MTH 33, Analytic Geometry and Calculus III, Fall 2016

Bronx Community College, CUNY.

Section E01, MW 18:00-20:25, Philosophy Hall 23

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Office Hours: Tuesday-Wednesday 14:00-15:00 or by appointment.
Textbook: *Calculus*, by James Stewart, Brooks/Cole, Pub. 7^{th} ed., ISBN 978-0-53849781-7.

Syllabus:

This is the third course in a three -semester calculus sequence. It is a one semester course designed to present the standard materials of sequences and series and multivariable Calculus. The topics we will cover are Chapters 12-16 of the text, skipping a few sections along the way. Additional topics will be covered if time permits.

Prerequisites:

Students enrolled in this course must have either taken MATH 32 or an equivalent.

Calculators:

Calculators are NOT permitted for tests, exams and quizzes. However, the use of a basic scientific calculator is required to aid in the homework sets. TI-89 and other symbolic manipulators are not allowed.

Grading:

Homework assignments will be assigned and to be turned in. Quizzes will be given at the instructors discretion and will reflect the homework assignments. *No make-up quizzes will be given. Your lowest Homework will be dropped.* Homework assignments will assist in understanding the material but will NOT be sufficient to learn this material well. You should be doing many more problems.

Term Tests :
There will be two in-class term tests. *No make-up exams will be given.* If you miss a test, you must contact me within 24 hours should you wish to have your absence excused. A doctor's note is needed to justify illness. Any student with a *justified* absence during a test will have his or her *(uncurved)* final exam grade count in place of the missed test. You are responsible for the material in the course readings in addition to any material and announcements made during lecture, regardless of whether or not you were in attendance.

All grades will be assigned by the standard 10-point scale. Pluses and minuses will be assigned at instructor's discretion.

Homework - Quizzes	25%
Test 1	20%
Test 2 6	20%
Final Exam	35%

Resources:

Math Tutoring Lab: http://fsw01.bcc.cuny.edu/mathdepartment/tutoringlab/lab.htm

SECTION	TOPIC	PAGE/SUGGESTED EXERCISES
11.1	Sequences	724 /3-55 odd
11.2	Series	735/ 1-4, 6, 8, 15, 17-26, 27-48 odd
11.3	The Integral Test and Estimating Sums	744/ 1-26 odd, 33
11.4	The Comparison Tests	750/ 15-32 odd, 41, 43, 45
11.5	Alternating Series	755/ 1-20 odd, 23, 27, 33
11.6	Absolute Convergence	761/ 3-37 odd
11.7	Strategy for Testing Series	764/ 2, 5, 6, 8, 10, 12, 14, 15-38 odd
11.8	Power Series	769/ 5 - 28 odd, 30, 31, 33, 37, 39, 41
11.9	Representations of Functions as Power Series	775/ 5-41 odd
11.10	Taylor and MacLaurin Series	789/ 1, 2, 4, 6, 8, 10, 13-20 odd, 22, 25, 30-38 odd 48, 51, 55, 63-70 even
11.11	Applications of Taylor Polynomials	798/ 3, 5, 10, 13, 18-20, 23, 30
	Review	803/1-56, odd
12.1	Three Dimensional Coordinate Systems	814/ 1-13 odd, 17, 19, 21, 23-34 odd
12.2	Vectors	822/ 5-29 odd, 30, 33, 43, 47
12.3	The Dot Product	830/ 3-10 odd, 15-47 odd, 51, 54
12.4	The Cross Product	838 /1-43 odd
12.5	Equations of Lines and Planes	848/1, 5-39 odd, 51, 55, 59, 67
	Review	859/ 1-13 odd
13.1	Vector Functions and Space Curves	869/ 1-30 odd
13.2	Derivatives and Integrals of Vector Functions	876/ 3-28, odd
13.3	Arc Length and Curvature	884/ 1-11 odd, 17, 18, 21, 25, 30
	Review	898/ 1-5 odd, 9-17 odd
14.1	Functions of Several Variables	912/ 1, 3, 9-22 odd
14.2	Limits and Continuity	923 / 5-22 odd, 31, 35, 37
14.3	Partial Derivatives	935/ 2, 15-40 odd, 43-70 odd, 76, 81
14.4	Tangent Planes and Linear Approximations	946/ 1-6 odd, 11-18 odd, 25, 28, 31, 34
14.5	The Chain Rule	954/ 1-34 odd
14.6	Directional Derivatives and the Gradient Vector	967/ 4-26 odd, 31, 33, 44, 46, 51, 58
14.7	Maximum and Minimum Values	977/ 2, 5-17 odd, 29-36 odd, 39, 43
	Review	992/ 1-45 odd
15.1	Double Integrals over Rectangles	1005/ 1-5, 11, 14
15.2	Iterated Integrals	1011/ 3-31 odd
15.3	Double Integrals over General Regions	1019/ 3-10 odd, 13, 19, 21, 29, 31
15.4	Double Integrals in Polar Coordinates	1026/ 7-27 odd
15.7	Triple Integrals	1049/ 1, 3, 9, 11, 15
	Review	1074/ 3, 7, 9, 13, 15, 21, 29, 41, 47

Complaint Procedure:

If you have any problems with the course, please come and talk to me. Most issues can be resolved with a straightforward discussion.