Math 210-Calculus III-Spring 2013

General Information

Name	Dr. Voldman	Textbook/Author	Calculus 6th edition by Stewart
Office	Room 2764	Chapters Covered	13,14,15,16,17, and 18(if time permits)
Phone	355-6299	**Office Hours: MW 7:00-7:30, TTH 2:00-3:30**	**Credit Units**: 5 Time: MW 10:15-12:45 **CRN**: 20243
E-mail	alex.voldman@imperial.edu	IVC Prerequisite with C or better	Calculus II-Math 194

Grading Scale

90-100%	A	80-89%	B	70-79%	C	60-69%	D	0-59%	F

Grade Distribution

Homework	Project	Exams	Final
100 points	100 points	200 points	200 points

Project   20%
Class work & Homework   10%
Exams   50%
Final   20%

General Guidelines

1. Late work (homework, projects, etc) is not accepted	5. Bring your book, ruler to class every day
2. School policy: No food or beverages are allowed in the classroom	6. It is your responsibility to drop before the W deadline
3. Missed assignments are recorded as zeros	7. It is your responsibility to keep notes, syllabus, handouts
4. School policy: No children are allowed in the classroom	

Course Description:

Concepts dealing with integration of functions of several variables, partial derivatives, vectors and vector functions, parametric equations and polar coordinates.

Course Objectives:

1. The student will demonstrate a broad understanding of the basic operations with vectors in various coordinate spaces and a variety of 3-dimensional figures.
2. The student will demonstrate their knowledge of vectors to differentiation and integration of vector-valued functions.
3. The student will demonstrate the use of functions of several variables and apply techniques to relevant situations.
4. The student will demonstrate an understanding of double and triple integrals and the ability to solve problems when dealing with applications of multiple integrations.
5. The student will evaluate and demonstrate knowledge of diverse topics in vector analysis

SLO:

1. apply partial differentiation to the optimization of functions of multiple variables. (ILO1, ILO2)
2. compute and apply vector products and cross-products. (ILO1, ILO2)
3. analyze and apply vector –valued functions. (ILO1, ILO2)
4. compute and apply multiple integrals. (ILO1, ILO2, ILO4)
5. recognize and classify the three-dimensional figures appropriate to the course. (ILO1, ILO2)

Attendance and Absences:

If you are 5 minutes late you will be marked absent. Do not make doctor, counseling, or any appointments during class time. . Leaving during lecture will be considered an unexcused absence. If you have to leave anytime during class, other than established break times, you must inform your instructor. After the third unexcused absence, you will be dropped from the class. In other cases, it is your responsibility to drop yourself before the withdrawal deadline. Disruptive and inconsiderate behavior will not be tolerated!

Cheating and Plagiarism
Dishonesty in the classroom is considered a very serious offense. Any form of cheating, turning in work which is not one's own (plagiarism), is grounds for disciplinary action. The consequences of these actions are severe and may include the possibility of expulsion.

Silence pagers and cell phones. Use of cell phones in the class room will not be permitted; you should not bring one into the classroom unless the ringer is turned OFF.

Project and Class work
Purpose: To introduce technology (MATLAB)
Place to work on the project: MATHLAB (Building 2500)
-No late project or class work will be accepted!

Midterms
Purpose: To evaluate your understanding of the material covered in the course.

Final Exam (comprehensive)

Learning Resources
1. Me: Office Hours ; just walk-in and get help. Appointment hours; you must give at least one day advance notice
2. Tutorial services: Library, Vocational Education Building Room 1701
3. Study Guides: The bookstore has textbooks for sale
Any student with a documented disability who may need educational accommodations should notify the instructor or DSPS office as soon as possible (DSP&S, Room 2117, Health Sciences Building, (760) 355-6312

Schedule Spring 2013

Week 1
Orientation
3D-coordinate systems and vectors
The dot and the cross products
Week 2
Monday-Holiday
Equations of Lines and Planes
Week 3
Cylinder and Quadratic Surfaces
Vector functions, space curves, derivatives of vector functions
Week 4
Arc length and curvature
Vector functions, velocity and acceleration
Week 5
Applications-velocity and acceleration
Functions of several variables, limits and continuity
Week 6
Holiday-Monday
Partial derivatives, tangent planes
Week 7
The Chain rule
Directional derivatives and the gradient vector
Week 8
Exam I-Monday
Maximum and minimum values
Week 9
Lagrange multipliers
Double integrals over rectangles and over general regions
Week 10
Double integrals in polar coordinates
Triple Integrals

Week 11
Triple integrals in cylindrical and spherical coordinates
Vector fields and line integrals
Week 12
Vector fields and line integrals
The fundamental theorem for line integrals,
Week 13
Green's Theorem
Exam II-Wednesday
Week 14
Curl and Divergence
Week 15
Review
Week 16
Final