Last update: 18/7/2022

MRGO5104 Research Methodology & Biostatistics (1 Credit units)

研究方法學及生物統計學

Module Head: Professor Louis Cheung

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Session	1	2	3	4	Exam
Date	5/9 (M)	19/9 (M)	26/9 (M)	3/10 (M)	12/11 (Sat)
Time	1830 – 2130	1830 – 2130	1830 – 2130	1830 – 2130	PM
Venue	CSB SR1	PEC KCT	CSB Lecture Theatre	PEC KCT	

Content	Speakers	Session	Date / Time
Research Designs: a) How to develop a "Good" topic? b) How to Propose a Sound Hypothesis? c) Randomization and Blinding d) Considerations of Different Study Designs Ethics & Critically appraising the journal articles a) Research Ethics and Plagiarism (also anti-Plagiarism systems, e.g. VeriGuide) b) Preparing A Scientific Report	Professor Louis Cheung	1	5/9/2022(M) 18:30-21:30 CSB SR1, 2/F, LCWCSB, PWH
Systematic literature review and Meta-analysis methodology	Professor Pauline Lui	2	19/9/2022M) 18:30-21:30 KCT, G/F, PEC, PWH
Introduction of Data Analysis: a) Principle of Biostatistics b) Sampling Distributions and Confidence Intervals Basic Theory and Practical Guide to: a) Hypothesis Testing (paired and independent t-test) and ANOVA b) Chi-square test c) Correlation	Professor TP Lam	3	26/9/2022(M) 18:30-21:30 CSB lecture Theatre, 2/F, LCWCSB, PWH
Clinical Studies & Trial: Causation Clinical Studies & Trial: Association & correlation	Mr. Raymond Tsang	4	3/10/2022(M) 18:30-21:30 KCT, G/F, PEC, PWH
Written Examination			12/11 (Sat)

Venue:

CSB SR1 Seminar Room 1, Clinical Skill Learning Center, 2/F, Lui Che Woo Clinical Sciences Building, Prince of Wales Hospital CSB Lecture Theatre (Next to Li Ping Library), Clinical Skill Learning Center, 2/F, Lui Che Woo Clinical Sciences Building, Prince of Wales Hospital

PEC KCT Kai Chong Tong Lecture Theatre, G/F, Postgraduate Education Centre (PEC), Prince of Wales Hospital

Recommended Reading:

Mohit Bhandari, Anders Joensson. Clinical Research for Surgeons. Thieme, Stuttgart. 2009. [ISBN 978-3-13-143931-4]

Brief Description:

This course aims to provide basic knowledge of biostatistics and research methodology.

本科目旨在提供生物統計學和研究方法的基礎知識。

Learning Outcome:

Students should be able to understand and apply:

- 1. Principles of evidence-based research
- 2. Research, academic conduct and anti-plagiarism measures
- 3. Principles of biostatistics

Assessment:

End of Module Examination (100%)

Date: 12/11/2022 (Sat)

Time: 14:00 – 15:00 (to be confirmed)

Online / face-to-face (Venue: OLC, PWH (to be confirmed))

Attention: University policy and regulations on honesty in academic work

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at http://www.cuhk.edu.hk/policy/academichonesty/.

With each assignment, students will be required to submit a signed <u>declaration</u> that they are aware of these policies, regulations, guidelines and procedures.

- In the case of group projects, all members of the group should be asked to sign the declaration, each of whom is responsible and liable to disciplinary actions, irrespective of whether he/she has signed the declaration and whether he/she has contributed, directly or indirectly, to the problematic contents.
- For assignments in the form of a computer-generated document that is principally text-based and submitted via VeriGuide, the statement, in the form of a receipt, will be issued by the system upon students' uploading of the soft copy of the assignment.

Assignments without the properly signed declaration will not be graded by teachers.

Only the final version of the assignment should be submitted via VeriGuide.

The submission of a piece of work, or a part of a piece of work, for more than one purpose (e.g. to satisfy the requirements in two different courses) without declaration to this effect shall be regarded as having committed undeclared multiple submissions. It is common and acceptable to reuse a turn of phrase or a sentence or two from one's own work; but wholesale reuse is problematic. In any case, agreement from the course teacher(s) concerned should be obtained prior to the submission of the piece of work.

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Speakers:

Professor Louis Cheung, BSc, PhD, Postgrad Cert (Biostatistics)

Deputy Director, MSc in Musculoskeletal Medicine, Rehabilitation and Geriatric Orthopaedics (Geri-Ortho Stream)

Deputy Director, Musculoskeletal Research Laboratory

Professor (non-clinical), Department of Orthopaedics & Traumatology, The Chinese University of Hong Kong

<u>Professor Pauline Lui, Ph.D.</u> in Biochemistry, PgDip in Clinical Trial Research Methodology, PgCert in Pharmacology and Pharmaceutical Management Associate Professor, Department of Orthopaedics & Traumatology, the Chinese University of Hong Kong

<u>Professor TP Lam</u>, MBBS, FHKAM(Orth Surg), FHKCOS (Ortho Surg), FRCSEd, FHKCS Associate Professor (Clinical), Department of Orthopaedics and Traumatology, The Chinese University of Hong Kong

Mr. Raymond Tsang, MScHC(PT), MMedSc(Med Stat), FHKCOP Department Manager, Physiotherapy Department, MacLehose Medical Rehabilitation Centre