

REGULATIONS FOR THE MASTER OF PUBLIC HEALTH (MPH)

(See also General Regulations)

M.87 Admission requirements

To be eligible for admission to the programme leading to the Master of Public Health, a candidate shall:

- (a) comply with the General Regulations;
 - (b) hold a Bachelor's degree with honours or the degrees of MBBS of this University, or another qualification of equivalent standard from this University or from another University or comparable institution accepted for this purpose; and
 - (c) satisfy the examiners in a qualifying examination, if required.
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M.88 Qualifying examination

- (a) A qualifying examination may be set to test the candidate's formal academic ability or his/her ability to follow the courses of study prescribed. It shall consist of one or more written papers or their equivalent and may include a project report.
 - (b) A candidate who is required to satisfy the examiners in a qualifying examination shall not be permitted to register until he or she has satisfied the examiners in the examination.
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M.89 Award of degree

To be eligible for the award of the degree of Master of Public Health, a candidate shall:

- (a) comply with the General Regulations; and
- (b) complete the curriculum and satisfy the examiners in accordance with the regulations set out below.

Advanced standing of the Master of Public Health programme may be granted to a candidate who has successfully completed one or more modules of the Postgraduate Diploma/Postgraduate Certificate in Public Health subject to the following conditions:

- (a) the module is appropriate for the Master of Public Health concentration applied for;
- (b) advanced standing up to 3 modules may be granted to holders of the Postgraduate Certificate in Public Health;
- (c) advanced standing up to 6 modules may be granted to holders of the Postgraduate Diploma in Public Health; and
- (d) application for advanced standing is received not more than five years after successful completion of the relevant module(s) or graduation from the Postgraduate Diploma/Postgraduate Certificate.

A candidate may choose to:

- (a) exit the programme after having successfully completed a minimum of 100 hours of the coursework component and be considered for the award of a Postgraduate Certificate in Public Health; and
- (b) exit the programme after having successfully completed a minimum of 200 hours of the coursework component and be considered for the award of a Postgraduate Diploma in Public Health.

M.90 Length of curriculum

The curriculum shall extend over not less than one academic year of full-time study or two calendar years of part-time study, with a minimum of 400 hours prescribed work.

Holders of the Postgraduate Diploma/Postgraduate Certificate in Public Health may apply for admission to the Master of Public Health programme after a break of at least one year and not more than five years from graduating from the programme.

M.91 Completion of curriculum

To complete the curriculum, a candidate shall:

- (a) follow instruction in the syllabus prescribed for the programme and complete satisfactorily all required written, practical or clinical work;
- (b) satisfy the examiners in the modules by continuous assessments and/or written examinations; and
- (c) complete a satisfactory dissertation on an approved research project or a health care project report according to the curriculum option approved by the Board of Studies and may be required to present for an oral examination.

A candidate who fails to fulfil the requirements within the prescribed maximum period of study shall be recommended for discontinuation under the provisions of General Regulation G12, except that a candidate who is unable because of illness or circumstances beyond his/her control to complete the requirements within the prescribed maximum period of study, may apply to the Board of Studies for permission to extend his/her period of study.

M.92 Module selection

Selection of modules shall be made within the curriculum structure delineated for each curriculum strategy and concentration, in consultation with the taught course co-ordinator and subject to the approval of the Board of Studies.

M.93 Title of dissertation/project report

The title of the dissertation or project, depending on the curriculum strategy approved, shall be submitted for approval on or before May 31st of the graduation year, and the dissertation/project report shall be presented for examination not later than August 15th of the graduation year. The candidate shall submit a statement that the dissertation/project report represents his/her own work (or in the case of conjoint work or work on a secondary dataset, a statement countersigned by his/her co-worker/supervisor, which shows his/her share of the work) undertaken after registration as a candidate for the degree.

All dissertations/project reports may be subject to oral examination.

M.94 Examinations

- (a) A candidate who has failed to satisfy the examiners in a module may be permitted:
 - (i) to attend a supplementary examination; or
 - (ii) to re-take the module and the prescribed examination(s); or
 - (iii) to enrol in another module in lieu if the failed module is not a core module.

- (b) A candidate who is not permitted to present himself/herself for re-examination in any module(s) in which he/she has failed to satisfy the examiners shall be recommended for discontinuation of studies under General Regulation G12.
 - (c) A candidate who has failed to achieve an overall average of 50% or above in the modules but have presented a satisfactory dissertation/project report may be permitted to undertake a further period of study in the module(s) of failure and to be re-examined by a specified date not less than one month after the publication of the overall results.
 - (d) A candidate who has presented an unsatisfactory dissertation/project report but has satisfied the examiners in the modules may be permitted to revise the dissertation/project report and to re-present it within a specified period of not more than four months after receipt of a notice that it is unsatisfactory.
 - (e) A candidate who has failed to satisfy the examiners in a second attempt in the module(s) or in the dissertation/project report shall be recommended for discontinuation of studies under the provisions of General Regulation G12.
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M.95 Examination results

At the conclusion of the examination a pass list shall be published. A distinction may be awarded to candidates who have demonstrated outstanding performance in the programme.

M.96 Publication based on work approved

Any publication based on work approved for a higher degree should contain a reference to the effect that the work was submitted to The University of Hong Kong for the award of the degree.

SYLLABUS FOR THE MASTER OF PUBLIC HEALTH

MODULE REQUIREMENTS

All candidates must enrol in the following core modules:

CMED6200	Epidemiology and critical appraisal
CMED6100	Introduction to biostatistics
CMED6201	Principles of public health

All candidates must select either one of the following curriculum strategies:

Dissertation curriculum strategy which comprises 9 taught course modules and CMED6300 Research methods in health care (200 hours), as well as a research project leading to a dissertation (200 hours).

Project curriculum strategy which comprises 16 taught course modules (320 hours) and health care project leading to a project report (80 hours).

For either Dissertation or Project curriculum strategy, candidates are required to choose one of the five concentrations listed below and then select modules laid out for each concentration.

1. Public Health Practice
2. Epidemiology and Clinical Effectiveness
3. Infectious Disease Epidemiology and Control
4. Administrative Medicine
5. Health Economics and Policy

Concentration 1: Public Health Practice

All candidates choosing the **dissertation** curriculum strategy must choose **at least 4** of the **9** concentration modules listed below and up to **2** additional modules from the module list.

CTCE6030	Advanced epidemiological methods
CMED6400	Evidence-based practice: an introduction to clinical epidemiology and decision analysis
CMED6204	Health and society
CMED6900	Health care systems and policy
CMED6902	Health economics for public health
CMED6206	Health promotion and health education
CMED6704	Psychosocial issues in health and illness
CMED6208	Risk: perception, decisions and communication
CMED6202	The practice of public health

All candidates choosing the **project** curriculum strategy must choose **at least 8** of the **10** concentration modules listed below and up to **5** additional modules from the module list.

CTCE6030	Advanced epidemiological methods
CMED6400	Evidence-based practice: an introduction to clinical epidemiology and decision analysis
CMED6204	Health and society

CMED6900	Health care systems and policy
CMED6902	Health economics for public health
CMED6206	Health promotion and health education
CMED6704	Psychosocial issues in health and illness
CMED6300	Research methods in health care
CMED6208	Risk: perception, decisions and communication
CMED6202	The practice of public health

Concentration 2: Epidemiology and Clinical Effectiveness

All candidates must enrol in the concentration modules listed below.

CMED6401	Advanced clinical epidemiology and decision analysis
CTCE6030	Advanced epidemiological methods
CTCE6020	Advanced statistical methods I – experimental and quasi experimental designs and data analysis
CTCE6040	Advanced statistical methods II – analysis of complex data
CMED6400	Evidence-based practice: an introduction to clinical epidemiology and decision analysis

All candidates choosing the **dissertation** curriculum strategy must choose **1** additional module from the module list.

All candidates choosing the **project** curriculum strategy must choose **8** additional modules from the module list.

Concentration 3: Infectious Disease Epidemiology and Control

All candidates must enrol in the concentration modules listed below.

CMED6210	Advanced infectious disease epidemiology
CMED6104	Emerging infectious diseases: ecology, evolution and multi-host transmission dynamics
CMED6215	Historical and contemporary perspectives of infectious diseases
CMED6211	Infectious disease epidemiology
CMED6105	Public health microbiology
CMED 6208	Risk: perception, decisions and communication

All candidates choosing the **project** curriculum strategy must enrol in the modules below and choose **4** additional modules from the module list.

CTCE6030	Advanced epidemiological methods
CTCE6020	Advanced statistical methods I – experimental and quasi experimental designs and data analysis
CTCE6040	Advanced statistical methods II – analysis of complex data

It is recommended that all physicians registered in this concentration should choose the equivalent of 1 credit from the modules listed below which are offered by the Carol Yu Centre for Infection.

MICR6903	Common problems in infectious diseases (0.5 credit)
MICR6904	Infectious in immunocompromised hosts (0.5 credit)
MICR6905	Infectious disease emergencies (0.5 credit)
MICR6901	Infectious disease rounds (0.5 credit)
MICR6902	Local emerging infectious diseases (0.5 credit)
MICR6906	Tropical diseases in the developed world and public health (0.5 credit)

Concentration 4: Administrative Medicine

All candidates must enrol in the concentration modules listed below.

CMED6400	Evidence-based practice: an introduction to clinical epidemiology and decision analysis
CMED6910	Financial management in health care organizations
CMED6900	Health care systems and policy
CMED6902	Health economics for public health
CMED6901	Health services management
CMED6907	The practice of health administration

All candidates choosing the **project** curriculum strategy must choose **6** of the modules listed below and **1** additional module from the module list.

CMED6401	Advanced clinical epidemiology and decision analysis
CMED6204	Health and society
CMED6903	Health care financing
CMED6908	Quality health care
CMED6911	Human resources (HR) in health care organisations
CMED6220	Informatics for health management
CMED6226	Population Health Informatics/eHealth
CMED6221	Public health law and ethics

Concentration 5: Health Economics and Policy

All candidates must enrol in the concentration modules listed below.

CMED6400	Evidence-based practice: an introduction to clinical epidemiology and decision analysis
CMED6204	Health and society
CMED6903	Health care financing
CMED6900	Health care systems and policy
CMED6902	Health economics for public health

All candidates must choose **1** of the **2** concentration modules listed below.

CMED6909	Comparative health systems: Hong Kong and the United States
CMED6221	Public health law and ethics

All candidates choosing **project** curriculum strategy must choose **7** additional modules from the module list.

MODULE LIST

CMED6401. Advanced clinical epidemiology and decision analysis (20 hours)

This is an intermediate/advanced-level module on methods of clinical epidemiology and decision science. It covers the techniques and growing range of applications of decision analysis and cost effectiveness analysis in health care technology assessment, health policy analysis, medical decision making, and health resource allocation. Students will learn to apply methods that are currently used at the frontiers of clinical epidemiology and decision science. While the primary emphasis is not mathematical theory, a certain amount of theoretical background is presented for each topic.

Pre-requisite: CMED6200 Epidemiology and critical appraisal; CMED6100 Introduction to biostatistics; CMED6400 Evidence-based practice: an introduction to clinical epidemiology and decision analysis

CTCE6030. Advanced epidemiological methods (20 hours)

Epidemiological survey design and methods, occupational epidemiology, environmental epidemiology, nutritional epidemiology, molecular and genetic epidemiology, infectious disease epidemiology, randomised controlled trials, systematic review and meta analysis.

Pre-requisite: CMED6200 Epidemiology and critical appraisal

CMED6210. Advanced infectious disease epidemiology (20 hours)

The course will build on CMED 6211 by extending student's understanding of transmission-dynamic models of infectious disease and also giving an in-depth description of the real world systems used to monitor incidence and prevalence of infectious disease.

Pre-requisite: Familiarity with Excel

CTCE6020. Advanced statistical methods I – experimental and quasi experimental designs and data analysis (20 hours)

This course will provide a practical overview of commonly used biostatistical methods, building on the basic methods introduced in CMED 6100. This course covers ANOVA, generalized linear models, factor analysis, time series analysis, instrumental variable analysis, statistical process control and aspects of trial design. The software package SPSS will be used. Tutorials will cover the practical application of methods on real datasets.

Pre-requisite: CMED6100 Introduction to biostatistics

CTCE6040. Advanced statistical methods II – analysis of complex data (20 hours)

This course will provide a practical overview of the application of commonly used biostatistical methods for building appropriate statistical models, building on the basic methods introduced in CMED 6100. This course covers analysis of longitudinal data, generalized estimating equations, multi-level modelling, structural equation modelling and several aspects of model building including confounder selection and mediation. The software package STATA will be used. Tutorials will cover the practical application of methods on real datasets.

Pre-requisite: CMED6100 Introduction to biostatistics

CMED6600. Biological basis of common health problems (20 hours)

Biology and pathophysiology of common diseases including cancer, diseases of the cardiovascular, respiratory, gastrointestinal, neurological, musculoskeletal and reproductive systems, infections and psychiatric diseases; for each selected disease, the following will be included: aetiology and risk factors, pathophysiology and clinical manifestations, pattern and distribution in populations.

Pre-requisite: Not available to students with medical or dental background

MICR6903. Common problems in infectious diseases (10 hours)

The practice of clinical infectious diseases depends on the support and proficiency in four major areas: (1) clinical knowledge and skill including routine laboratory investigations; (2) organ imaging; (3) diagnostic microbiological; and (4) histological examination of tissue biopsies. History, physical examination, and preliminary test would usually lead to the formulation of a clinical diagnosis of a possible infectious process. The clinical symptoms and signs will also provide clues in the localization of the focus of infection so that relevant clinical specimens are taken for microbiological examinations. This course will review the above issues. Students should visit <http://www.hku.hk/hkucoi/> for the latest update.

Pre-requisite: Registered medical doctors

CMED6909. Comparative health systems: Hong Kong and US (20 hours)

The major aim of this course is to provide a comparative view of aging, public health, and allopathic, traditional and complementary treatment in Hong Kong and The United States within the perspectives of nursing, medicine, and interdisciplinary collaboration. Classroom experiences are designed – both in the U.S. and in H.K. – to build knowledge of how the U.S. and H.K. compare in demographics and aging; health, disease, and illness; and health care treatment from prevention through rehabilitation and palliation. Collaboration between nurses and physicians is emphasized throughout the course, in interaction with the faculty team, in home seminars and clinical observations, and in the seminars and clinical observations in Hong Kong. Clinical experiences include observation in a collaborative practice in the U.S. and in a variety of settings across the SAR of Hong Kong. All of these experiences will be reflected against the student's broader knowledge of the U.S. health care system and care delivery settings but do not require specific clinical background to achieve the objective of the course.

CMED6214. Dental public health (20 hours)

This course will cover the epidemiology of common dental diseases, application of the principles of public health in dentistry, oral health promotion, prevention of dental disease and oral health care delivery systems. Examples and issues with special interest to Hong Kong will be used in the teaching.

CMED6104. Emerging infectious diseases: ecology, evolution and multi-host transmission dynamics (20 hours)

Most human communicable diseases originally arose from inter-species transmission from animals. There is an emerging consensus that a "One Health" approach that unifies animal and human health is needed to address future emerging infectious disease threats. The factors that contribute to emergence of such disease and of zoonotic disease include environmental, ecological, societal, microbial and host factors. This module is designed for postgraduate students of the Faculty of Medicine who require a good understanding of the factors that contribute to infectious disease emergence with a view to prevention and control. The learning will be facilitated by student reading assignments followed by presentation and discussion with others in the class.

CMED6225. Environmental and Occupational Epidemiology (20 hours)

(1) Introduction: historical development and landmark studies of EOE; (2) Study designs commonly used in EOE (ecological studies, cross-sectional surveys, population-based and nested case-control studies, and historical and prospective cohort studies); (3) Data sources and data collection (surveillance programs, registries, data linkage, follow-up, interviews and questionnaires); (4) Assessment and adjustment of biases or confounding factors; (5) Exposure assessment, surrogate measures and exposure indices; (6) Analytical techniques (stratified analysis, multivariate models, exposure-response, trend analysis), risk measures (RR, OR, SMR, PMR, PCMR, MOR), and statistical power analysis; (7) Critical appraisals of published studies of environmental/occupational hazards; (8) The course consists of lectures supplemented with directed in-class discussions of selected examples of EOE investigations.

Pre-requisite: CMED6100 Introduction to biostatistics

CMED6913. Environmental health assessments (20 hours)

This course aims to provide a broad overview on methods of assessment on environmental health impacts. It covers measurement and analysis of different types of exposure commonly found in daily activities. It also covers on the effect modification of socio-demographic, lifestyle and other environment factors. Student will obtain hands-on experience in analyzing environment and health data using a statistical software.

Pre-requisite: CMED6912 Environmental health hazards and interventions; CMED6200 Epidemiology and critical appraisal; CMED6201 Principles of public health; CMED6100 Introduction to biostatistics

CMED6912. Environmental health hazards and interventions (20 hours)

This module broadly covers health risks due to various environmental hazards including indoor and outdoor air pollution, water and food contaminants, noise, radiation, environmental disasters, climate changes, urbanization and toxic organic chemicals. It also covers issues on livability, environmental health policy, environmental justice, risk information and communication. The theory of epidemiological and toxicological effects and implication in public health intervention and policy formulation will be introduced. Some real examples are used and to be guided by guest speakers. In each teaching session, students are provided with a set of reading materials and with questions for small group discussion. Assessment will be based on in-course performance and individual project.

CMED6200. Epidemiology and critical appraisal (20 hours)

This introductory course covers basic concepts of epidemiology that are of practical importance for the critical appraisal of scientific epidemiological evidence. It serves as a prerequisite for several other courses.

The topics include (1) Epidemiology: distribution and determinants of disease, reliability, validity, confounding, interaction, causality, vital statistics, source of information; (2) Study designs: cross-sectional studies, ecological studies, cohort studies, case-control studies, intervention studies, meta-analysis; (3) Critical appraisal: apply epidemiological concepts to understand and appraise journal papers.

This course is lecture-based and supplemented with optional tutorials to support learning. It emphasises critical thinking and the application of epidemiological concepts.

CMED6205. Epidemiology of important health conditions (20 hours)

Global burden of diseases, epidemiology of cancer, cardiovascular, respiratory, infectious, mental and musculoskeletal diseases, lifestyle factors (smoking, alcohol, diet, exercise, environment, occupation) and health.

CMED6400. Evidence-based practice: an introduction to clinical epidemiology and decision analysis (20 hours)

Information Mastery: A Practical Approach to Evidence-Based Medicine for Clinicians and Managers. Is it True? Evaluating Research about Therapy. Clinical Jazz: Harmonizing Clinical Experience and EBM. Don't Panic: Basic Statistics You Can Understand. Using "Medical Poetry": Is it Possible to both Improve Health Care Quality and Reduce Costs? Evaluating "Foraging Tools" for Keeping Up with New, Relevant, and Valid Information. Is it True? Evaluating Research about Diagnostic Tests. The Case of Baby Jeff. Taking the Right STEPS to Avoid Fallacies of Decision-Making. Is it True? Evaluating Research about Prognosis. Evaluating Conventional Information Sources (Consultants, CME, and Reviews). Is it True? Evaluating Medical Reviews. Is it True? Evaluating Practice Guidelines. The Information Pyramid: Obtaining Useful Information from Secondary Sources. Is the Best Evidence Getting Into Practice: The Case of Type 2 Diabetes. Hints and Tips for Practicing and Teaching EBM via IM. Wrap Up/Clinical Jazz. Evaluation of personal and program performance.
Pre-requisite: CMED6200 Epidemiology and critical appraisal

CMED6910. Financial management in health care organizations (20 hours)

This course is to introduce financial management concepts and tools to non-accountants as related to management of health care organizations. The course has 2 objectives: 1) To give students a basic understanding of accounting and financial concepts in order to understand issues encountered by managers, 2) To give students a real life perspective on how to apply these concepts and tools. The course aims to introduce international concepts while also being sensitive to HK and PRC's model and methods of health care delivery.

The course will be taught via the case-based approach, which requires student's commitment to prepare ahead of each lecture, and to participate in the discussion during the lecture.

A second course might easily follow with would go into greater details on some of the more advance challenges and opportunities in health care management.

CMED6204. Health and society (20 hours)

This module provides an overview of the field of the social determinants of health, and will focus on the theories, measurement tools, and analytical methods for investigating the causal influence of social contexts and social variables on population health. By the end of the course, student will be familiar with basic concepts in the field, including the prevention paradox and the two strategies of prevention; the measurement of socio-economic status (SES) and the mechanisms of its association with health outcomes; absolute vs. relative concepts of poverty; compositional vs. contextual influences of neighborhood environments on health; the measurement of social networks, social support, and social capital, and how each concept is related to health; the demands/control model of job stress; and policies to tackle social inequalities in health.

CMED6903. Health care financing (20 hours)

Funding is a major tool for shaping the delivery of health care, for both good and ill. Consequently, health care financing, the mechanisms by which money is mobilized to fund health care, and how it is allocated, is one of the most important issues to tackle when reforming the health system. This course aims to introduce major financing options and examine its potential impacts. International experiences from OECD and Asia-Pacific countries, drawing on extensive empirical evidence from ECuity and EQUITAP, will be used to illustrate the performance assessment of the health systems under discussion. This course will also familiarize the students with the use of OECD Health Data.

Pre-requisite: CMED6900 Health care systems and policy

CMED6900. Health care systems and policy (20 hours)

Health system design and the ethical basis of policy formulation; health politics; enduring problems across systems; Hong Kong SAR; the U.S. and China, Policy analysis; quality and safety issues in health care.

CMED6219. Health communication (20 hours)

Covers the development of public communication campaigns in the field of health promotion: assessing what the mass media can accomplish to promote health; designing mass media messages that are consonant with principles of behavioral science and the public health model; and strategic planning for integrated mass media campaigns.

CMED6902. Health economics for public health (20 hours)

This module introduces basic health economic concepts to health care professionals. Topics include scarcity, supply and demand, rationing mechanisms, economic evaluation and evidence-based decision-making. The module emphasizes the uses and limitations of the economic approach in health care, with applications in medicine, nursing, other health-related professions and health promotion.

CMED6206. Health promotion and health education (20 hours)

This course will be organized into two sections. The first section will provide students with a broad definition and understanding of health and health promotion at the individual, small group, community, and societal levels. Students will examine different theoretical models for health promotion in terms of their different aims, methods, and means of evaluation. A major emphasis is to critically examine the influences of socioeconomic environment on health and health promotion. The second section will focus on identifying and analyzing opportunities for and barriers to promoting health and wellness among individuals and populations. Students will assess and evaluate a variety of approaches and actions that form the basis of a strategic operation for promoting individual and populations' health.

CMED6901. Health services management (20 hours)

This module is an introductory course to organizational and management theory as applied in practice in Hong Kong. Students will be introduced to the concepts of organization design and behaviour,

management theory, managing people and organising work, leadership, managing change and change theory, using evidence to guide management decision making and methods for the assessment of organizational effectiveness. A problem based approach will be adopted for most of the sessions.

CMED6215. Historical and contemporary perspectives of infectious diseases (20 hours)

History and evolution of infectious diseases; Causal agents in infectious diseases; Quarantine and other public health measures to protect populations; Risk communication and risk perception; Politics, health and social attitudes; Significance of infectious disease in an Asian context.

CMED6218. Human health: futures in a globalized world (20 hours)

The “big picture” module has as its focus the implications for the next 25 years. It will analyse globalization, economics, resource depletion, food and agricultural issues, population change, and societal reactions, and climatological impacts from current patterns of human population behaviour within an ecological systems-based perspective to infer likely futures and their health implications. In particular, we will examine current trends and models to attempt to estimate emerging public health issues and hazards linked to these.

CMED6911. Human resources (HR) in health care organisations (20 hours)

This module provides an overview of HR issues in health care. Through individual case studies, group assignments and presentations, by the end of the course, students should have developed a basic understanding of HR principles, how they are applied in health care organizations and the consequent impact on patient care. Topics covered will include, among others, manpower planning and recruitment, staff motivation and performance, leadership and teamwork.

MICR6904. Infections in immunocompromised hosts (10 hours)

Infectious disease is as old as the history of mankind. Yet the systematic study of infectious diseases is relatively recent. The importance of the classical contagious and communicable diseases dwindled in the developed world, mainly because of improvements in public health measures. The spectrum of infection in many parts of the world has now been replaced by a predominance of hospital-acquired infections and infection in immunocompromised hosts, a “side effect” of our advances in the management of various diseases like malignancies and autoimmune diseases. In this course, we focus on the approach to infections in patients suffering from an impaired immune system, either as a result of the underlying illness or due to the effects of various therapeutic modalities. Antimicrobial therapy alone often does not completely control the infection or its damages, other means to modulate the immune system are sometimes necessary in order to effect a cure. This latter aspect is also looked into in this course. Students should visit <http://www.hku.hk/hkucoi/> for the latest update.

Pre-requisite: Registered medical doctors

MICR6905. Infectious disease emergencies (10 hours)

Advances in medicine have brought with it an increased expectation from patients. Missing an infectious disease emergency is almost considered a sin because of its generally treatable nature and complete recovery is expected if the correct diagnosis and treatment is given at the early stage. One of the important advances in medical service is the implantation of indwelling medical devices for

supplementing functions of vital organs or fulfilling the locomotive functions. However, such therapeutic measures are associated with a significant amount of complication from infection which by itself is life-threatening and at the very least, debilitating. Infectious disease emergencies and indwelling medical device-related infections could present in almost any patient group within any medical specialties. It is therefore timely for the course to review these two topics. Students should visit <http://www.hku.hk/hkucoi/> for the latest update.

Pre-requisite: Registered medical doctors

MICR6901. Infectious disease rounds (10 hours)

The gold standard for the testing of medical knowledge is its predictability of patients' outcome at the bedside. Despite the importance of large studies such as randomized controlled trials in the literature, case reports have always played a unique role in education and the initiation of break-through research. This course strives to use an interactive approach in the learning process by case presentation before a literature review. These cases include genitourinary infections, common problems with atypical presentation and rare problems with an unbelievably simple solution. Students should visit <http://www.hku.hk/hkucoi/> for the latest update.

Pre-requisite: Registered medical doctors

CMED6211. Infectious disease epidemiology (20 hours)

This module clearly explains fundamental concepts of infectious disease epidemiology and sets out the analytical methods employed in public health practice. The contents of the lecture series covers the concept/definition of various epidemiological measurements, assessment of the spread and control of infectious diseases using a variety of statistical methods, statistical estimation of key epidemiological indices, and introduces mathematical modeling of infectious diseases. This vast and important area of epidemiology is described in line with recent and ongoing health concerns such as HIV/AIDS, tuberculosis, malaria, dengue, SARS and influenza.

Pre-requisite: CTCE6020 Advanced statistical methods I – experimental and quasi experimental designs and data analysis; CMED6100 Introduction to biostatistics

CMED6220. Informatics for health management (20 hours)

The role of ICT (Information and Communication Technologies) in the future of healthcare provision is increasingly critical. This module introduces how new developments in information management and technology offer both exciting opportunities and challenges. In a series of seminars, guests with expertise in health informatics will share their experience on how and why timely and accurate information in a healthcare environment is to be provided. Through a class project and presentation, students will identify key issues relating to quality data collection in different healthcare environments and how to harness ICT to develop quality healthcare management system.

Pre-requisite: Familiarity with or interest in computer systems and networking

CMED6100. Introduction to biostatistics (20 hours)

Probability; binomial distribution; normal distribution; measure of location and dispersion of data; making inferences from a sample to a population; hypothesis testing for means; non-parametric methods; correlation; regression; errors in measurement; association; logistic regression; lifetable and survival analysis.

CMED6914. Introduction to occupational health (20 hours)

This course provides an introduction to basic concepts in occupational health, and will allow students to understand the exposure-disease paradigm in work related illnesses and injuries. The course will also describe the common work related hazards in the work environment that workers are working in, as well as opportunities of control and prevention of occupational illnesses. Administrative and legal issues related to occupational health will also be introduced.

Pre-requisite: CMED6200 Epidemiology and critical appraisal

CMED6216. Introductory public health genomics (20 hours)

Genetics is the study of variation in the genome, its inheritance, and its contribution to health and disease. Public health genetics focuses on the public health implications of advances in genetic and molecular science for preventing disease and for protecting and improving the health of the population. The curriculum will be centered on an understanding how genetic and environmental factors work together in determining disease susceptibility in individuals and populations. It will also address the implications of these developments for health services, and the ethical, legal, cultural, economic and policy issues involved in applying genomics to public health.

CMED6223. Global Health: Challenges, Policies and Institutions (20 hours)

This course aims to introduce a conceptual and practical understanding of the various links between diverse forms of global change and human health worldwide. Students will explore global health from the perspective of understanding broad determinants of health across developing and developed worlds. The course will consist of a series of lectures, student presentations, and in-class discussions covering major policies and programmes in global health. Students will critically assess and evaluate the respective roles of key players in international public health – national governments, bilateral and multi-lateral donors, foundations, UN agencies and international non-governmental organizations – through empirical case studies on selected issues. The challenges of global health governance and the emergence of new institutions and frameworks for addressing global public goods will be discussed.

MICR6902. Local emerging infectious diseases (10 hours)

Infectious diseases result when the normal human physiology is significantly affected by the virulence of the microbe which has overcome or over-excited the defence mechanism of the host. Epidemics are triggered when the delicate balance between man, microbe and environment is altered. In the recent years, unexpected outbreaks of SARS, Avian influenza, new variant Creutzfeldt-Jakob disease have shocked the world. This course is designed to acquaint the candidates of recently emerging infections in Hong Kong and our neighbourhood countries. Students should visit <http://www.hku.hk/hkucoi/> for the latest update.

Pre-requisite: Registered medical doctors

CMED6203. Measurement in health (20 hours)

Measuring health status is central to health services research and clinical trials; this course examines the basic science of health measurement. The measures include evaluative instruments, screening tools, clinician rating scales and self-report health indicators. The course does not cover laboratory (biochemical or physiological) methods, nor measures for molecular epidemiology; nor does it cover measures of environmental factors.

The course will review existing measurement methods and discuss the theoretical aspects of health measurement. Students will learn about empirical validity analyses of an existing instrument (but will not actually run such analyses) and the course will review the process of developing an instrument where a suitable one does not already exist.

CMED6226. Population Health Informatics/eHealth (20 hours)

Modern information and communication technologies are providing unprecedented ways that help individual patients and health consumers to improve their health and wellness, health professionals to make timely and evidence based decisions, and health policy makers to understand the population health trends and needs. Physicians need to grasp the power of population health informatics, and how this can positively influence health practices and health outcome. Furthermore, physicians need to know the opportunities and challenges that PHI brings, and how they can effectively advocate for their patients and the health system through the use and application of the principles and practice of PHI/eHealth. This module is intended to introduce the subject of PHI and eHealth to medical students to start their journey in this domain, providing them with solid grounding and understanding of this field of study.

CMED6224. Practicum (42 hours)

The practicum aims to prepare students with a broad mastery of subjects and methods necessary for the field of public health practice, bridging theory and practice. The recommended standard is a minimum of 42 hours. Students will gain relevant practical public health experience by completing an 8-12 week community based work placement in a local Department of Health clinic or unit, a local or regional hospital, Food and Health Bureau, or non-governmental agency, to apply what has been learned in a public health setting. The placement could involve any public health activities or functions: such as but not limited to surveillance, policy development, programme evaluation, or communications. Most full-time students will complete the practicum in the summer semester. Alternatively the practicum may also be completed over a year with a defined weekly commitment to the sponsoring agency. With an agreed plan it would be possible for part time working students to complete the practicum within their current place of employment. The plan, structure and deliverables of the practicum will be agreed between the student, the academic advisor and field supervisor.

Pre-requisite: CMED6200 Epidemiology and critical appraisal; CMED6100 Introduction to biostatistics; CMED6201 Principles of public health; Two other core modules in the concentration

CMED6201. Principles of public health (20 hours)

History, concepts and concerns of public health, determinants of health, public health policies, health care systems, measurement of health and needs, public health advocacy, control of disease and health problems, health promotion. The sessions are based on the study of either historical or contemporary global health problems using a wide range of different types and sources of information.

CMED6704. Psychosocial issues in health and illness (20 hours)

This course provides a comprehensive introduction to some core topics in understanding of the roles of psychological and social processes in relation to health and illness. This course will illustrate the interactions between cognition, behaviour, social environment, health and illness.

CMED6221. Public health law and ethics (20 hours)

This course will lead students to understand and discuss the potential tension between respect for individual rights and morals, and the pursuit to protect the health of the public, or the so-called “private interest versus public good” debate. The course first introduces the conceptual foundations of health law, ethics and human rights, and issues relating to these fields. Students will then explore how government may, on behalf of the public’s health, conflict with the rights of individuals and businesses. These conflicts will be examined through critical current controversies in public health law and practices, e.g. surveillance vs. privacy rights, health promotion vs. freedom of expression and regulation of business. The course concludes by inviting students to critically review the roles of the government, communities, and individuals in some emerging issues in public health, e.g. infectious diseases, bioterrorism, and public health genetics.

CMED6105. Public health microbiology (20 hours)

Infectious diseases are of major public health concern. This module is designed for postgraduate students in the Faculty of Medicine who are interested in studying microbiology from a public health point of view. This module covers basic microbiology, common infectious diseases in community and healthcare settings, and provides the biological basis for the methods used for prevention and control of communicable diseases. This module has a strong emphasis on the practical aspects of infectious disease surveillance and is important to those who are working or pursue their career in the fields of epidemiological investigations, public health surveillance, and other public health responses that are related to microbial infections.

CMED6222. Public health nutrition (20 hours)

This course will provide students an overview of the literature addressing local and global issues in nutrition. It leads students to think beyond nutrition as an individual issue but as a public health concern. Factors that will influence nutrition status of a population and techniques for assessing community nutrition needs will be explored. Various nutrition programmes will be introduced and students will have to identify their strengths and weaknesses in different contexts. It aims to equip students with a scholarly capacity for critically analyzing nutrition problems from a multi-disciplinary perspective and formulating effective public health nutrition project.

CMED6908. Quality health care (20 hours)

Methods and strategies for quality measurement in quality improvement and accountability. Measurement of clinical quality using process or outcome data. Measurement of patient expectations/experience with the health care system. Nature and causes of variation in quality, variation related to overuse, underuse and misuse of services. Strategies for changing physician and organizational practice. Traditional quality improvement techniques, regulation, credentialing education, CQI, organizational learning, systems design, managed care, practice guidelines, information systems, performance reports, mediation.

CMED6217. Qualitative health research (20 hours)

This course will provide a comprehensive introduction to qualitative health research, with the aim to helping students to acquire a sound knowledge base of the qualitative research process and to develop an appreciation of the importance of qualitative research in health science. During the course, various

qualitative methods will be introduced and discussed. Students will have the opportunity to engage in activities involved in data collection, analysis, as well as appraising qualitative research evidence.
Pre-requisite: CMED6300 Research methods in health care

CMED6300. Research methods in health care (20 hours)

Principal types of research methods used in evaluation and audit; framing objectives, quantitative and qualitative approaches to evaluation; survey methods; designing questionnaires; sampling, validity, and reliability; measuring outcomes; using examples from health care and health programme evaluation.

CMED6208. Risk: perception, decisions and communication (20 hours)

Risk is inevitable in life, yet the ability to accurately judge risk and the decisions made thereafter are usually quite skewed by psychological, social and contextual factors, so much so that serious errors can occur in decision making. In health care, the ability to accurately assess risk and the psychological strategies that people adopt to avoid the threat that risk presents means that health hazards are often completely misrepresented both to ones self and to others. Health professionals also have the task of communicating health risk information to the community as well as individuals. How can information be presented in such a way as to effectively communicate the true nature of a hazard without distorting or falling into the trap of being ignored? This module looks in detail at the area of risk perceptions, the distortions of decisions by psychological and other factors and the communication of risk, all core skills for public health professionals.

CMED6103. Statistical inference using R (20 hours)

This course will provide a basic, yet thorough introduction to the probability theory and mathematical statistics that underlie many of the commonly used techniques in public health research. The frequentist and Bayesian approaches to parameter estimation, interval estimation and hypothesis testing will be compared and contrasted. The open-source software package R will be introduced, and used to perform analyses. R also includes a powerful graphics engine which will be used to produce publication quality figures. All theoretical material will be motivated with problems from epidemiology and public health.

Pre-requisite: CMED6100 Introduction to biostatistics; CTCE6020 Advanced statistical methods I – experimental and quasi experimental designs and data analysis

CMED6906. Strategic financial management of health organizations (20 hours)

This course builds on CMED 6910 Financial management in health care organizations, and introduces the use of financial information to inform strategic decision making, and covers topics such as financing of healthcare services, role of internal/ external audit, role of director of finance, corporate governance, strategic and business planning. This course is designed for students with prior working experience in healthcare industry and requires in-class discussions.

Pre-requisite: CMED 6910 Financial management in health care organizations

CMED6907. The practice of health administration (20 hours)

The module aims to stimulate concerns about important problems and issues facing health administration at both global and local levels, and to provide a comprehensive look at public health management and administration. Students will explore the characteristics, contemporary issues and

controversies of health administration. Various theories and concepts in administrative science regarding strategic planning, governance and accountability, quality and risk management, human resources management, information management and leadership will be appraised and applied in the practice of administrative medicine. Students will also compare and contrast and evaluate cases in different health systems (e.g. Hong Kong, US, UK, China), as well as formulate solutions to problems in healthcare administration.

Pre-requisite: CMED 6901 Health services management

CMED6202. The practice of public health (20 hours)

The content of this module aims to promote the application of public health sciences to a wide range of common problems and issues. Students will be expected to integrate the diverse knowledge and skill requirements of a competent public health practitioner in their approach to problem solving. Each session will include one or more problems which can be used to illustrate the wide range of disciplines applicable (from an evidence based perspective) to the practice of public health. The module will also focus on the presentation of solutions to specific problems and support the preparation of candidates for international professional examinations in public health medicine.

MICR6906. Tropical diseases in the developed world and public health (10 hours)

The term “tropical diseases” appears to be remote to most clinicians practising in developed countries, especially among the younger generation of doctors who seldom if ever see patients with tropical infections. However, as will be seen in the course, even people from the developed world can contract these exotic infections owing to the ease and increase of international travel for occupational, recreational, and missionary purposes. Even more important is that missing these cases can have disastrous outcomes because a number of these infections may have a rapidly progressive clinical course and unless promptly diagnosed and treated, they may result in irreversible organ damage and even death. The situations in which they should be suspected and the methods for diagnosis are covered. Students should visit <http://www.hku.hk/hkucoi/> for the latest update.

Pre-requisite: Registered medical doctors