

Syllabus: Advanced Calculus (I)

1. Description:

This course is concerned with the basic theories of the analysis of real numbers, sequences and series of real numbers, and real-valued functions. There are two topics that we will cover throughout the course:

- 1: One-dimensional Theory: Sequences, functions, differentiability, integrability on $\mathbf{R}$, infinite series of real numbers and functions.
- 2: Multidimensional Theory and Abstract Theory.

2. Topic prerequisites:

Calculus.

3. Course information:

- (a) Lecture: Every Tue. and Thu. 10:10-12:00
- (b) Seminar: Every Wed. 12:10-13:00
- (c) Room: Math. Building 201
- (d) Textbook:
 - An Introduction to Analysis/ William R. Wade
 - Elementary classical analysis /Jerrold E. Marsden, Michael J. Hoffman
 - Principles of Mathematical Analysis /W. Rudin
- (e) Teacher: Chih-Chiang Huang, E-mail: cchuang@ccu.edu.tw, Math Building 435
- (f) Office hours: Wed. 08:00-10:00, Math. Building 435
- (g) TA: 吳承燁, E-mail: denny0107a@gmail.com; Q&A: Mon. 15:00-16:00, Math Building 512

4. Grading

Grade (100%)= Final exam (40%)+ Midterm exam (40%)+ Quiz (20%) (Choose 5 from 6)

5. Exam Schedule

- (a) Quiz1-6: 09/24, 10/08, 10/22, 11/26, 12/10,12/24 (Wed) 12:10-12:40
- (b) Midterm Exam: 11/04 (Tue), 10:00-12:00
- (c) Final Exam: 12/30 (Tue) 10:00-12:00