# Math 2058, Section 1
# Honor Multidimensional Calculus

also known as

# Calculus III

**Textbook:** *Early Transcendentals Calculus, 5e* by James Stewart
**Time:** 12:40-1:30, Monday, Wednesday, and Friday in Lockett 137
**Instructor:** Gestur Olafsson
**Office:** 322 Lockett
**Office Hours:** Monday 10:40 –11:30 am, Wednesday 1:40-2:30 pm. 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.

## 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

## GRADINGS

- There will be **three** tests in class (each 100 points)
  - ▶ Friday, September 21;
  - ▶ Friday, October 19;
  - ▶ Friday, November 16
- There will be quizzes in class or assigned problems using WebWork from each section that we go over, 15 highest scores will be counted towards to final grade (90 points, 100% score on a quizz/home work counts as 6 points towards the final grade, 90% as 5.4 points etc.). **There are no make-up quizzes except you contact me before class**. I will also assign exercises for you to look at after every class. I will only discuss two or three of those problems in class, but you should look at as many as possible. One third of each exams problems will be based on those assignements! And, mathematics can only be learned by working on it!

**Points**

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|---|---|
| Tests during the semester | 300 |
| Homework/Quizzes | 90 |
| Final | 200 |
| Total | 590 |

**Final Grades**

A $>$ 531, B $>$ 472, C $>$ 413, D$\geq$354. F $<$354

## Important dates

September

3. Labor Day holiday
4. Final date for dropping courses without receiving a grade of "W"
6. Final date for adding courses for credit and making section changes.

October

11-12 Fall Holiday

15-20 Midsemester examination period

November

9. Final date for resigning from the University and/or dropping courses

22-23 Thanksgiving holidays

December

5-9 Final examination period

10 Final exam at 3:00-5:00 PM