

# 實變函數論一

## REAL ANALYSIS (I)

### 課程安排 Arrangements

教師：陳國璋 Kuo-Chang Chen

時間：M56R56

教室：綜三118

助教：劉振宏、黃楷鈞

### 聯繫方式 Contact Info.

教師辦公室：綜三609

分機：33067

辦公室時間：T78

email: kchen@math.nthu.edu.tw

助教將建立Line群組以便聯繫，  
加入方式於課堂宣布

### 教科書 Textbook

E. M. Stein and R. Shakarchi: *Real Analysis*, Princeton University Press, 2005.

### 參考書 References

H. L. Royden: *Real Analysis*, Macmillan, 1988.

R. L. Wheeden and A. Zygmund: *Measure and Integral - An introduction to Real Analysis*, Marcel Dekker, 1977.



### 課程簡介 Course Description

This course is an introduction to the theory of measure and integration. In the first semester we will introduce Lebesgue's theory of measure and integration. Topics to be covered include:

1. Preliminaries on set theory
2. Lebesgue measure
3. Lebesgue integral
4. Differentiation and integration

### 課程大綱 Syllabus

There will be a total of 22 lectures, 7 recitation classes, each of them will be 2 hours long. They are scheduled as follows.



## 評分方式 Grading

小考/作業 Quizzes/Homework  
Selected exercises from Chapter 1~3 in Stein-Shakarchi's book will be assigned. Some of them will be collected and graded. Quizzes will be based on homework assignments.

期中考 Midterms

2023/10/30

2023/11/30

期末考 Final Exam

2024/01/08

計分方法：

小考、期中考1、期中考2、期末考  
各佔1/4

## 出席與缺席 Attendance

Students are expected to attend every scheduled class. It is the student's responsibility to keep informed of any announcements, syllabus adjustments or policy changes made during scheduled classes.

You should miss an exam only for the most compelling reasons and you should obtain permission in advance, except in some extraordinary circumstances. If you miss an exam for legitimate reasons, then it will be weighted to other exams. There will be no make-up exam.

週次	週一	進度	週四	進度
1	9/11	Chapter 1	9/14	Chapter 1
2	9/18	Chapter 1	9/21	演習課
3	9/25	Chapter 1	9/28	教師節放假
4	10/2	Chapter 1	10/5	Chapter 1
5	10/9	彈性放假	10/12	演習課
6	10/16	Chapter 1	10/19	Chapter 1
7	10/23	Chapter 2	10/26	演習課
8	10/30	期中考	11/2	Chapter 2
9	11/6	Chapter 2	11/9	Chapter 2
10	11/13	演習課	11/16	Chapter 2
11	11/20	Chapter 2	11/23	Chapter 3
12	11/27	演習課	11/30	期中考
13	12/4	Chapter 3	12/7	Chapter 3
14	12/11	Chapter 3	12/14	演習課
15	12/18	Chapter 3	12/21	Chapter 3
16	12/25	Chapter 3	12/28	Chapter 3
17	1/1	元旦放假	1/4	演習課
18	1/8	期末考		

