REGULATIONS FOR THE DEGREE OF MASTER OF FINANCE (MFin)

These regulations apply to candidates admitted to the Master of Finance in the academic year 2018-19 and thereafter.

(See also General Regulations and Regulations for Taught Postgraduate Curricula)

Admission requirements

MF1   To be eligible for admission to the courses leading to the degree of Master of Finance, candidates shall

(a)   comply with the General Regulations;

(b)   comply with the Regulations for Taught Postgraduate Curricula;

(c)   hold a degree of this University or another qualification of equivalent standard from this University or from another University or comparable institution accepted for this purpose; and

(d)   satisfy the examiners in a qualifying examination, if required.

MF1A   Candidates who do not satisfy the requirements of MF 1(c) above may in exceptional circumstances be admitted if they hold a professional qualification and membership of a professional body accepted for this purpose.

Qualifying examination

MF2

(a)   A qualifying examination may be set to test the formal academic ability of the candidates or their 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)   Candidates who are required to satisfy the examiners in a qualifying examination shall not be permitted to register until they have satisfied the examiners in the examination.

Advanced standing

MF3   Advanced standing of up to two (for single concentration) or three (for double concentration) required courses, except the capstone course, may be granted if

(a)   the course is completed at a graduate, postgraduate or master level from a recognized curriculum elsewhere within the last four years before admission to the Master of Finance curriculum and achieved a good grade in the course; or

(b)   the candidate possesses a relevant professional qualification which was obtained before admission to the curriculum.

Course exemption

MF4   Course exemption of up to four required courses, except the capstone course, may be granted (normally by examination) if candidates

(a) can produce evidence, such as transcript and course syllabus, that a course is equivalent in content to another course taken elsewhere for which a satisfactory grade has been obtained; or

(b) are holding relevant professional qualifications which were obtained before admission to the curriculum.

No credits will be given for the exempted course and candidates shall be required to take an approved alternative course of the same credit value.

Award of degree

MF5 To be eligible for the degree of Master of Finance, candidates shall
(a) comply with the General Regulations;
(b) comply with the Regulations for Taught Postgraduate Curricula; and
(c) complete the curriculum as stipulated in the syllabuses prescribed and satisfy the examiners in accordance with the regulations set out below.

Period of study

MF6 The curriculum shall normally extend over one academic year of full-time study. Candidates shall not be permitted to extend their studies beyond the maximum period of registration of two academic years.

Completion of the curriculum

MF7 To complete the curriculum, candidates shall
(a) satisfy the requirements prescribed in TPG 6 of the Regulations for Taught Postgraduate Curricula;
(b) follow instruction on the syllabuses prescribed, participate in activities which form part of the curriculum, and complete all written and practical work as may be required;
(c) satisfy the examiners in the written presentations and practical work prescribed for each year of the course; and
(d) have achieved a cumulative GPA of 2.0 or above.

Assessment

MF8 Candidates shall satisfy the examiners in all the prescribed courses as specified in the syllabuses. Examinations shall normally be held at the end of each course, unless otherwise specified. Only passed courses will earn credits.

MF9 Failure to take the examination as scheduled will automatically result in course failure under normal circumstances. Candidates who are unable, because of illness or other acceptable reason, to be present at any examinations of a course, may apply for permission to present themselves for a supplementary examination at some other time. Failure to sit for the supplementary examination as arranged shall automatically result in course failure.

MF10 Candidates who have failed a course shall be required to sit for re-examination or retake the course.

MF11   Candidates shall not be permitted to repeat a course for which they have received a passing grade for the purpose of upgrading.

MF12   Candidates who have failed a total of more than two examinations/assessments or re-examinations/re-assessments during the entire period of study of the curriculum shall be recommended for discontinuation under the provisions of General Regulation G 11.

MF13   There shall be no appeal against the results of examinations and all other forms of assessment.

Grading system

MF14   Courses shall be graded according to the following grading system:

Grade	Standard	Grade Point
A+		4.3
A	Excellent	4.0
A-		3.7
B+		3.3
B	Good	3.0
B-		2.7
C+		2.3
C	Satisfactory	2.0
C-		1.7
D+	Pass	1.3
D		1.0
F	Fail	0

Assessment Results

MF15   On successful completion of the curriculum, candidates who have shown exceptional merit may be awarded a mark of distinction, and this mark shall be recorded in the candidates' degree diploma.

SYLLABUSES FOR THE DEGREE OF
MASTER OF FINANCE
(MFin)

These syllabuses apply to candidates admitted to the Master of Finance in the academic year 2019-20 and thereafter.

CURRICULUM STRUCTURE

Candidates may concentrate in the area of Corporate Finance (CorFin), Risk Management (RiskMgt), Financial Engineering (FinEng) or Financial Technology (FinTech).   Unless advanced standing is granted, candidates normally need to take 10 core courses and 2 elective courses, including the completion of a capstone course.

Candidates may also choose to take a double major in any two out of the four areas: CorFin, RiskMgt, FinEng and FinTech.   Those who take a double major in CorFin and RiskMgt, CorFin and FinEng, or RiskMgt and FinEng are required to take 12 core courses in both areas plus 2 electives.   Candidates with a double major in FinTech and CorFin, FinTech and RiskMgt, or FinTech and FinEng are not required to take MFIN7007 Economics for financial analysis and MFIN6002 Spreadsheet modelling in finance, and the numbers of required core courses and electives are 14 and 2 respectively.

I. Fundamental Core Courses:

Corporate Finance, Risk Management and Financial Engineering streams

MFIN7007   Economics for financial analysis* (6 credits)

This module provides the foundation in economics that is essential in financial analysis.   The major topics include microeconomics, macroeconomics and international economics, consumer choice, costs and the supply of goods and services, competitive and market structure, the role of government in the economy, national income accounting, business cycles, aggregate demand/supply, fiscal and monetary policies, the level and structure of interest rates, the role of expectations in economies analysis, economic analysis, economic growth, comparative advantages and international trade, international finance and foreign exchange markets.   Appropriate references will be made to current issues in Hong Kong, the region and the international economy.

MFIN7001   Financial statement analysis and business ethical standards (6 credits)

This course provides an introduction to the financial statements and financial reporting process from a user's perspective.   The course focuses on fundamental accounting concepts and principles as well as techniques related to financial statements analysis.   Ethical and professional standards that persons engaged in the professional practice of financial analysis and investment management should know, understand, and apply are also covered.

MFIN7005   Corporate finance and asset valuation (6 credits)

This course aims to provide candidates with understanding of (i) fundamental approaches for equity valuation, (ii) fundamental approaches for valuation of fixed income securities, (iii) the knowledge about corporate finance and behavioral approaches in asset valuation, and (iv) the recent development of valuation techniques.   On the theoretical side, this course introduces fundamental knowledge for asset valuation, investment strategies, and portfolio management.   On the practical side, this course covers recent topics that are related to the asset valuation techniques used in both Hong Kong and United States.   Some projects about asset valuation are specially designed to let candidates apply the theoretical knowledge into practice.   This course is highly recommended for candidates who intend to pursue a career or further studies in equity valuation and securities analysis.   Certainly, the knowledge from this course will also be very useful when you make your own personal investment decision.

MFIN7002   Investment analysis and portfolio management (6 credits)

This course aims to provide candidates with understanding of (i) fundamental knowledge for asset valuation, (ii) portfolio management techniques for risk management and speculation. (iii) investment strategies adopted in financial market, and (iv) the recent development of portfolio management tools and investment strategies. On the theoretical side, this course introduces fundamental knowledge for asset pricing, investment strategies, and portfolio management. On the practical side, this course covers recent topics that are related to the investment strategies and portfolio management in both Hong Kong and United States. Some projects about portfolio management and asset valuation are specially designed to let candidates apply the theoretical knowledge into practice. This course is highly recommended for candidates who intend to pursue a career or further studies in investment strategies and portfolio management. Of course, the knowledge will also be very useful when candidates make their own personal investment decision.

Financial Technology stream

MFIN7005   Corporate finance and asset valuation (6 credits)

This course aims to provide candidates with understanding of (i) fundamental approaches for equity valuation, (ii) fundamental approaches for valuation of fixed income securities, (iii) the knowledge about corporate finance and behavioral approaches in asset valuation, and (iv) the recent development of valuation techniques. On the theoretical side, this course introduces fundamental knowledge for asset valuation, investment strategies, and portfolio management. On the practical side, this course covers recent topics that are related to the asset valuation techniques used in both Hong Kong and United States. Some projects about asset valuation are specially designed to let candidates apply the theoretical knowledge into practice. This course is highly recommended for candidates who intend to pursue a career or further studies in equity valuation and securities analysis. Certainly, the knowledge from this course will also be very useful when you make your own personal investment decision.

MFIN7002   Investment analysis and portfolio management (6 credits)

This course aims to provide candidates with understanding of (i) fundamental knowledge for asset valuation, (ii) portfolio management techniques for risk management and speculation. (iii) investment strategies adopted in financial market, and (iv) the recent development of portfolio management tools and investment strategies. On the theoretical side, this course introduces fundamental knowledge for asset pricing, investment strategies, and portfolio management. On the practical side, this course covers recent topics that are related to the investment strategies and portfolio management in both Hong Kong and United States. Some projects about portfolio management and asset valuation are specially designed to let candidates apply the theoretical knowledge into practice. This course is highly recommended for candidates who intend to pursue a career or further studies in investment strategies and portfolio management. Of course, the knowledge will also be very useful when candidates make their own personal investment decision.

**MFIN7031   Introduction to FinTech and its impact on the future of banking and finance^
(6 credits)**

The world of global finance, banking and financial services is changing rapidly with the emergence of start-up financial technologies, commonly referred to as FinTech that may disrupt the status quo. Taught as a series of practical courses and guest lectures by industry entrepreneurs and professionals, the course covers the main pillars of the FinTech start-up ecosystem in Asia, including peer to peer lending platforms, internet finance, online finance, bitcoin, digital currencies, digital payments, big data, cybersecurity, cryptography, etc and their practical impact on global banking and finance. This course will provide students with the latest empowering and practical knowledge on FinTech enabling them to understand some of the FinTech changes taking place currently in the financial services industry and, most importantly, the trends that will impact the industry in the future. This is a very

practical course with a heavy emphasis on guest lectures on the latest industry trends and best practices by industry experts and entrepreneurs rather than theoretical concepts.

MFIN7033 Advanced financial programming and databases^ (6 credits)

This course provides students a foundation in managing and analyzing financial datasets as well as other datasets. The first part of the course focuses on building skills – data manipulation using programming languages. The second part introduces various financial databases. Through practice on real-world financial datasets, students will learn methods used to warehouse and retrieve data for statistical computing. The course then turns to analytical methods with a focus on demonstrating these methods on real-data from various contexts in finance. Methods covered include statistical modeling and inference, machine learning, textual analysis, classification and alternative datasets. Problem sets and projects will be the primary mode of learning. Course learning will be supplemented with exposure to industry speakers from the local financial industry.
Prerequisite: MFIN7005 Corporate Finance and Asset Valuation

II. Advanced Core Courses:

Corporate Finance, Risk Management and Financial Engineering streams

MFIN6003 Derivative securities (6 credits)

Derivatives have become a popular hedging and investment tool over the last few decades and derivatives concept are required for every advanced finance topic. This course provides candidates with a framework (1) to understand the fundamental concepts of derivative products (forward and futures, options, swaps, and basic structured products), (2) to develop the necessary skills used in valuing derivative contracts, and (3) to understand a wide variety of issues related to risk management and investment decisions using derivatives. The course intends to provide a solid foundation for other advanced courses of the program such as mathematical finance, risk management, fixed income securities, and financial engineering.

MFIN7003 Mathematical techniques in finance (6 credits)

There are three main approaches to mathematical finance: the tree approach, the martingale approach and the partial differential equation approach. This course will present these three approaches and their applications to pricing and hedging financial derivatives. The corresponding numerical methods of the three approaches are lattice method, Monte Carlo simulation method, and finite difference method. Along the lectures, necessary mathematics, such as calculus, partial differential equation, applied probability and stochastic calculus will also be reviewed. After taking this course, candidates should be able to fully understand no-arbitrage theory, risk-neutral probability, martingale, and Black-Scholes equation. The purpose of this course is to lay down a solid mathematical foundation for candidates to learn more advanced topics in financial engineering and risk management, such as exotic options, interest rate derivatives and credit risk models.
Prerequisite: MFIN6003 Derivative Securities

MFIN6002 Spreadsheet modelling in finance* (6 credits)

This course is intended to introduce spreadsheet (MS Excel) as a financial modelling tool and understand its capabilities and limitations. It is designed to teach candidates to apply Visual Basic for Applications (VBA) to automate spreadsheet applications and extend the functionality of the spreadsheet. Numerical derivative pricing by implementing models in VBA will be illustrated. Examples include Black-Scholes formula, Greeks Parameters, Binomial Tree and Monte Carlo Methods Statistical computations with application to Risk Management will also be demonstrated. This course will also explore to optimise the computational power of Excel through the C API.
Prerequisite: MFIN7003 Mathematical Techniques in Finance

MFIN7012   Fixed income securities and interest rate modelling (6 credits)

This course introduces various state of the art techniques in modeling fixed income securities. In particular, the course starts with the discount factor approach in pricing all kinds of bonds. Then it focuses on modeling the discount factors. Models are introduced in two major parts. First, the course emphasizes discrete-time models based on binomial trees in order to understand the economic insight of the risk-neutral pricing. Second, extensions to continuous-time models are also discussed in detail. Calibration and implementation of the models will be studied. Other related topics may include interest rate risk management, interest rate derivatives, and monetary policy. *Prerequisite: MFIN7005 Corporate Finance and Asset Valuation and MFIN6002 Spreadsheet Modelling in Finance*

Financial Technology stream

MFIN6003   Derivative securities (6 credits)

Derivatives have become a popular hedging and investment tool over the last few decades and derivatives concept are required for every advanced finance topic. This course provides candidates with a framework (1) to understand the fundamental concepts of derivative products (forward and futures, options, swaps, and basic structured products), (2) to develop the necessary skills used in valuing derivative contracts, and (3) to understand a wide variety of issues related to risk management and investment decisions using derivatives. The course intends to provide a solid foundation for other advanced courses of the program such as mathematical finance, risk management, fixed income securities, and financial engineering.

MFIN7003   Mathematical techniques in finance (6 credits)

There are three main approaches to mathematical finance: the tree approach, the martingale approach and the partial differential equation approach. This course will present these three approaches and their applications to pricing and hedging financial derivatives. The corresponding numerical methods of the three approaches are lattice method, Monte Carlo simulation method, and finite difference method. Along the lectures, necessary mathematics, such as calculus, partial differential equation, applied probability and stochastic calculus will also be reviewed. After taking this course, candidates should be able to fully understand no-arbitrage theory, risk-neutral probability, martingale, and Black-Scholes equation. The purpose of this course is to lay down a solid mathematical foundation for candidates to learn more advanced topics in financial engineering and risk management, such as exotic options, interest rate derivatives and credit risk models.
Prerequisite: MFIN6003 Derivative Securities

MFIN7034   Machine learning and artificial intelligence in finance^ (6 credits)

Machine learning and artificial intelligence are the apex technologies of the information era. These methods are getting increasingly popular in the financial market. This course provides students the fundamental models and methods of machine learning and apply them to solve real-world financial problems. The topics include regression, classification, clustering methods, model selection, topic modeling and policy search. The first part of the course focuses on supervised learning techniques for regression and classification. The second part of the course covers unsupervised learning techniques for clustering and matrix factorization. The third part of the course covers reinforcement learning algorithm. The last part provides the fundamental concepts of artificial intelligence and its implications. The course provides introductions to the latest datasets in financial markets and practices applying learning algorithms to these datasets in a variety of topics. The primary mode of learning is based on assignments and projects.

MFIN7036   Text analytics and natural language processing in finance and FinTech^
(6 credits)

This course covers the main elements of natural language processing (NLP), text analytics, and text mining, providing students with a foundation in collecting, managing, and analyzing textual data with financial applications in mind such as FinTech. Examples of potential applications include understanding and responding to sentiment in financial newspapers and social media, using social media to improve performance in asset/investment management, due diligence, Fed watching, monitoring of company events, and detecting insider trading. Although students write their own computer programmes in this course, they are not required to implement most algorithms from scratch. Instead, the focus of this course is on how to use existing state-of-the-art open-source software libraries and how to apply them in a financial context. This course consists of three parts. In the first part, we work with real-world textual data sets to obtain proficiency in collecting, importing, organizing, and cleaning textual data from sources related to finance and FinTech. Among others, we cover web scraping, textual corpora, text processing, tokenization, stemming, and stop word removal. In the second part we delve into a more detailed analysis of NLP, text analytics, and machine learning with a particular focus on finance and FinTech. For instance, we examine bag-of-words, word weighting schemes, document classification, document clustering, sentiment analysis, and topic models. The third part consists of summarizing, displaying, and visualizing results obtained from NLP and text analytics for applications in finance and FinTech.

III. Stream Core Courses

Risk Management stream

MFIN6012   Risk management (capstone course) (6 credits)

The objective of this course is to introduce concepts, techniques and framework for quantitative risk management at financial institutions. Financial firms, with their complicated list of positions in a mixture of instruments, are exposed to various sources of financial risk. This class focuses mainly on market risk, the risk of unexpected changes in prices and rates. The first part of the course introduces basic concepts in risk management and builds the toolkit for measuring risk quantitatively. The second part of the course is devoted to studying the widely accepted Value at Risk (VAR) systems, including calculations, back testing and flaws of VAR. The course also touches on other aspects of financial risk such as liquidity risk, credit risk and operational risk.
Prerequisite: MFIN6002 Spreadsheet Modelling in Finance

MFIN7011   Credit risk (6 credits)

A comprehensive analysis of credit risk measurement and credit derivatives. Topics include credit events, expected default frequency, expected exposure, loss given default, default correlation, KMV, Credit Metrics, credit ratings performance and migration, total return swaps, credit default swaps, basket default swaps, credit spread forwards and options, exotic credit derivatives, credit-linked notes, collateralised debt obligations, Basel II and SME lending.
Prerequisite: MFIN7012 Fixed Income Securities and Interest Rate Modelling

Financial Engineering stream

MFIN7009   Financial engineering (capstone course) (6 credits)

Financial engineering is the process of constructing new instruments by using bonds and individual derivatives such as forwards, calls, puts, and common exotic options as basic building blocks. The process involves designing, pricing and managing the instruments. In this course, we anatomize a few popular structured products. Some of them have been traded in the Chicago Board Options Exchange, and Hong Kong Exchanges and Clearing Limited. And others, such as equity-linked high yield notes

and capital guarantee funds are sold by the commercial banks in Hong Kong. Then how to price these products by studying the price of the embedded exotic options will be discussed. The risk exposure of the retail investors and risk management for the commercial banks will be studied. Some topics on the market for volatility trading, recent development of option-pricing models and global financial crisis will also be discussed.
Prerequisite: MFIN7003 Mathematical Techniques in Finance

MFIN7017   Advanced option pricing models (6 credits)

This course brings together the practical and theoretical knowledge taught in the other derivatives and risk management courses in the MFin curriculum to introduce some of the state-of-the-art option pricing models. The course dwells on the original insights of various authors for exotic option pricing and option pricing models with volatility smiles. In addition to the plain-vanilla European option model, the course discusses the continuous and discrete barrier, lookback, Asian, American, excursion option pricing models. It also discusses the jumps and stochastic volatility option pricing models, including the latest option pricing models under Levy processes. Although this course highlights the theoretical and technical motivation of the various models, its delivery requires some hands-on knowledge of MatLab programming. Candidates finished this course will be conversant to the latest development and technology in option pricing.
Prerequisite: MFIN7003 Mathematical Techniques in Finance

Corporate Finance stream

MFIN7026   Advanced corporate finance (capstone course) (6 credits)

This course is aimed to give candidates a solid understanding of theoretical and empirical contributions of modern corporate finance. Major topics of corporate finance, including valuation, equity offerings, financial leverage, payout policy, and mergers and acquisitions, will be extensively discussed. The course offers candidates an opportunity to appreciate how corporate managers apply financial concepts and theories to managing real business and how financial decisions generate significant impact on firm value. After taking the course, candidates are expected to possess the ability to logically evaluate a firm's financial decisions and later resolve financial issues in real world.

MFIN7010   Mergers, acquisitions and corporate restructuring (6 credits)

This course is designed to develop a solid understanding of commonly discussed and applied issues in merger and acquisitions (M&As). The topics covered in this course include the M&A process, methods of valuing a target firm, valuing synergies, the form of payment and financing, assessing the highly levered transaction, governance in M&A, and M&A negotiation. Cases in M&As will be used in the discussion of the various topics. By going through analyses and discussions of real-life M&As, candidates will gain experiences in the application of financial theory and techniques to evaluate a M&A decisions and transactions.

Financial Technology stream

MFIN7035   Big data in finance (capstone course) (6 credits)

This course provides students a foundation in managing and analyzing large datasets for applications in finance. The first part of the course focuses on building skills – data custodianship and performance computing. Through practice on real-world financial datasets, students will learn methods used to warehouse and retrieve data for high-performance statistical computing. The course then turns to analytical methods with a focus on demonstrating these methods on real-data from various contexts in finance. Methods covered include statistical modeling and inference, machine learning, textual analysis, classification and alternative datasets. Problem sets and projects will be the primary mode of learning. Course learning will be supplemented with exposure to industry speakers from the local

financial industry.
Prerequisite: MFIN7002 Investment Analysis and Portfolio Management

MFIN7037   Quantitative trading (6 credits)

This course provides a foundation for advanced quantitative trading in financial markets. The course has two parts. First, the course reviews stylized facts and methods used for time-series predictability, cross-sectional asset pricing and strategy performance evaluation. The second part of the course uses these tools to study recent advances in investment strategies sourcing from academic and practitioner literature. For example, the course will discuss new theories on risk premia, intermediation-based asset pricing, and quantifiable soft information and alternative data. The primary method of learning will be a combination of problem sets and projects. Subject to availability, learning will be supplemented with exposure to industry speakers from the local financial industry.
Prerequisite: MFIN7002 Investment Analysis and Portfolio Management

IV. Electives Courses (choose any 2) (6 credits each):

MFIN6015   Trading workshop

This course covers financial data and software tools as well as the operational side of derivatives trading in a trading lab environment. Candidates will learn how the major systems such as Reuters and Bloomberg work in trading. Candidates will be shown the manner in which transactions are executed, either across telephone lines, telex or electronic trading devices, and the manner in which systems are used to help dealers update their trading blotters, and how positions are updated and risk monitored. Candidates will also learn the pre-settlement stage of each transaction and the settlement issues, including back-office support in accounting and handling of counter-party risk.

MFIN7004   Financial services regulations

This course provides candidates with the legal background necessary to comply with the regulatory requirements in banking and finance. It covers the legal aspects of corporate governance, the legal framework of banking and finance, and financial products, including derivatives. This course also provides candidates with background on market access in financial services, as China embarks on liberalisation of its financial markets as a member of the WTO.

MFIN7006   Macroeconomic analysis and forecasting

Divided into two parts, the first half deals with the theory and practice of modern macroeconomic analysis. The design of the course aims at making close contact with current macroeconomic events and providing an integrated view of macroeconomics. To achieve such goals, the introduction of a unified model that concentrates on the implications of equilibrium conditions in three sets of markets: the goods market, financial markets, and the labour market. A variety of applications and examples will be offered to show how economic concepts can be put to work in explaining real-world issues. The second half of the course concerns the forecasting of economic time-series, and focuses on techniques and models that are routinely used in applied work. Topics include ARIMA models, trends and seasonality, aberrant observation, non-linearity, ARCH and GARCH models, multivariate time-series and VAR models. As part of the course requirement, candidates are expected to generate and evaluate their own forecasts by using appropriate time-series models that are supported by key features of the data.

MFIN7008   Advanced mathematical finance

This course introduces candidates to the techniques of quantitative finance using MATLAB. The main topic includes the introduction to MATLAB, time-series analysis of financial data, simulation, optimization, back testing of asset allocation and trading strategies, introduction to financial databases

and finite difference method. The course will illustrate the techniques with a lot of examples with real financial data. After taking this course, candidates should be able to implement the techniques in various financial applications.

MFIN7013 Seminar in commercial banking and real estate financing

This course covers bank management techniques that include asset and liability management, liquidity and reserve management, credit analysis, loan pricing and off-balance-sheet banking, as well as regulatory issues of commercial banks. It also discusses issues related to mortgage loan products and how real estate risks may affect the market value of mortgages.

MFIN7014 Fund management and alternative investments

Hedge funds are one of the fastest growing sectors of asset management. This course studies the styles of hedge funds and management strategies from an investment decision-making perspective. Topics covered in this module include environment and micro-structure of capital market, investment strategies, quantitative tools, derivative products, investment performance evaluation and discussions of some hedge funds failures. Special attention is given to various practical investment strategies and their risks, including equity selection techniques, market-neutral portfolio constructions, arbitrage strategies, emerging market investment, shortselling problems, etc.

MFIN7015 Behavioral finance

Behavioral finance uses insights from psychology to understand how biases, heuristics, framing and emotions influences the decisions of individual and professional investors, markets and managers. It describes how and why these suboptimal decisions might deviate from those predicted by traditional financial or economic theory. The course also shows why arbitrageurs such as hedge funds cannot correct but instead choose to ride on the misbehavior and mispricing. The course will explore the implications of investor psychology and limitation to arbitrage in the individual trading behaviors, aggregate stock market and the cross-section of average returns, and corporate finance. How insights of behavioral finance complement the traditional finance paradigm will be examined, so that candidates will gain an understanding of how individuals and institutions actually make financial decisions (descriptive) and guidance on how to improve financial decision making (prescriptive) in themselves and others.

MFIN7016 Real options and dynamic corporate finance

A real option is a right—not an obligation—to take an action on an underlying real asset. The action may involve, for example, abandoning, expanding, or contracting a project or even deferring the decision until a later time. Real options analysis (ROA) is a tool that helps to quantify the value of a real option. This course provides a synthesis of modern asset pricing and corporate finance via the framework of ROA. The course compares and contrasts ROA with the traditional tools of valuation. The benefits and limitations of ROA in terms of practical applications are also discussed.

MFIN7018 Special topics in finance: market microstructure

This course examines the effects of market designs and trading mechanisms on various dimensions of trading quality. Its main objective is to help candidates to understand how markets work, and how governments and exchanges regulate them. Candidates will learn who makes market liquid; why some traders consistently profit from trading while others lose; and how trading rules/mechanisms affect price efficiency, liquidity and trading profits. With this knowledge, they can improve their trading strategies. If candidates are regulator or exchange officials, this knowledge will help them to design better markets. This course is also practical and covers many realistic trading mechanisms around the world. To develop candidates' ability to apply theories into practices, this course covers several contemporary issues on market microstructure.

MFIN7019   Applications of derivatives in financing and risk management

One of the key responsibilities of a CFO or CIO (chief investment officer) is to secure low cost funding for capex, acquisition or leveraging an investment. Reduction in funding cost can be achieved through strong credit standing, negotiation with banks or offering of security packages to lenders. With appropriate use of derivatives, not only can CFO/CIOs often further reduce their funding cost but they can also tap more sources of funding. Globalization of financial markets allows capital to flow easily across borders, thus allowing borrowers to tap offshore funding. But offshore funding is often denominated in foreign currency which then requires the use of derivatives to swap it into the desired currency. In this course, candidates study the use derivatives in financing and liability risk management. Besides getting an overview of the various forms of financing current available to corporations and financial institutions, candidates will also learn how to take advantage of the on- and offshore funding price gap in Asia and hedging a company's risk exposures to interest rate and currency movements. In addition, it will reinforce their derivatives knowledge acquired in other courses through case studies and recent applications as seen by financial market.
Prerequisite: MFIN6003 Derivative Securities

MFIN7021   Corporate financial and risk management

This course covers a specific subset of topics in corporate finance including risk management, hedging, capital structure, and liquidity management. The basic idea of the course is that all corporate financial decision-making is some form of risk management. They are centered on notions of asset liability matching and should be well aligned with each other and with management and capital market expectations. The objective of the course is to explain the theory of corporate risk management and to demonstrate some of its real-world applications. In particular, the course will describe a 4-step corporate risk management process which includes defining a consistent risk strategy; quantifying market risk exposures; establishing an efficient benchmark and implementing risk strategies. It will also touch upon some recent developments in derivative accounting and their implications for corporate hedging.

MFIN7022   Risk management for insurance companies and financial conglomerates

This course offers latest developments in the theory and practice of risk measurement and management in the areas of (i) life insurance, (ii) property-casualty insurance, (iii) natural catastrophic risks, and, (iv) commodity price risk.

MFIN7023   Advanced interest rate models

This course covers advanced topics in interest rate modeling and builds on material covered in earlier derivatives and mathematical finance courses. The course integrates theory and practice and focuses on the methods and models used by financial institutions to value interest-rate products. These include spot and forward rate models such as the Hull-White, HJM and the LIBOR market models and their extensions (displaced diffusion, CEV, stochastic volatility) and their calibration to market caps and swaptions. Important theoretical material needed to understand and extend these models is also be integrated into the course (e.g. forward measure, change of numeraire/measure).
Prerequisite: Fixed Income Securities and Interest Rate Modelling

MFIN7024   Financial engineering in practice

This course is designed to provide a holistic view of financial engineering. The course will introduce the candidates to the whole work flow of product design, pricing, packaging and post-execution management. The emphasis is on real life practical concerns and on financial markets in Asia region. The course aims to provide a comprehensive and consistent view of the various underlying financial assets and their characteristics. It emphasizes the importance of a client-oriented engineering process and aim to illustrate the characteristics of various client segments with different investment and

hedging needs. As part of the course, candidates are introduced to several financial products such as FX carry strategy and commodity derivatives etc. After course completion, a candidate should have a better understanding not only of the process of financial engineering but also of how financial engineering fits into the machinery of a modern investment bank.

MFIN7025   Entrepreneurship in finance: hedge funds, private equity and venture capital

This course provides students with the foundations and practical knowledge enabling them to launch and manage their own entrepreneurial venture including a hedge fund, private equity, venture capital or asset management firm. Taught as a combination of practical classes and guest lectures by industry professionals, the course covers the entire fund and business launch spectrum including fund structuring, investor capital raising, investor due diligence, regulatory, tax, governance, fund terms, private placement regulations, market trading rules, service provider selection, counterparty selection, employment matters, real estate, technology, operations, etc. The course also covers the investor landscape and investor lifecycle from early stage investors to institutional capital raising from global family offices, fund of funds, endowments, private banks and pension funds. We also cover the ongoing management and deal making of such funds from angel and venture capital early investments to private equity deals and exits. The course also discusses the global trends and industry institutional best practices, the customs and usage in the industry as well as some of the future trends, including FinTech and cybersecurity, and their impact on the industry. This is a very practical course with a heavy emphasis on the latest industry trends and best practices rather than theoretical concepts..

MFIN7027   Global investing

The global financial market is flat. International financial markets have experienced an explosive growth in the past two decades. Financial innovations, deregulation of national markets, the rise of emerging markets and the massive increase in international assets held by governments have fuelled a global liquidity wave and opened new avenues for international investments. At the same time, the speed and depth of the global contagion experienced in the wake of the US subprime crisis has underscored the financial markets/products' interconnectedness. The purpose of this seminar would be to offer a framework for the analysis of international investment decisions. The seminar will extend the standard investments theories and products to a global setting through a series of introductory lectures, but the focus will be hands-on interaction with the candidates through case studies and analysis of materials in class.

MFIN7028   Advanced fund management

This course will provide insights into key aspects of fund management, with a focus on investment strategies. Much of the course will be taught using a case-study approach, often relying on the experience of the faculty and their guest speakers. The first part of the course will start with a quick recap of investment principles leading to a discussion of fund management and delving into the current issues in the industry. Alternative investments will then be introduced, including hedge funds, private equity and real estate. The course will employ case studies from thereon to illustrate some of these issues with a particular focus on investment strategies. The second part of the course will pick up with an overview of the business side of fund management, highlighting the key issues faced by fund managers outside of their portfolios. An overview of selected investment strategies will be given, with an emphasis on the distinction between strategies pursuing market inefficiencies and strategies pursuing directional bets. The rest of the course will feature case studies adopting global macro, long-short equity, and fixed income strategies, and discussions highlighting the impact of corporate governance on the investment decision.

MFIN7029   Asian financial markets

This course gives candidates an overview of Asian financial markets, their latest development and future trends so that candidates can better prepare themselves for building their career in finance in the

region. It consists of company visits, executive talks/seminars, training, networking and/or cultural activities.

MFIN7030   Current topics in finance

This is a special course that deals with various current topics in finance. Topics covered may vary from year to year, depending on the research interests of the instructor.

MFIN7032   Equity valuation and investment management

This course aims to provide students with a practical approach to equity valuation and investing. They will learn how to apply the key concepts, techniques and tools used by market practitioners in making real world investment decisions. Topics include: identifying sources of value, core valuation techniques - discounted cash flow, multiples analysis of comparable companies, real options valuation, and other valuation methods commonly used by practitioners; an overview of the asset management industry; the fundamental assumptions and approaches to value investing; risk management in the investment process.

MFIN7038   Financial econometrics

This course intends to be a highly applied one. The knowledge of econometrics that has immediate applications in finance will be imparted to candidates. This course is not a pure econometrics theory course, nor is it a course to exhaust financial applications of econometrics. It is designed to equip candidates with knowledge of relevant econometric theories and the ability to apply such knowledge to several finance models. Candidates are required to do computer exercises to implement relevant econometric techniques during the course. Upon completing the course, candidates are expected to appreciate usual practical applications of econometrics in finance and carry out their own empirical investigations. The course should help candidates gain access to more advanced topics if they so wish.

MFIN7039   Asset-backed securities

This course extends the study of fixed income and credit risk to focus on mortgage products, asset-backed securities, and other debt market instruments.

MFIN7040   Business ethics and corporate social responsibility

This course aims to enhance awareness of ethical issues regarding international corporate decision-making, and provides candidates with business strategies and frameworks to deal with ethical problems. It starts with an introduction of concepts, including corporate social responsibility and moral decision making process, and then discusses various ethical issues related to the global business system, international management strategies, technology, external and internal stakeholders, and corporate governance.

MFIN7041   China capital markets

This course introduces the history, structure, and operating system of China's capital markets. In the context of financial market globalization, the discussion of this course will focus on Chinese regulatory policies, institutional reform of markets, and public and private market investments. Historical trends will be analyzed together with recent development, providing insights from practical experiences in the markets. It will discuss China's gradual shift towards a capital market-based financial system and policy issues faced by the Chinese governments during the process of multi-level capital market development.

MFIN7042 Financial data analysis and decision-making

This course provides an analytical framework to evaluate key problems in a structured approach and tools to manage uncertainty in business process. From this course, candidates learn the "language" of uncertainty using concepts in elementary probability, the procedure of framing decision-making in an uncertain environment, and the statistical methods for making inferences and decisions on the basis of limited information.

MFIN7043 Private banking and wealth management

This course looks at the fundamentals of private banking and wealth management. Topics covered include the market segmentation and key drivers of the industry, the different business models used by major market players, the basic analytical tools for asset allocations and wealth planning, and the various wealth management products (with related risk/return profiles) and other services that are offered to High Net Worth (HNW) clients. The course intends to provide a conceptual and practical approach to domestic and international wealth management for market practitioners, HNW individuals and families, and other professionals.

MFIN7044 Real estate finance

This course provides a broad introduction to real estate with a focus on financing issues. Basic project evaluation, financing strategies, asset-backed securities, methods of valuation, REIT modeling and capital markets issues related to real estate are covered. No prior knowledge of the industry is required, but candidates are expected to acquire working knowledge of real estate markets.

MFIN7045 Seminar on the perspectives of financial markets and corporate policies

This course provides in-depth discussions on perspectives of financial markets and corporate policies.

MFIN7046 Financing and leasing

This course focuses on valuation and financing issues of project investment of enterprises, with an emphasis on financing strategy. The objective of this course is to guide candidates to think innovatively about capital management and utilize various financing channels. The course will also introduce the framework and practice of leasing, and the role of leasing as a way of financing in a company's financial management.

MFIN7047 Entrepreneurial finance and innovation strategy

This course aims to cover basic information and knowledge about project choice and financing, idea implementation, decision-making, and innovations in start-up businesses. The majority of such information and knowledge is delivered based on the case method (with supplementary lecture notes when appropriate). It is noteworthy that we will take two roles interchangeably throughout this course: the entrepreneurs who seek funding and the venture capitalists who seek good projects. Understanding the role of both important players in the entrepreneurial finance process helps us have an objective evaluation and unbiased assessment of potential ideas and projects.

Courses marked with ^ and the eight stream core courses can also be taken as elective courses to fulfill the graduation requirements provided that they are not counted as core courses.

A list of electives will be announced at the beginning of the academic year. Candidates may also take up to two electives from other taught postgraduate curricula offered by the Faculty of Business and Economics under the advice and approval of the Programme Directors concerned.

ASSESSMENT

Candidates shall be assessed for each of the courses for which they have registered, and assessment is normally conducted in the form of coursework assessment (40-100%) and examinations (0-60%), unless otherwise specified by the course instructor.

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* Students with a double major in FinTech and another area are not required to take MFIN7007 Economics for financial analysis and MFIN6002 Spreadsheet modelling in finance.