MULTIVARIABLE CALCULUS
MTH 234 SECTIONS 013–016
FALL 2009

GÁBOR FRANCSICS
D310 WELLS HALL, 353-7962

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Course description: The goal of the course is to provide an introduction to multi-variable calculus.

Class meetings:
    Lectures: MWF 12:40–13:30PM Room S109, SKH.
    Recitations:
    Section 013: Thursday 12:40–13:30 Room 2245 EB
    Section 014: Thursday 11:30–12:20 Room 119 FAE
    Section 015: Thursday 12:40–13:30 Room C210 WH
    Section 016: Thursday 11:30–12:20 Room A148 PSS

Textbook: Thomas' Calculus, 11th edition.
Material: The course will cover most of chapters 12, 13, 14, 15, 16. Vectors, partial derivatives, multiple integrals, integration in vector fields.

Office hours: My office is at the Mathematics Department in the Wells Hall, Room D310. I have office hours on Wednesdays from 11:30–12:00 noon, Fridays 11:30–12:00 noon and 1:30–2:30 or by appointments.

Exams: There will be four exams and a uniform final exam. The tentative dates for the exams are
    Exam 1   Thursday, September 24;
    Exam 2   Thursday, October 15;
    Exam 3   Thursday, November 12;
    Exam 4   Thursday, December 10.
    There is a comprehensive uniform final exam in MTH 234.
    The **Final Exam** will be on **Monday, December 14, from 10:00-12:00 noon**.

Homework: The recommended homework problems for each section are attached. Homework problems will not be collected or graded. However, solving these problems

is essential for the course. At each class you are expected to have done the homework problems related to the previous lecture. You are encouraged to work together on the homework problems.

Grading Policy: Your final grade for the course will be based upon the four hour exams (100 points=20% each) and the final exam (200 points= 40%). The lowest hour exam score will be dropped. The total worth of the hour exams, and final exam will be 500 points. The course grade will be based on the following grading scale:

Total %	Grade
$90-100$	4.0
$85-89$	3.5
$80-84$	3.0
$75-79$	2.5
$70-74$	2.0
$65-69$	1.5
$60-64$	1.0
$0-59$	0.0

The course grades may be higher than the scale above - if the situation warrants – but they will not be lower.

More details will be provided in class.

Calculators and notes: The use of calculators or notes will NOT be permitted during exams.

HELP IS AVAILABLE!! Use the Mathematics Learning Center (MLC)!
    MLC Hours: M,Tu,W, Th, 10:10–4:00PM, F 10:10-1:40, Sunday 4:00-9:50.

Important Dates — Fall Semester, 2009:
Monday, September 7 -Labor Day. University closed.
September 16 Last day to late add a course or change sections within a course. Last day to drop to a lower level course.
September 28 - Last day to drop a course and receive a 100% refund.
October 21 - Last day to drop a course without a grade being reported.

Recommended Homework Problems
Thomas' Calculus, 11th edition

Section 12.1: 1, 9, 10, 12, 14, 16, 18, 19, 23, 25, 26, 34, 35, 38, 44, 46, 49, 52.

Section 12.2: 3, 5, 8, 9, 11, 13, 16, 17, 19, 20, 21, 23, 25, 26, 27, 30, 33, 34, 35, 37, 41, 43, 44, 47.

Section 12.3: 3, 5, 8, 9, 11, 12, 13, 17, 19, 21, 22, 29, 32, 43, 45.

Section 12.4: 1, 3, 8, 11, 12, 13, 15, 17, 23, 25, 27 a-g, 28, 31, 33, 35, 38, 39, 42.

Section 12.5: 1, 3, 4, 5, 7, 9, 10, 20, 21, 23, 25, 26, 27, 29, 31, 35, 37, 39, 42, 45, 47, 48, 51, 53, 55, 57, 58, 61, 65, 66, 68, 69.

Section 12.6: 2, 4, 5, 7, 9, 10, 11, 15, 17, 18, 21, 23, 24, 25, 27, 28, 31, 33, 37, 39, 42, 43, 47, 50, 51, 55, 59, 61, 63, 68.

Suggested review problems from Chapter 12:

    Pages 900-902: 1, 7, 9, 13, 15, 19, 25, 31, 33, 37, 43, 45, 49, 53, 57, 59, 69, 73, 75.

Section 13.1: 1-11(odd), 14, 17, 23, 26, 27, 29, 32, 33, 35, 39, 41, 45.

Section 13.3: 1, 3, 5, 8, 11, 13, 15.

Section 14.1: 2, 7, 9, 12, 13-18, 19, 22, 23, 26, 29, 30, 31, 33, 35, 37, 39, 41, 42, 45, 46.

Section 14.2: 7, 8, 10, 11, 12, 15, 17, 18, 24, 29, 30, 31, 32, 35, 37, 42, 45, 48, 50.

Section 14.3: 7, 8, 11, 12, 13, 15, 16, 17, 19, 27, 29, 32, 43, 45, 46, 47, 49, 63, 65, 68.

Section 14.4: 1, 3, 6, 7, 9, 10, 11, 12, 15, 17, 18, 21, 24, 25, 27, 28, 29, 31, 32, 33, 35, 37, 38, 41, 47.

Section 14.5: 1, 2, 5, 6, 9, 11, 12, 15, 17, 20, 21, 23, 24, 27, 29, 30, 31.

Suggested review problems:

    Pages 960-961: 1, 3, 4, 21, 22, find T in 23, 25.

    Pages 1060-1061: 12, 15, 17, 20, 27, 29, 31, 34, 35, 39, 42, 47, 49, 51, 53.

Section 14.6: 1, 2, 4, 5, 7, 9, 10, 13, 17, 19, 27, 29, 30, 31, 33, 34, 39, 40, 43, 47, 49.

Section 14.7: 1, 3, 5, 6, 17, 19, 22, 26, 31, 37, 42, 47.

Section 15.1: 1-9 odd, 10, 11, 13, 16, 17-23 odd, 28, 29, 30, 31, 33, 34, 37, 39, 41, 43, 46, 47, 48, 59.

Section 15.2: 1-11 odd, 12, 21, 23, 24, 27, 32, 33, 35, 38.

Section 15.3: 1, 3, 7, 8, 10, 13, 17, 19, 22, 23 (Find the centroid), 25, 27, 28, 35, 36.

Section 15.4: 1, 3, 5, 6, 9, 13, 15, 16, 21, 23, 24, 25, 27, 28, 29, 31, 33, 34, 39, 41, 43.

Suggested review problems:

    Pages 1061-1062: 55, 57, 69, 77.

    Pages 1138-1139: 3, 7, 11, 13, 15, 27, 31 (a), 33, 35, 40.

Section 15.6: 5, 7, 10, 13, 15, 16, 17, 21, 23, 26, 29, 34, 35, 45, 49, 51, 52, 55, 56, 59, 61, 62.

Section 16.1: 1–9, 11, 13, 14, 15, 21, 23, 26.

Section 16.2: 1, 3, 9, 11, 13, 14, 19, 21, 23, 29(a)(b), 37, 39, 42.

Section 16.3: 1, 3, 5, 6, 9, 13, 15, 17, 18, 29, 31.

Section 16.4: 3, 5, 7, 8, 9, 11, 13, 15, 17, 19, 20, 21, 23, 26, 29.

Section 16.5: 1, 3, 5, 8, 9, 10, 11, 14, 17, 18, 19, 21 24, 25, 26, 29, 31, 33, 39, 40, 43.
Section 16.7: 1, 3, 5, 7, 8, 11, 12, 19, 21, 22.
Section 16.8: 5, 7, 9, 11, 14, 16, 17, 21, 22, 23, 25, 26.
Suggested review problems:
    Pages: 1223–1225: 3, 9, 11, 13, 15, 27, 37(a), 39, 41, 49, 55, 57, 59.