



## MMPH6117 Advanced statistical methods I

<b>Course Coordinator:</b>	Dr JY Wong / Prof BJ Cowling
<b>Course Description:</b>	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.
<b>Venue:</b>	TBC

**Prerequisite:** CMED6100 Introduction to Biostatistics

**Term 2 (Monday and Thursday)**

**Tutors:** Ms Faith Ho/ Mr Alan Dai/ Ms Caifen Liu

**Contact person:** Ms Emily Cheung/ Ms Caifen Liu

Date	Time	Lecture Topic	Lecturer	Venue
15 Jan 2024	6:30 – 9:00 pm	1. Introduction to R	Dr JY Wong	TBC
22 Jan 2024	6:30 – 9:00 pm	2. Regression model in R	Dr JY Wong	TBC
25 Jan 2024 (Thu)	2:00 – 5:00 pm	Tutorial 1	Dr JY Wong	TBC
29 Jan 2024	6:30 – 9:30 pm	Tutorial 1	Dr JY Wong	TBC
05 Feb 2024	6:30 – 9:00 pm	3. Applied regression I	Dr JY Wong	TBC
19 Feb 2024	6:30 – 9:00 pm	4. Applied regression II	Dr JY Wong	TBC
26 Feb 2024	6:30 – 9:00 pm	5. Applied regression III	Dr JY Wong	TBC
29 Feb 2024 (Thu)	2:00 – 5:00 pm	Tutorial 2	Dr JY Wong	TBC
4 Mar 2024	6:30 – 9:30 pm	Tutorial 2	Dr JY Wong	TBC
11 Mar 2024	6:30 – 9:00 pm	6. Conditional logistic regression and propensity score method	Dr JY Wong	TBC
18 Mar 2024	6:30 – 9:00 pm	7. Inverse probability weighting and meta analysis	Dr JY Wong	TBC
25 Mar 2024	6:30 – 9:00 pm	8. Instrumental variable analysis	Dr JY Wong	TBC
28 Mar 2024 (Thu)	2:00 – 5:00 pm	Tutorial 3	Dr JY Wong	TBC
8 Apr 2024	6:30 – 9:30 pm	Tutorial 3	Dr JY Wong	TBC
15 Apr 2024	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.

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