	2	229	5, 7, 9, 11, 15, 17, 19, 23, 47, 50, 55	
	3	231	1, 7, 13, 21, 27, 31, 35, 43, 44	
	Sup	242	40, 51	
4	1	248	3, 5, 9, 13, 17, 21, 25, 31, 37 - 41	
	2	253	13 - 35	
	3	258	1 - 21, 25, 27, 29, 31, 37, 38, 39, 40, 41, 43, 49, 50	
	4	264	1 - 29, 45, 46	
	5	268	1 - 23, 27, 29, 38	
	6	272	1 - 21, 25, 31, 33, 34, 35, 37, 38	
5	1	284	3, 5, 7, 9, 13, 15, 19, 21, 23, 25, 29	
	4	303	1, 3, 5, 8, 9, 10, 13, 14	
10	1	506	1-11, 14, 18, 20, 21, 25	
	4	520	15, 16, 17, 18, 19, 20, 25, 26	
	5	530	7, 9, 11, 15, 16, 19, 23, 27, 35, 37	
	6	541	9, 10, 11, 12, 13, 21, 22, 23, 25, 26	
8	1	422	5-17	
	2	429	1-11, 12, 21, 23, 27, 29, 30, 33, 37	
	3	438	1-29, 48, 51	
	sup	445	56, 57, 58	
11	1	560	1-9, 13, 17, 21, 25	
	2	567	1-5, 11, 19	
	3	576	1-7, 11, 29, 31	

* - optional