Math 2057, Section 5
Multidimensional Calculus

also known as

Calculus III

Textbook: *Early Transcendentals Calculus, 5e* by James Stewart
Time: 12:10-1:30, Tuesday and Thursday in Lockett 232)
Instructor: Gestur Olafsson
Office: 322 Lockett
Office Hours: Tuesday 1:40 –2:30 and Thursday 11:00-12:00. You can also contact me by e-mail, olafsson@math.lsu.edu, or in class for other appointments.
Phone: 225-578-1608
e-mail: olafsson@math.lsu.edu **or** olafsson@lsu.edu
web-page: www.math.lsu.edu/∼olafsson. This syllabus, list of problems, test dates, and solutions to tests, quizzes and other information will be available on this web-page. Grades, and some other information will also be made available on *blackboard*

SYLLABUS

- **Chapter 14, Partial Derivatives**
  - 14.1 Function of several variables
  - 14.2 Limits and Continuity
  - 14.3 Partial Derivatives
  - 14.4 Tangent Planes and Linear Approximations
  - 14.5 The Chain Rule
  - 14.6 Directional Derivatives and the Gradient Vector
  - 14.7 Maximum and Minimum Values
  - 14.8 Lagrange Multipliers
- **Chapter 15, Multiple Integrals**
  - 15.1 Double Integrals over Rectangles
  - 15.2 Iterated Integrals
  - 15.3 Double Integrals over General Regions
  - 15.4 Double Integrals in Polar Coordinates (and a short introduction/overview over Polar Coordinates)
  - 15.5 Applications of Double Integrals
  - 15.7 Triple Integrals
  - 15.8 Triple Integrals in Cylindrical and Spherical Coordinates
  - 15.9 Change of Variables in Multiple Integrals (only a short discussion)
- **Chapter 16, Vector Caluclus**
  - 16.1 Vector Fields
  - 16.2 Line Integrals
  - 16.3 The Fundamental Theorem for Line Integrals
  - 16.4 Green's Theorem

16.5 Curl and Divergence
16.6 Parametric Surfaces and Their Areas
16.7 Surface Integrals
15.6 Surface Area
16.8 Stoke's Theorem
16.9 The Divergence Theorem

You can find more detailed discussion on the web:

http://www.math.lsu.edu/courses/syllabi/2057.html

The following days are off:

- Thursday October 6 because of Fall Holidays Oct. 6 and 7
- Thursday November 24, Thanksgiving.

GRADINGS

- There will be **three** tests in class (each 100 points). Note that test 1 and 2 have been moved by one week and thest 3 has been moved by two weeks.
  - ▶ Tuesday, September 27;
  - ▶ Thursday, October 27;
  - ▶ Thursday, December 1
- There will be quizzes in class or home work **every week**, 7 highest scores will be counted towards to final grade (70 points). **There are no make-up quizzes except you contact me before class**.
- The final exam (200 points) will take place:
  - ▶ **Lockett 232, Thursday, Dec. 8, 3:00-5:00 PM**.

Points

Tests during the semester	300
Homework/Quizzes	70
Final	200
Total	570

Final Grades

A $\geq$ 513, B $\geq$ 456, C $\geq$ 399, D$\geq$342. F $<$342