

# MATH 4423 Nonparametric Statistics

## Course Outline - Fall 2023

### 1. Course Home Page

<http://www.math.ust.hk/~maling/>

### 2. Instructor

Dr. Shiqing Ling

Contact Details: Rm 3460; phone: 2358-7459; e-mail: [maling@ust.hk](mailto:maling@ust.hk)

Office Hour: Wed, 4 to 6 pm.

### 3. Teaching Assistants

Cai Bibi

Contact Details: Rm 3214; phone: 2358-7467; [bcaiaa@connect.ust.hk](mailto:bcaiaa@connect.ust.hk)

Office Hour: Wed, 4 to 6 pm

### 4. Meeting Time and Venue

Lectures: WeFr 1:30PM - 2:50PM. Rm 2463, Lift 25-26

### 5. Course Description

Duration: one semester. Credits: 3 units.

Prerequisites: Math2411 or math3423 or equivalents.

Key topics: The sign test; Wilcoxon signed rank test; Wilcoxon rank-sum test; Kruskal-Wallis test; rank correlation; order statistics; robust estimates; Kolmogorov-Smirnov test

### 6. Assessment Scheme

<u>Assessment</u>	<u>Assessing Course ILOs</u>
Homework: 15 %.	1,2
Online Midterm Exams: 35 %.	1
Online Final Exam: 50 %.	1,2

### 7. Student Learning Resources

#### *Lecture Notes:*

Lecture notes (All exams and homework problems will be based on the contents covered in lectures.)

#### *Textbooks/ References:*

- 1). Chapter 9 of "Mathematical statistics: basic ideas and selected topics", 1st edition, by Bickel and Doksum; Publisher: Prentice-Hall.
- 2). "Applied nonparametric statistics", 2nd edition, by Wayne W. Daniel; Publisher: Duxbury Classic Series.
- 3). "Nonparametrics: statistical methods based on ranks", by E.L. Lehmann; Publisher: Holden-Day series in probability and statistics.

