

## **COURSE DESCRIPTIONS 科目簡介**

### **COURSES FOR TAUGHT POSTGRADUATE PROGRAMMES**

#### **HAM501 Understanding Public Health and Epidemiology (3 credits)**

This course will introduce students to fundamental and advanced concepts, measures and approaches in public health and epidemiology, the study of health and disease in populations. Students will learn about nature and historical perspectives of public health and epidemiology, determinants of health and diseases, epidemiology study design, mapping diseases and health needs, measuring health and diseases, controlling epidemics. The course will provide a foundation for other courses, especially those relating to data analytics in health. It will be delivered through a combination of lectures and seminars.

#### **HAM502 Policy and Resource Management Issues in Health Systems (3 credits)**

In the course, students will be introduced to different kinds of policies relating to healthcare and public health. Students will learn how various types of health data are extracted to shape and inform health policies. The course will border on issues relating to health infrastructure and coverage, health financing, health personnel training and retention, the sustainability of health systems, and health education. The course will be delivered through a series of practitioner seminars. Policy analysts and healthcare professionals will be invited to offer empirical perspectives on policies and the realities of their implementations.

#### **HAM503 Principles of Data Analytics (3 credits)**

With the large volume of data in various domain-specific applications in recent years, it is crucial to interpret and understand data in a scientific way. Data analytics, an essential method for identifying the hidden patterns and critical information from data, have been widely employed due to the rapid development of artificial intelligence and big data analytic techniques in recent years. In this course, students will explore the foundation, principle, methods, and potential applications of data analytics. Specifically, the course will contain four modules, including data models in real life, analytical tools, data extraction, and data visualisation.

#### **HAM504 Healthcare Operations Management (3 credits)**

Healthcare is the maintenance or improvement of health via the prevention, diagnosis, treatment, recovery, or cure of disease, illness, injury, and other physical and mental impairments in people. Operations management is essential for the provision of healthcare services, and it is primarily concerned with the delivery of quality services promptly while controlling costs. This course is designed to introduce the key concepts, practices and tools that have been developed for service operation management with specific applications in the healthcare industry. The course also demonstrates the *how-tos* of analysing, designing and managing a complex healthcare system.

**HAM505 Marketing Analytics and Intelligence (3 credits)**

This is a new course to be offered by a new programme “MSc in Artificial Intelligence and Business Analytics” under the FB. Marketing analytics is the intersection of Marketing and Data Science, generating business insights and offering new opportunities for a competitive advantage. New digital technologies have fundamentally changed various aspects of marketing practice over the past years. They have led to a dramatic shift in the quantity and quality of information we can access, analyse, and act. The course discusses the cutting-edge techniques used to unlock the predictive potential of data analysis to enhance marketing performance, strategic management, and operational efficiency and provides students with hands-on experience in the application of analytical tools and techniques, to a real-life marketing problem.

**HAM506 Health Analytics and Operations Management Project (6 credits)**

This is a capstone for HAOM. The project can be undertaken in three ways. First, students can carry out an empirical research study on any selected topic relating to health analytics and operations management in the health sector. In this project, students must gather primary data. Second, students can utilise some of the various analytical techniques and approaches they have learned in the programme to analyse secondary data in response to a well-defined research question. The final approach shall entail a report generated through participation in an internship programme with a relevant entity such as a hospital (including Chinese medicine clinic), a business involved in health service or logistics provision and non-governmental organisations offering health-related services. Working with supervisors, students are expected to complete the chosen task independently.

**HAM507 Understanding Health and Social Care (3 credits)**

This course will explore major theoretical debates and practice issues in health and social care. It will enhance the understanding of social aspects and ethical dilemmas in health and care services for people in vulnerable conditions. Upon completing this course, students of the HAOM programme will learn to incorporate social care and services dimensions to their analysis of healthcare operations. The course will be delivered through lectures. The course is adapted from an existing one offered by the GS, MHM501 *Theorising Health and Social Services I*. Unlike the existing course, this one will give attention to the data dimensions and implications in health and social care.