Math 335, (Honors) Advanced Calculus

Lecture:	TWThF 10:30, Thomson 217
Instructor:	Jim Morrow
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Office Hours:	WF 9:30-10:20, C439 Padelford
Quiz Section:	10:30, Thomson 217
Mondays except:	
Wednesday, January 19	
and February 23	
TA:	Ryan Sturgell
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Text:	*Advanced Calculus* (required)
Author:	Gerald Folland
Text:	*Mathematical Thinking* (required)
Authors:	John P. D'Angelo & Douglas West

Math 335 investigates the properties of sequences and series of numbers and functions. It is an introduction to topics that will be covered in more depth in Math 424 and Math 428. Before we start on these topics we will finish up the material on several variable calculus that we left hanging last quarter. I intend to cover the following topics.

1. Stokes's theorem and applications to physics
2. Infinite series
3. Uniform convergence
4. Introduction to power series

5. Improper integrals and special functions

6. Fourier Series

Homework will be collected at regular intervals and will count 20% of the course grade. There will be two 50 minute midterm tests which will count 20% of the course grade. The midterm tests will be closed book but you will be allowed to bring notes on one side of a notebook size sheet of paper. There will be a two hour closed book final exam which will count 40% of the course grade. For the final you will be allowed to bring notes on both sides of a notebook size sheet of paper. No calculators will be allowed on tests.

Here are the homework assignments :

DATE	ASSIGNMENT (from Folland)
Jan. 10	§5.7: 6, 7, 8; §5.8: 2, 3, 4; §4.5: 1, 3, 5, 6
Jan. 19	§4.6: 1d, 2b, 3f, f, 8; §5.6: 1, 2; §6.1: 1d, 2bcd
Jan. 24	§6.2: 3, 6, 8, 13, 19, 21, 22; D'Angelo & West: 5.6, 5.23, 5.25
Jan. 31	§6.3: 1, 3, 4; §6.4: 6, 11, 14; §6.5: 3, 4
Feb 2	**MIDTERM**
Feb. 7	§7.1: 1cf, 2ce, 3, 6, 8; 7.2: 1, 3, 6
Feb. 14	§7.3: 1, 4, 5, 11; §7.5: 3, 4, 5, 8, 11; D'Angelo & West: 6.22, 6.26, 6.27, 6.29
Feb. 23	§7.6: 2, 3; 8.1: 1, 2; §8.2: 1, 4ab
Feb. 28	§8.3: 2, 3a, 4, 6; §8.4: 1; D'Angelo & West: 7.6, 7.15, 7.24
Mar. 1	**MIDTERM**
Mar. 6	§§8.5:1, 4, 7; D'Angelo & West: TBA
Mar. 10	§§8.6: 2, 3, 4, 5, 6, 9ac
Mar. 13	**FINAL EXAM** (8:30-10:20 a.m.)

These assignments are due at the beginning of class on the due date.