

# Honors Analysis II

Semester: Spring 2016  
Course number: Math-UA.329  
Credit hours: 4  
Prerequisite: Math-UA.328/Analysis  
Professor: Fanghua Lin  
E-mail: linf@cims.nyu.edu  
Office: WWH 717  
Office hours: Tuesday 11:00-12pm

## Classroom information:

Classroom: WWH 202  
Time: 2:00-3:15pm  
Days: Monday and Wednesday  
Recitation: TBA

## Course Description:

This is a continuation of Honors Analysis I (UA328) from Fall 2015, which covered chapters 1-9. Other analysis courses that covered material similar to Rudin's chapters 1-6 would also be sufficient. Topics to be discussed include: sequence and series of functions, transcendental functions, inner product spaces and Fourier series, the Lebesgue measure and Lebesgue integrals. A few traditional topics in multivariables such as inverse and implicit function theorems, long range multipliers and constrained extremals may also be discussed if time permits.

**Textbook:** *Foundations of Mathematical Analysis*, R. Johnsonbaugh and W. E. Pfaffenberger (Dover, 2010).

**Reference text:** *Principles of Math. Analysis*, by Walter Rudin.

## Grading policy and tentative calendar

<u>Item</u>	<u>Weight</u>	<u>Week(s)</u>	<u>Chapters</u>
Homework	35%	1-3	10
Midterm	30%	4-5	11
Final	30%	5-7	12
Other	5%	8-9	Some multivariables
		10-14	Lebesgue measures & Lebesgue integrals