

## Class Schedule

Here is the class schedule for the August 2022/23 semester.

### Week 01, 01/08 – 07/08

- Lecture: Introduction
- Complete diagnostic test

### Week 02, 08/08 – 14/08

- Lecture: Elementary set theory
- Lecture: Algebra of sets

### Week 03, 15/08 – 21/08

- Lecture:  $\sigma$ -algebra
- Tutorial: Exercise 1 (Sets)

### Week 04, 22/08 – 28/08

- Lecture: Limit sets
- Tutorial: Exercise 2 (Algebras and  $\sigma$ -algebras)

### Week 05, 29/08 – 04/09

- Lecture: The Cantor set
- Tutorial: Exercise 3 (Limit sets)

### Week 06, 05/09 – 11/09

- Lecture: Probability measure
- Tutorial: Exercise 4 (Uncountable sets and their sizes)

### Week 07, 12/09 – 18/09

- Tutorial: Exercise 5 (Probability measures)
- Class test
- Submit notes for marking

### 19/09 – 25/09: Mid-semester Break

*No classes. Take a break!*

### Week 08, 26/09 – 02/10

- Lecture: Properties of probability measure & extension theorem
- Tutorial: Class test review

### Week 09, 03/10 – 09/10

- Lecture: Random variables
- Lecture: Lebesgue measure
- Tutorial: Exercise 6 (The Cantor distribution)

### Week 10, 10/10 – 16/10

- Lecture: Lebesgue integral
- Tutorial: Exercise 7 (Extension theorem and random variables)