Mathematical Statistics (I) 304026001 Syllabus

Spring 2025

- Instructor Information.

  - Instructor: Huang, Tzee-Ming

  - Email: tmhuang@nccu.edu.tw

  - Office hours: Monday 8:00-10:00 and by appointment

- Textbook and reference.

  - Textbook. Introduction to Mathematical Statistics (8th Edition) by Hogg, McKean, and Craig.

  - Reference. Introduction to Probability and Mathematical Statistics by Bain.

- Grading Policy.

  - Homework (optional): $x\%$, where $0 \leq x \leq 30$ is determined by homework scores.

  - Midterm Exam: $(50 - 0.5x)\%$

  - Final Exam: $(50 - 0.5x)\%$

- Note.

  - Homework problems will be posted on the course web site every week after the class starts. The course web site is at

    https://stat.walkup.tw/teaching/math_stat_under/S25/homepage.html

  - The Midterm Exam and Final Exam are closed book and closed notes exams.

  - Most exam problems are modified from basic homework problems.

- Tentative Class Schedule.

Week	Content	Reading chapter(s)
1	Probability and Distributions (Sections 1.1–1.6)	1
2	Holiday	
3	Probability and Distributions (Sections 1.7)	1
4	Probability and Distributions (Sections 1.8, 1.9)	1
5	Multivariate Distributions (Sections 2.1)	2
6	Multivariate Distributions (Sections 2.2-2.4)	2
7	Holiday	
8	Multivariate Distributions (Sections 2.6, 2.7)	2
9	Midterm Exam	
10	Multivariate Distributions (Section 2.5)	2
11	Covariance and correlation (a part of Section 3.5)	3
12	Multivariate Distributions (Sections 2.7, 2.8)	2
13	Multivariate normal distributions (a part of Section 3.5)	3
14	Multivariate normal distributions (a part of Section 3.5)	3
15	Holiday	
16	Some Special Distributions (Sections 3.1–3.3)	3
17	Joint PDF determined by conditional PDF and marginal PDF (extra handout)	NA
18	Final Exam	

Note. The topics in the above tentative class schedule are subject to modification. An up-to-date schedule will be posted on a weekly basis on the course web site after the class starts.