Math 2419-501 SPRING 2005

CALCULUS II

GREEN 3.420 7:00 -8:15 M.W.

INSTRUCTOR: F.R. ALLUM (972)883-6342 (fallum@utdallas.edu)

Text: CALCULUS by LARSON, HOSTETLER & EDWARDS, 7TH EDITION
STUDENT SOLUTION MANUAL AVAILABLE IN BOOKSTORE

You must be enrolled in problem section Math 2419-801 or 803.

Help is available. If difficulties arise, the following suggestions may help you:
(I) Ask questions in your problem section
(ii) Contact the problem section instructor during office hours
(iii)Visit the MATH LAB (MC2.408; (972)883-6707)
(iv) You may be eligible for assistance through Special Services
(v) Contact the lecturer during office hours

Calculators. It is assumed that you will use a scientific calculator in this class. Calculators with either graphing or non-numeric displays are forbidden for all quizzes and exams.

Assignment Problems Assignments will be selected odd numbered problems and possibly problems from the Chapter Review. Answers to these problems are given at the back of your text book. Complete solutions to many of these problems may be found in the Solutions Manual which is available in the book store. You should work several problems of each type. Don't slavishly copy the solutions from the manual. Try to work them without reference to the solutions manual. When you have finished the problem or when you have exhausted all possibilities, then you should refer to the solutions manual to verify your answer or to obtain a hint in order to complete the solution. These problems will be discussed in the problem sections.

Problem Sections There are 14 problem sessions this semester. At 10 of these meetings, a quiz will be given, lasting about 15 minutes. Only 8 of these quiz grades will be used in the calculation of your final grade. The T.A. conducting each section will answer questions on the assignments, supply additional background material, discuss the previous quiz, comment on your examinations and may ask you to work problems. Occasionally, the problem section may be used to remind you of material covered in previous courses and deemed essential to the present course. At all times feel free to ask questions during these problem sections.

Note: Quizzes will be given in the problem solving sections; examinations in the class meetings.

Examinations All students are expected to take the examinations at the announced time. Cheating will NOT be tolerated. Students are required to inform the lecturer of suspected honor code violations. On all problems, you must show your work. No work, no credit. In general, there will be no make up exams or quizzes (see below).

Grade: Each quiz will be worth 25 points. A list of Math 2417 questions on differentiation and integration is available on my home page, and is also atached to this syllabus.
The best 8 out of the 10 quizzes (expressed as a percentage)will be used for your quiz grade. Each of the three examinations will be worth 100 points and the comprehensive final will be worth 200 points. The best 3 out of the four quiz and examination grades plus the comprehensive final will be used to calculate your final grade. The final exam must be taken.

Example: Student J.T.M. has the following results:
Quiz grades 20, 15, 25, 18, 25, 19, 0, 10, 25, 21

Quiz grade (168/200)100 = 84 (drop 0,10)	
Examination 1	75
Examination 2	60
Examination 3	72
Comprehensive final	171 (count as two exams)

Average = (84+75+72+171) / 5 = 80.4 ...(a grade of B-)

Grade Scale

96.7 - 100	A+	76.7 - 79.9	C+
93.4 - 96.6	A	73.4 - 76.6	C
90.0 - 93.3	A-	70.0 - 73.3	C-
86.7 - 89.9	B+	66.7 - 69.9	D+
83.4 - 86.6	B	63.4 - 66.6	D
80.0 - 83.3	B-	60.0 - 63.3	D-
0.0 - 59.9	F		

Important Dates

January 10	**First class day**
January 17	**University Holiday**
February 09	**Examination I (subject to change)**
March 07-12	**Spring Break**
March 14	**See instructions in SPRING 2005 schedule regarding drop procedures after March 14, 2005**
March 21(Monday)	**Examination II (Subject to change)**
April 13	**Examination III(subject to change)**
April 25	**Last day of classes**
APRIL 29 (FRIDAY)	**Comprehensive Final Exam at 7.00 PM**

Note: The comprehensive final examination is scheduled for 7.00pm FRIDAY April 29, 2005.

Either HH 2.402, HH on map or CN 1.112, CN on map

Details to be announced in class.

Grade of Incomplete "A grade of incomplete (X) may be assigned when a student's work has been satisfactory, but due to circumstances beyond the student's control, some part of the required work has not been completed. An X may not be assigned in lieu of an F or W. Allowing a student to "retake" an entire course during a subsequent semester, disregarding previous course performance, does not constitute an appropriate use of the grade of incomplete." In this course, an incomplete will only be considered if the student has a serious documentable, non-academic reason for missing more than one exam and not taking a make-up (e.g. illness in finals week).

MATH LAB HOURS

Monday-Thursday.....10:00 a.m. - 8:00 p.m.
Friday/Saturday.....10:00 a.m. - 2:00 p.m. Or by appointment (Ext. - 6707)

Problem Solving Classes (subject to change)

CLASS #	DATE: WEEK BEGINNING	DESCRIPTION
1	10 January	NO QUIZ THIS WEEK
2	17 January	Quiz 1 (ON JAN 19,WED)
3	24 January	Quiz 2
4	31 January	Quiz 3
5	07 February	NO QUIZ THIS WEEK
6	14 February	Quiz 4
7	21 February	Quiz 5
8	28 February	Quiz 6
9	14 March	Quiz 7
10	21 March	NO QUIZ THIS WEEK
11	28 March	Quiz 8
12	04 April	Quiz 9
13	11 April	NO QUIZ THIS WEEK
14	18 April	Quiz 10

NOTE: DUE TO THE UNIVERSITY HOLIDAY ON MONDAY JAN 17,2005 ALL STUDENTS WANTING TO TAKE QUIZ 1 MUST DO SO ON WEDNESDAY JANUARY 19.

MID-TERM EXAMS AT REGULAR CLASS TIME, 07.00 pm
February 09, March 21, and April 13

FINAL EXAM 07:00 PM ,FRIDAY, APRIL 29, 2005

LOCATION OF FINAL EXAM - TO BE ANNOUNCED IN CLASS LATER.
Either CN1.112 or HH2.402

INTERESTING INTERNET ADDRESSES

(1) http://www-groups.dcs.st-and.ac.uk/~history/Curves/Curves.html
(2) http://www.sisweb.com/math/tables.htm
(3) http://www.geocities.com/CapCanaveral/Launchpad/2426
(4) http://www.Ecalculus.org/
(5) http://www.math.temple.edu/~cow/
(6) http://archives.math.utk.edu/utk.calculus/141toc.html
(7) http://archives.math.utk.edu/visual.calculus/index.html

HOME PAGE ADDRESS http://www.utdallas.edu/~fallum/

NOTE: Please turn off cell phones and pagers during lectures and exams.

MATH 2419 CALCULUS SYLLABUS
(Larson/Hostetler/Edwards)7th Edition

7. Integration Techniques, L'Hôspital's Rule, and Improper Integrals

7.7 Indeterminate Forms and L'Hôspital's Rule
7.8 Improper Integrals

8. Infinite Series

8.1 Sequences
8.2 Series and Convergence
8.3 The Integral Test and P- Series
8.4 Comparisons of Series
8.5 Alternating Series
8.6 The Ratio and Root Tests
8.7 Taylor Polynomials and Approximations
8.8 Power Series
8.9 Representation of Functions by Power Series
8.10 Taylor and Maclaurin Series

9. Conics, Parametric Equations, and Polar Coordinates

9.2 Plane Curves and Parametric Equations
9.3 Parametric Equations and Calculus
9.4 Polar Coordinates and Polar Graphs
9.5 Area and Arc Length in Polar Coordinates

10. Vectors and the Geometry of Space

10.1 Vectors in the Plane
10.2 Space Coordinates and Vectors in Space
10.3 The Dot Product of TwoVectors
10.4 The Cross Product of TwoVectors in Space
10.5 Lines and Planes in Space
10.6 Surfaces in Space
10.7 Cylindrical and Spherical Coordinates

11. Vector-Valued Functions

11.1 Vector Valued Functions
11.2 Differentiation and Integration of Vector- Valued Functions
11.3 Velocity and Acceleration
11.4 Tangent Vectors and Normal Vectors
11.5 Arc Length and Curvature

12. Functions of Several Variables

12.1 Introduction to Functions of Several Variables.
12.2 Limits and Continuity
12.3 Partial Derivative
12.4 Differentials
12.5 Chain Rules for Functions of Several Variables
12.6 Directional Derivatives andGradients
12.7 Tangent Planes and Normal Lines
12.8 Extrema of Functions of Two Variables
12.9 Applications of Extrema of Functions of Two Variables
12.10 Lagrange Multipliers

13. Multiple Integration

13.1 Iterated Integrals and Area in the Plane
13.2 Double Integrals and Volume
13.3 Change of Variables: Polar Coordinates
13.6 Triple Integrals and Applications
13.7 Triple Integrals in Cylindrical and Spherical Coordinates
13.8 Change of Variables: Jacobians

Appendix B Proofs of Selected Theorems
Appendix C Integration Tables

ASSIGNMENTS MATH 2419 SPRING 2005

LARSON, HOSTETLER EDWARDS. 7th Edition

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