

**THE CHINESE UNIVERSITY OF HONG KONG**  
**Department of Mathematics**  
**MATH1050B/MATH1058** (Second term, 2020-21)  
**(Honours) Foundation of Modern Mathematics**

This course introduces rigorous mathematical reasoning, and proofs. The use of logic in mathematics and various methods of proof will be illustrated by concrete examples from a variety of topics in mathematics.

Topics are selected amongst: logic and axiomatic systems; sets, relations and functions; infinite sets and countability; numbers and polynomials.

## **Instructor**

- Fong Wing-Chung (Office: Rm 218 LSB. Email: [wcfong@math.cuhk.edu.hk](mailto:wcfong@math.cuhk.edu.hk))

## **Tutors**

- Hui On Yu (Office: Rm 232 LSB. Email: [oyhui@math.cuhk.edu.hk](mailto:oyhui@math.cuhk.edu.hk))  
Consultation hours: Thursdays 1530-1730hrs, Fridays 1530-1730hrs.
- Ng Ming Ho (Office: Rm 228 LSB. Email: [mhng@math.cuhk.edu.hk](mailto:mhng@math.cuhk.edu.hk))  
Consultation hours: Tuesdays 1400-1600hrs.
- Chen Haiyu: (Office: Rm 614 AB1. Email: [hychen@math.cuhk.edu.hk](mailto:hychen@math.cuhk.edu.hk))  
Consultation hours: Fridays 1500-1700hrs.

## **Time and Venue**

- MATH1050B: Tuesdays 1630-1815hrs, Thursdays 1030-1215hrs.
- MATH1058: Tuesdays 1330-1515hrs, Thursdays 1630-1815hrs.
- Classes are conducted online via ZOOM.  
For the ZOOM class arrangements, refer to the *Miscellaneous arrangements*.

## **Course material, course homepage(s), and course announcements.**

Refer to the *Miscellaneous arrangements*.

## **Teaching Schedule**

Below is the schedule for MATH1050:

- Weeks 1-6: various methods of mathematical proofs; set operations; logic; numbers.
- Weeks 7-11: functions and relations.
- Weeks 12-13: infinite sets.

## **Assessment Scheme**

Refer to the *Assessment Scheme Second Semester 2020-21*.

## **Submission of work for assessment**

Every piece of work for assessment are to be submitted online, to the 'Blackboard'. As specified in the *Assessment Scheme*, some submissions are allowed to be hand-written; some are required to be typed up.

As for the detail on technical requirements on the formats for the various types of submissions, refer to *Instructions on submission of work*, which will be available in the course homepage.

## **Academic Honesty**

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at

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

There is zero tolerance on plagiarism. If you are found to have committed plagiarism, you will be reported to the university for disciplinary action and you could be recommended to receive the 'F' grade in the course.

## **Books and other learning resources**

Refer to *Books and other learning resources*.