MATH 234 – Advanced Calculus II

Semester: Spring 2018
Instructor: Burak Gürel
Office: TB 255, `e-mail: bgurel at boun.edu.tr`

Exams & Grading: Two midterm tests 30% each and a final examination 40%.
Make up policy: One make up exam (including all topics) after the final exam.

Course Schedule: M 1200 **TUE 11:00-12:50**
M 1200 **THU 11:00-12:50**
Office Hours: TUE and THU 15:00-17:00
Textbook: G.B. Folland, *Advanced Calculus*, Prentice Hall, NJ, 2002.

Week	Date	Topics	Section
1	2/6-2/8	Integral Calculus. Integration on the line. Integration in higher dimensions.	4.1-4.2
2	2/13-2/15	Multiple and iterated integrals. Change of variables for multiple integrals.	4.3-4.4
3	2/20-2/22	Functions defined by integrals. Improper integrals. Improper multiple integrals.	4.5-4.7
4	2/27-3/1	Line and Surface Integrals; Vector Analysis. Arc length and line integrals. Green's Theorem.	5.1-5.2
5	3/6-3/8	Surface area and surface integrals. Vector derivatives. Midterm 1: March 7, Wednesday.	5.3-5.4
6	3/13-3/15	The divergence theorem. Some applications.	5.5-5.6
7	3/20-3/22	Stokes's Theorem. Integrating vector derivatives.	5.7-5.8
8	3/27-3/29	Infinite Series. Definitions and examples. Series with nonnegative terms. Absolute and conditional convergence.	6.1-6.3
9	4/3-4/5	More convergence tests. Double series; product of series.	6.4-6.5
10	4/10-4/12	Functions Defined by Series and Integrals. Sequences and series of functions. Integrals and derivatives of sequences and series of functions. Midterm 2: April 11, Wednesday.	7.1-7.2
11	4/17-4/19	Spring Break	
12	4/24-4/26	Power series. The complex exponential and trigonometric functions.	7.3-7.4
13	5/1-5/3	Labor Day Holiday: No class on the 1st of May. Functions defined by improper integrals.	7.5
14	5/8-5/10	The Gamma function. Stirling's Formula.	7.6-7.7