

MATH 7080 Probability and Stochastic Processes (3,3,0)

Prerequisite: Postgraduate standing or consent of instructor
This course provides the elements of the modern theory of stochastic processes. Stochastic processes and probability theory in its modern form have found wide application in the natural sciences, engineering and the finance sector. Emphasis is placed on probabilistic thinking, and applications will demonstrate the introduced concepts throughout.

MATH 7090 Advanced Numerical Methods and Algorithms (3,3,0)

Prerequisite: Postgraduate standing or consent of instructor
This course will mainly study several modern numerical methods developed in the last one or two decades. These methods will be applied to simple model problems as well as some problems with strong physical applications, such as nonlinear conservation laws and the Navier-Stokes equations. This course will provide students with a sound understanding of the highly accurate and efficient numerical schemes and a useful training on how to implement these methods.

MATH 7110 Numerical Analysis of Delay Differential and Volterra Functional Equations (3,3,0)

Prerequisite: Postgraduate standing or consent of instructor
Collocation and Galerkin methods in piecewise polynomial spaces play a fundamental role in modern numerical analysis. This course introduces the students to the application of these methods to standard integral (and integro-differential) equations of Volterra and Fredholm type, and to analogous problems with singular kernels (including boundary integral equations). While the focus of the course is on the analysis of the convergence and stability properties of these projection methods, various aspects of the practical implementation of the methods are also studied in detail.

MATH 7120 Special Topics in Mathematics (3,3,0)

Prerequisite: Postgraduate standing or consent of instructor
This course is devoted to the study of up-to-date and important topics in different areas of applied mathematics. Emphasis is laid on the continuation and consolidation of those fundamental applied courses offered in the programme. It is specifically designed with the flexibility to take advantage of visiting scholars from other institutions to introduce topics that are under current research.

MATH 7130 Advanced Topics in Mathematics (3,3,0)

This course is devoted to the study of up-to-date and important topics in different areas of applied mathematics. Emphasis is laid on the continuation and consolidation of those fundamental applied courses offered in the programme. It is specifically designed with the flexibility to take advantage of visiting scholars from other institutions to introduce topics that are under current research.

MATH 7620 Business Intelligence and Decision Support (2,2,0)

The aims of this course are to study the concepts and tools of business intelligence, to explore the process, contents and context of managerial decision making and to look at how business intelligence can enhance a company's competitive advantage and improve its top management decision-support effectiveness.

MCM 7010 Clinical Applications of the Different Theories of Chinese Medicine (3,3,0) (P)

The course will allow students to study and master the thoughts and experiences of distinguished physicians in different dynasties with a view to improving students' knowledge structure and enhancing their ability in comprehensive application of fundamental Chinese medicine knowledge. Students will also be able to cure diseases by various methods and to handle practical cases by applying Chinese medicine according to different

situations. Students may also learn from the experience of the famous physicians in order to save time from exploring in clinical practice in order to achieve twice the result with making only half the effort.

MCM 7030 Thinking Approach and Methodology of Chinese Medicine (3,3,0) (P)

This course will allow students to learn the thinking approach and methodology of Chinese medicine in a systematical way, and hence enhances their ability in handling practical cases by applying thinking approach and methodology of Chinese medicine.

MCM 7040 Research Methodology and Practices in Chinese Medicine (3,3,0) (P)

This course will allow students to learn master the basic programmes and methods of scientific research in Chinese medicine in order to lay a foundation for scientific research work in Chinese medicine.

MCM 7060 Formulation Theories and Practices of Chinese Medicinal Formulae (3,3,0) (P)

This course will allow students to learn through induction and analysis of the pattern of the various formulation theories, and incorporated with cases study and analysis in clinical practice, students will be able to have a thorough mastery of the formulation theories. Their ability to analyse clinical symptoms, establish judgment according to the symptoms, and compose formulation according to the judgment will be strengthened.

MCM 7070 Studies and Applications of the Science of Seasonal Febrile Diseases (3,3,0) (P)

This course is to strengthen students' knowledge of the theories of epidemic febrile diseases and mastery of the basic pattern of treating diseases by the theory. Students will be able to skilfully apply "treatment methods and formulae" of the theory in treating various kinds of (acute) infectious diseases of epidemic febrile diseases.

MCM 7080 Examination and Diagnosis of Musculoskeletal Disorders (3,3,0) (P)

On completion of this course, student are expected to be able to demonstrate (1) skills in carrying out clinical examination for a preliminary diagnosis of common musculoskeletal disorders; (2) the ability to examine x-ray films and identify common abnormalities; and (3) the ability to interpret ultrasound, arthrography, computed tomography (CT) and magnetic resonance imaging (MRI) reports.

MCM 7100 Theoretical and Clinical Studies on the Miscellaneous Diseases of Internal Medicine (4,3,0) (P)

The course provides students with the knowledge of the characteristics and advantages of treating miscellaneous diseases of internal medicine by Chinese medicine. Students will be able to master the current research practices of Chinese medicine theories as well as the pattern of differentiation of syndromes of rare and common diseases of internal medicine. Their standard of diagnosis and treatment in clinical practice will be enhanced in order to meet the practical needs.

MCM 7110 Studies and Applications of the Theory of Zhong Jing (4,3,0) (P)

This course provides students with a synthetical study of the thoughts of Zhong Jing including his theories on differentiation of syndromes in diagnosis and application of Chinese medicinal formulae. Students will be able to have a thorough understanding in the differentiation of syndromes in diagnosis established by Zhang Zhongjing and participate in the discussion of the difficulties, queries and controversial points. The course focuses on the theories and applications of the theory. Emphasis will be put on the theories and applications of medicinal formulae with a view to developing the theory of Zhong Jing.