

THE CHINESE UNIVERSITY OF HONG KONG
Department of Mathematics
MATH 2050C (Second term, 2020-21)
Mathematical Analysis I
Course Outline

Course Description

MATH2050/2058, 2060/2068 and 3060 are basic courses for analysis, which together form a solid foundation for analysis. In this first one we start with the properties of the real number system, then proceed to limits of sequences and functions, and end up with the concept of continuity and uniform continuity. We will follow the text closely and go over chapters 2–5 assuming that the content of chapter 1 has been taught previously.

Instructor

- LI Man-chun Martin (Office: LSB 236. Email: martinli@math.cuhk.edu.hk)

Teaching Assistants

- LO Chiu Hong (Office: LSB 228, Email: chlo@math.cuhk.edu.hk)
Office Hours: please check on the course webpage
- WANG Gaoming (Office: LSB 222A, Email: gmwang@math.cuhk.edu.hk)
Office Hours: please check on the course webpage

Time and Venue

- **Lectures:** Tue 8:30AM - 10:15AM; Thur 9:30AM - 10:15AM (online via ZOOM)
- **Tutorials:** Thur 8:30AM - 9:15AM (online via ZOOM)

Zoom information

You will receive the passcodes for the ZOOM meetings via email.

- Meeting ID (**Lectures**): 958 1996 3691
- Meeting ID (**Tutorials**): 931 9214 8830

Lectures, Tutorials and Homeworks

Tutorials form an integral part of the course and students are expected to attend all the lectures and tutorials. Although the lecture notes will be posted on the course webpage, for the benefit of the students, we **strongly suggest** you to take notes during the lectures by yourself. This is the best way to learn the materials with your own articulation in the process. Mover, one cannot learn the subject well without working out lots of exercises. Therefore, students are expected to complete the homework assignment in detail by themselves (peer discussions are encouraged though but students are expected to do their own write-ups). Note that plagiarism is taken very seriously by the University and any related offence will lead to disciplinary action including termination of studies at the University.

Textbook and References

- (Required) R.G. Bartle and D.R. Sherbert, *Introduction to Real Analysis*, 4th edition, John-Wiley and Sons, NY, 2011
- W. Rudin, *Principles of Mathematical Analysis*, 3th edition, McGraw-Hill, International editions, 1976. (A step beyond MATH2050/60, this compactly written book has bred generations of mathematicians. Highly rewarding if read carefully.)

Assessment Scheme

- **Assignments:** 10%

Assignments will be posted on the course web page every week. Although you are asked to hand in a few selected problems only, you are supposed to do all of them. There are also some classwork in the tutorials.

- **One Midterm (Mar 11, 6PM - Mar 12, 6PM):** 40%

There will be one take-home 24-hour online midterm. More details will be announced later.

- **Final Examination (TBA):** 50%

More details will be announced later.

Course Webpage

Please check regularly the following course webpage for course materials and announcements:

<http://www.math.cuhk.edu.hk/course/2021/math2050c>

Honesty in Academic Work

The Chinese University of Hong Kong places very high importance on honesty in academic work submitted by students, and adopts a policy of zero tolerance on cheating and plagiarism. Any related offence will lead to disciplinary action including termination of studies at the University.

Although cases of cheating or plagiarism are rare at the University, everyone should make himself/herself familiar with the content of the following website:

<http://www.cuhk.edu.hk/policy/academichonesty/>

and thereby help avoid any practice that would not be acceptable.