

**Spring 2009**  
**Math 5302.501**

**Course Information**

Course Number/Section: Math 5302.501

Course Title: Elementary Analysis II

Term: 2009 Spring

Days and Times: MW 5:30-6:45 p.m.

Room: FN 2.106

**Contact Information**

Professor: Istvan Ozsvath

Office phone: 972-883-2174

Office Location: ECSN 3.922

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Office Hours: MW 5:30-6:45 p.m. and by appointment

**Pre-requisite:** Math 5301

**Course Description:**

We will cover the second part of the book: *Multi-Dimensional Theory*, focusing on topics such as the topology of Euclidean spaces; differentiability and integration on those spaces, and fundamental theorems of vector calculus.

**Learning Objectives/ Outcomes:**

Students will learn in depth Mathematical Analysis and its applications. This endeavor will prepare them to continue their graduate studies in the fields of both theoretical or applied mathematics.

**Required Text:**

William R. Wade, *An Introduction to Analysis*, Third Edition, Upper Saddle River: Prentice Hall, 2004.

**Recommended Text:**

Walter Rudin, *Principles of Mathematical Analysis*, Third Edition, McGraw-Hill Book Company

**Assignments and Academic Calendar:**

Topics may include:

Planes and linear transformations  
Topology  
Limits of sequences and functions  
Continuous functions  
Definitions of differentiability  
Mean value theorem and inverse function theorem  
Jordan regions and Riemann integrations on Jordan regions  
Change of variables  
Theorems of Green and Gauss  
Stokes theorem

January 12, 2009: First Class:

January 19, 2009: Martin Luther King Day

February 25, 2009: Review

March 2, 2009: Midterm:

March 16-21: Spring Break

April 8: Religious Holiday

May 4: Review (Last Day of Classes)

May 13, Wednesday, 5:00 p.m.: Final Examination:

**Grading Policy:** The course grade will be derived as follows:

8 homework assignments:	30%
Midterm Exam	30%
Final Exam	40%

**Course and Instructor's Policies:**

No make-up exams, except under extraordinary circumstances.

Extra Credit: n/a

Late Work: All students are expected to turn in the home work problems and take the exams at the time announced.

Special Assignments: n/a

Class Attendance: required

Classroom: Citizenship: Students are expected to behave professionally. Discussions among students during the class period is highly discouraged. Cell phones, ringers, buzzers, beepers, alarms, and computers must be turned off.

**Field Trip Policies:** n/a

