

Math 1C-63, Spring 2016 (42242)

Calculus (third quarter); TTh 6:30-8:45 pm; S-54

Text: Stewart, Calculus: Early Transcendentals; 7th

Office Hours: Before and after class – TTh 6:00 - 6:30 pm and 8:45 - 9:15 pm or by appointment

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Syllabus: Infinite series, lines and surfaces in three dimensions, vectors in two and three dimensions, parametric equations of curves, derivatives and integrals of vector functions. Prerequisite: Math 1B.

Equipment: Graphing calculator (numerical but not symbolic).

Week(Monday)	Topics (with reference to chapters and sections in Stewart)
1 (4/4)	Introduction; 11: 1-3 (sequences and series, integral test)
2 (4/11)	11: 4-5 (comparison tests, alternating series); Quiz #1
3 (4/18)	11: 6-7 (absolute convergence, ratio and root test, strategies); Quiz #2
4 (4/25)	11: 8-9 (power series and functions); *Test #1 (28 April)*
5 (5/2)	11:10-11 (Taylor and Maclaurin series, applications); Quiz #3; [17.4 optional]
6 (5/9)	10: 1-3 (parametric equations and curves, polar coordinates); Quiz #4
7 (5/16)	10: 4 (areas and lengths); 12: 1-2 (vectors in 3-dimensions); Quiz #5 [10.6 optional]
8 (5/23)	*Test #2 (24 May);* 12: 3-4 (dot and cross products)
9 (5/30)	12: 5 (lines and planes, cylinders and quadric surfaces); Quiz #6; [12.6 optional]
10 (6/6)	13: 1-3 (functions and curves, derivatives and integrals, arc length and curvature); Quiz #7
11 (6/13)	13: 4 (motion in space); *Test #3 (14 June);* Review
12 (6/20)	**Final Examination 23 June 6:15 - 8:15 pm**

Course Requirements: The course will consist of a combination of teacher demonstrations with student participation in discussions, individual, and group work.

1. There will be seven Homework **Quizzes** during the quarter based upon the suggested problems. No make-ups will be given unless arranged in advance. Students should work problems in addition to those suggested. [The lowest quiz score will be dropped to compute the course grade.]

2. There will be three in-class **Tests**. Note the dates; no make-ups will be given unless arranged in advance. [If higher, one-half of the score on the final exam replaces the lowest test to compute the course grade.]

3. There will be a two-hour **Final Examination** on Thursday, June 23, from 6:15 to 8:15 pm. Any student missing the final exam will fail the course; no excuses are acceptable.

Grading:	Quizzes	(6 X possible 25 points each)	150
	Tests	(3 X possible 50 points each)	150
	Final Exam	(1 X possible 100 points)	<u>100</u>
			400 points

Course grades will reflect the following percentage range of total scores:

A = 90 ≤ % ≤ 100	[360 – 400]	C = 60 ≤ % < 75	[240 – 300]	F = below 50% (below 200)
B = 75 ≤ % < 90	[300 – 360)	D = 50 ≤ % < 60	[200 – 240)	

Grades of B⁺, B⁻, and C⁺ will be used as the final distribution of grades warrants; A⁻ will not be used.

Attendance: Regular attendance is expected. A student who misses any class during the first two weeks of the quarter may be dropped from the course. Inform the instructor, in advance, of any necessary absences; telephone the instructor and leave a message if an emergency arises. Note, however, that it is the **student's responsibility** to formally "drop" the course. Protect your academic record by observing these deadlines:

17 April to drop with no record 29 April for P/NP option 27 May to drop with a "W"

Learning Outcomes for Math 1C include:

- Graphically, analytically, numerically, and verbally analyze infinite sequences and series from the perspective of convergence, using correct notation and mathematical precision.
- Apply infinite sequences and series in approximating functions.
- Synthesize and apply vectors, the polar coordinate system, and parametric representations in solving problems in analytic geometry, including motion in space.

The key to success in any mathematics course is working homework. Listed here are "suggested problems" that will be used as a basis for the Quizzes. This is not meant to be a comprehensive selection of problems; you should work plenty of problems for practice. The text contains answers for the odd numbered problems. In addition, the Students' Solutions Manual, containing worked solutions to the odd problems, is on reserve in the Learning Center.

Please, also, utilize the Tutorial Center for assistance and group work.

Be sure to check the web site, <http://www.deanza.edu/faculty/hansen>, and its "Notes to Students" page for updates.

Suggested Problems Problems are referenced to Stewart, Calculus: Early Transcendentals (7th Edition).

11.1 5, 7, 11, 15, 21, 27, 31, 33, 37, 41, 47, 49, 63, 67, 70, 73, 75, 77

11.2 3, 7, 13, 16, 17, 25, 27, 31, 35, 41, 45, 47, 59, 60

11.3 5, 13, 19, 23, 29, 35, 37

11.4 5, 9, 11, 13, 15, 19, 27, 30, 33, 39, 40, 41, 42

11.5 3, 5, 13, 19, 25, 29, 33, 34

11.6 7, 9, 17, 19, 23, 25, 27, 29, 31, 41

11.7 3, 5, 9, 13, 15, 17, 25, 33, 35

11.8 3, 9, 13, 17, 19, 21, 25, 27, 30

11.9 5, 7, 11, 13, 17, 23, 27, 29

11.10 7, 13, 19, 21, 25, 29, 31, 33, 41, 47, 53, 59, 61, 63, 65

11.11 15

10.1 3, 5, 9, 11, 15, 19, 23, 25, 28, 37

10.2 1, 3, 7, 13, 16, 17, 29, 30, 37, 43, 59, 61

10.3 5, 11, 13, 14, 17, 19, 23, 29, 31, 35, 41, 55, 63

10.4 1, 5, 7, 9, 13, 19, 21, 27, 29, 35, 41, 47

12.1 3, 5, 7, 9, 13, 17, 21, 23-34

12.2 7, 13, 17, 19, 21, 25, 26, 29, 33

12.3 5, 7, 9, 17, 19, 23, 29, 31, 35, 39, 41, 46, 48

12.4 1, 3, 11, 15, 31, 35, 39, 43, 45

12.5 5, 9, 11, 15, 17, 19, 27, 35, 37, 43, 47, 53, 61, 69, 73

(12.6 3, 11, 17, 24, 33)

13.1 1, 3, 9, 13, 15, 21-26

13.2 1, 5, 13, 17, 21, 23, 27, 35, 41, 49

13.3 3, 7, 11, 13, 19, 23, 31, 33, 47, 49

13.4 3, 9, 13, 15, 21, 23, 24, 31, 37, 41