



MMPH6117/CMED 6020 Advanced statistical methods I

Coordinator: Dr JY Wong / Prof BJ Cowling

Course Description:

This course covers generalized linear models, meta-analysis, and instrumental variable analysis. This course will provide a practical overview of commonly used biostatistical methods, building on the basic methods introduced in CMED6100.

Prerequisite: CMED6100 Introduction to Biostatistics

Tutors: Ms Faith Ho/ Ms Caifen Liu

Contact person: Ms Emily Cheung

Term 2 (Monday and Thursday)

Date	Time	Lecture Topic	Lecturer	Venue
12 Jan 2026	6:30 – 9:00 pm	1. Introduction to R	Dr JY Wong	TBC
19 Jan 2026	6:30 – 9:00 pm	2. Regression model in R	Dr JY Wong	TBC
22 Jan 2026 (Thu)	2:00 – 5:00 pm	Tutorial 1	Dr JY Wong	TBC
26 Jan 2026	6:30 – 9:30 pm	Tutorial 1	Dr JY Wong	TBC
02 Feb 2026	6:30 – 9:00 pm	3. Applied regression I	Dr JY Wong	TBC
09 Feb 2026	6:30 – 9:00 pm	4. Applied regression II	Dr JY Wong	TBC
02 Mar 2026	6:30 – 9:00 pm	5. Applied regression III	Dr JY Wong	TBC
05 Mar 2026 (Thu)	2:00 – 5:00 pm	Tutorial 2	Dr JY Wong	TBC
09 Mar 2026	6:30 – 9:30 pm	Tutorial 2	Dr JY Wong	TBC
23 Mar 2026	6:30 – 9:00 pm	6. Conditional logistic regression and propensity score method	Dr JY Wong	TBC
30 Mar 2026	6:30 – 9:00 pm	7. Inverse probability weighting and meta analysis	Dr JY Wong	TBC
13 Apr 2026	6:30 – 9:00 pm	8. Instrumental variable analysis	Dr JY Wong	TBC
16 Apr 2026 (Thu)	2:00 – 5:00 pm	Tutorial 3	Dr JY Wong	TBC
20 Apr 2026	6:30 – 9:30 pm	Tutorial 3	Dr JY Wong	TBC
27 Apr 2026	6:30 – 9:30 pm	Examination	-	TBC

Course Assessment:

Written assignment: 50%
Final examination: 50%

Recommended Reading

1. Everitt B.S. and Hothorn T. A handbook of statistical analyses using R. Boca Raton, Florida: Chapman & Hall, 3rd edition, 2014.
2. Forthofer RN, Lee E, Hernandez M. Biostatistics: A guide to design, analysis, and discovery. 2nd edition. Boston: Elsevier Academic Press, 2007.
3. Frank E. Harrell. Regression Modeling Strategies: With Applications to Linear Models, Logistic Regression, and Survival Analysis. New York: Springer, 2010.

Contact person: Ms Emily Cheung – email: emilyyc@hku.hk