Math 4032, Section 1
Advanced Calculus II

Textbook: Notes by Prof. Len Richardson Advanced Calculus: Real Analysis with Norms. Those notes are available bound at low cost from the Serve ‘U’ Center, which is located about two blocks outside the LSU South Gades, at 4410 Highland Road next door to CC’s Coffee House.

Time: 11:40-12:30, Monday, Wednesday and Friday in Lockett 235)

Instructor: Gestur Olafsson
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Office Hours: M-W 1:40–2:30 You can also contact me by e-mail, olafsson@math.lsu.edu, or in class for other appointments.

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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

We will do Section 3.4, Cauchy-Schwarz Inequality and then Chapters 4, 5 and as much as possible of Chapter 6. This includes material on:

- The derivative, including uniform convergence.
- The mean value theorem and Cauchy’s generalized mean value Theorem.
- Taylor’s Theorem.
- Absolute and uniform convergence of series.
- Completeness of sequence spaces.
- Dual spaces.
- Real analytic functions.
- Functions of bounded variation.
- The Stieltjes integral.
- The dual of $C[a, b]$.

The following days are off:

- Mardy Gras holidays Feb. 27 – March 1.
- Spring break, April 10 – 16.
GRADINGS

• There will be three tests in class, each counting 100 points:
  ▶ Monday, March 6;
  ▶ Monday, April 3;
  ▶ Friday, April 28

• 7 graded homework assignments, each counting 30 points. Only the 6 best will be
  counted towards the final grade.

• A final exam, counting 200 points, will take place:
  ▶ Lockett 235, Monday, May 8, 10:00-Noon.

Points

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<tbody>
<tr>
<td>Tests during the semester</td>
<td>300</td>
</tr>
<tr>
<td>Homework</td>
<td>180</td>
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<tr>
<td>Final</td>
<td>200</td>
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<tr>
<td>Total</td>
<td>680</td>
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Final Grades

A ≥ 612, B ≥ 544, C ≥ 476, D ≥ 408. F < 330