Honors Analysis II

Semester: Spring 2021
Course number: Math-UA. 329
Prerequisites: Honors Analysis I or Its Equivalence, Linear Algebra.
Professor: Fanghua Lin
E-mail: linf@cims.nyu.edu
Office hours: Mondays 1:30pm-3:30pm
Lectures: Monday and Wednesday 9:30am–10:45am.

Course Description:
This is a continuation of Honors Analysis I (UA 328) from Fall 2015, which covered most of chapters 1–12 of the textbook "Foundations of Mathematical Analysis" by Richard Johnsonbaugh and W.E. Pfaffenberger. Other analysis courses that covers matherial similar to W. Rudin's book " Principles of Mathematical Analysis", chapters 1–8 would also be sufficient. Topics to be discussed in this course include: Euclidean (metric) spacs, differential of functions of several real variables, the implicit and inverse function theorems, Riemann integrals on Rn, the Lebesque integrals.

Main Texts and References
W.Rudin, Principle of Mathematical Analysis, Third Edition, McGraw-Hill Book Co. 1976. Chapters 9–11. [2] R.Johnsonbaugh and W.E. Pfeffenberger, Foundations of Mathematical Analysis, Dover Ed. 2015. Chapter 14.

Specific Instructions
The course divided into three periods. For the first two periods we follow the chapter 9 and some selected materials of chapter 10 of W. Rudin. For the final period, we follow Johnsonbaugh-Pfeffenberger's chapter 14 (similar to W.Rudin's chapter 11).

Grading policy

Item	Weight
Exam	40%
Homework	50%
Other	10%