Quantitative Finance and Risk Management Science
Applicable to students admitted in 2017-18

Major Programme Requirement

Students are required to complete a minimum of 87 units of courses as follows:

		Units
1.	Faculty Package: MATH1010, DSME1030, 1040	9
2.	Required Courses:	48
(a)	FINA3010, 3080, 3210, MATH1030, 2010#, RMSC2001, 4001, 4003, STAT2001#, 2006#, 3007#, 3008#	
(b)	ACCT1111 or 2111	
(c)	CSCI1510 or 1520 or 1530 or 1540 or 1580	
(d)	CSCI2520# or DSME2051# or SEEM3550#	
(e)	FINA2010 or 2110	
3.	Elective Courses:	30
(a)	Business (choose at least 6 units of courses from the following list, but no more than 6 one-unit courses): ACCT2121, 4214#, 4251#, FINA2210, 3020, 3030, 3040, 3060, 3070, 3110, 3230, 3240, 3280, 3310, 3320, 3330, 3340, 3350, 3360, 3420, 4010, 4020, 4030, 4040, 4050, 4060, 4230, 4240, 4310, 4320, 4330, 4340, 4350, MGNT1020, 2610#, 4010#, MKTG2010#	
(b)	Quantitative Finance (choose at least 9 units of courses from the following list): FINA4110, 4120, 4150, 4160, 4370	
(c)	Risk Management Science (choose at least 12 units of courses from the following list): ECON3420#, MATH3215#, 3230#, 3240#, 4210#, RMSC4002, 4004, 4005, 4007, STAT3006#, 4001#, 4002#, 4003#, 4004#, 4005#, 4006#, 4008#	
(d)	Capstone/Research (choose at least 3 units of courses from the following list): FINA4130, 4140, 4190, 4380, 4390, 6232, 6242, 6252, RMSC4102, 4202	
	Total:	**87**

Explanatory Notes:

1. FINA and RMSC courses at 2000 and above level as well as those labeled as # will be included in the calculation of Major GPA for honours classification.
2. JUPAS admittees without HKDSE Mathematics Extended Modules I or II are required to take a preparatory Mathematics course MATH1530 before taking MATH1010, except those who pass the Mathematics Placement Test arranged by the Programme.

	Recommended Course Pattern	Units
First Year of Attendance	1st term Faculty Package: DSME1030, MATH1010 Major Required: ACCT1111 or 2111 Major Elective(s):	 6 3
	2nd term Faculty Package: DSME1040 Major Required: FINA2010 or 2110, MATH1030 Major Elective(s):	 3 6
Second Year of Attendance	1st term Major Required: CSCI1510 or 1520 or 1530 or 1540 or 1580, MATH2010, RMSC2001, STAT2001 Major Elective(s):	12
	2nd term Major Required: CSCI2520 or DSME2051 or SEEM3550, FINA3010, 3080, STAT2006 Major Elective(s):	12
Third Year of Attendance	1st term Major Required: FINA3210, RMSC4003, STAT3007 Major Elective(s): 6 units from Business, Quantitative Finance, and Risk Management Science electives	 9 6
	2nd term Major Required: RMSC4001, STAT3008 Major Elective(s): 9 units from Business, Quantitative Finance, and Risk Management Science electives	 6 9
Fourth Year of Attendance	1st term Major Required: Major Elective(s): 12 units from Quantitative Finance and Risk Management Science electives	 12
	2nd term Major Required: Major Elective(s): 3 units from Capstone/Research electives	 3
	Total (including Faculty Package):	**87**

Course List		
Course Code	*Course Title*	*Unit(s)*
Required Courses		
ACCT1111	Foundations in Financial Accounting	3
ACCT2111	Introductory Financial Accounting	3
CSCI1510	Computer Principles and C Programming	3
CSCI1520	Computer Principles and C++ Programming	3
CSCI1530	Computer Principles and Java Programming	3
CSCI1540	Fundamental Computing with C++	3
CSCI1580	Visual Programming	3
CSCI2520	Data Structures and Applications	3
DSME1030	Economics for Business Studies I	3
DSME1040	Economics for Business Studies II	3
DSME2051	Business Information Systems	3

FINA2010	Financial Management	3
FINA2110	Financial Management: Foundations and Analysis	3
FINA3010	Financial Markets	3
FINA3080	Investment Analysis and Portfolio Management	3
FINA3210	Risk Management and Insurance	3
MATH1010	University Mathematics	3
MATH1030	Linear Algebra I	3
MATH2010	Advanced Calculus I	3
RMSC2001	Introduction to Risk Management	3
RMSC4001	Simulation Methods for Risk Management Science and Finance	3
RMSC4003	Statistical Modelling in Financial Markets	3
SEEM3550	Fundamentals in Information Systems	3
STAT2001	Basic Concepts in Statistics and Probability I	3
STAT2006	Basic Concepts in Statistics and Probability II	3
STAT3007	Introduction to Stochastic Processes	3
STAT3008	Applied Regression Analysis	3
Elective Courses		
Electives 3(a)		
ACCT2121	Introductory Management Accounting	3
ACCT4214	Applied Financial Statement Analysis	3
ACCT4251	Securities Regulation	3
FINA2210	Interest Theory and Finance	3
FINA3020	International Finance	3
FINA3030	Management of Financial Institutions	3
FINA3040	Commercial and Central Banking	3
FINA3060	Real Estate Finance and Investment	3
FINA3070	Corporate Finance: Theory and Practice	3
FINA3110	Issues in Finance	3
FINA3230	Life and Health Insurance	3
FINA3240	Corporate Property and Liability Insurance	3
FINA3280	Insurance Company Operations and Management	3
FINA3310	Introduction to Investment Banking	1
FINA3320	Introduction to Credit Rating	1
FINA3330	Introduction to Alternative Investment	1
FINA3340	Trading Strategies: Behavioral and Technical Analysis	1
FINA3350	Foreign Exchange Market Practices	1
FINA3360	Derivative Warrants, Proprietary and Arbitrage Trading Concepts	1
FINA3420	Credit Rating in Global Economy	3
FINA4010	Security Analysis	3
FINA4020	Fund Management and Asset Allocation	3
FINA4030	Selected Topics in Finance	3
FINA4040	Cases in Corporate Finance	3
FINA4050	Mergers And Acquisitions	3
FINA4060	China Finance	3
FINA4230	Reinsurance and Alternative Risk Transfer	3
FINA4240	Employee Benefits, Retirement and Estate Planning	3
FINA4310	China Banking and Financial System	1
FINA4320	China Equity Securities Market	1
FINA4330	China Derivative Securities Market	1
FINA4340	Structured Products: Fundamentals and Analysis	1
FINA4350	Bond Markets: Analysis and Strategies	1

MGNT1020	Principles of Management	3
MGNT2610	Legal Environment, Corporate Social Responsibility and Business Ethics	3
MGNT4010	Business Policy and Strategy	3
MKTG2010	Marketing Management	3
Electives 3(b)		
FINA4110	Options and Futures	3
FINA4120	Fixed Income Securities Analysis	3
FINA4150	Quantitative Methods for Financial Derivatives	3
FINA4160	Intermediate Financial Theory	3
FINA4370	Derivatives Trading: Analysis and Strategies	3
Electives 3(c)		
ECON3420	Financial Economics	3
MATH3215	Operations Research	3
MATH3230	Numerical Analysis	3
MATH3240	Numerical Methods for Differential Equations	3
MATH4210	Financial Mathematics	3
RMSC4002	Data Analysis in Finance and Risk Management Science	3
RMSC4004	Theory of Risk and Insurance	3
RMSC4005	Stochastic Calculus for Finance and Risk	3
RMSC4007	Risk Management with Derivatives Concepts	3
STAT3006	Statistical Computing	3
STAT4001	Data Mining and Statistical Learning	3
STAT4002	Multivariate Techniques with Business Applications	3
STAT4003	Statistical Inference	3
STAT4004	Actuarial Science	3
STAT4005	Time Series	3
STAT4006	Categorical Data Analysis	3
STAT4008	Survival Modelling	3
Electives 3(d)		
FINA4130	Empirical Finance	3
FINA4140	Computational Finance	3
FINA4190	Research Project in Quantitative Finance	3
FINA4380	Derivatives Trading: Research and Development	3
FINA4390	Banking and Finance Practicum	3
FINA6232	Seminar in Asset Pricing	3
FINA6242	Seminar in Corporate Finance	3
FINA6252	Empirical Research in Finance	3
RMSC4102	Research Project	3
RMSC4202	Practicum	3