

**Risk Management Science**  
**Applicable to students admitted in 2019-20**

There is one enrichment stream in the Risk Management Science Programme: *Risk Analytics Stream*. Students who got a total score of 30 or above in the best five DSE subjects or have obtained a cumulative GPA of 3.7 or above in the first or second year of attendance may apply for specializing in the *Risk Analytics Stream*.

**Major Programme Requirement**

Students are required to complete a minimum of 72 units of courses as follows:

	Units
1. Faculty Package: Group C: MATH1010 Group E: STAT1011 One course from the following Group A: LSCI1000 or 1001 or 1002 Group B: CHEM1070 or 1072 or 1280 Group D: PHYS1001 or 1002 or 1111 or 1113, or Courses from Faculty Package of the Faculty of Business Administration: DSME1031 or 1040 or HTMG1010 or MGNT1020	9
2. Required Courses: ACCT1111 or 2111, DSME1030[a], FINA2010#, 3080#[b], MATH1030#, 2010#, RMSC1101#, 2001, 2101, 3101, 4001, 4003, STAT2001#, 2006#, 3007#, 3008#	42
3. Elective Courses:	21
(a) One course from CSCI1510, 1520, 1530, 1540, 1580 or STAT2005	
(b) Choose at least five courses, but no more than three MATH courses, from the following list: CSCI2520#[c], ECON3420#, FINA3010#, 3210#, MATH3215#, 3230#, 3240#, 4210#, RMSC4002, 4004, 4005, 4007, STAT4002#, 4003#, 4004#, 4005#, 4006#, 4008#, 4010#, 4012#	
(c) One capstone/research course from RMSC4102 or 4202	
<b>Total:</b>	<b>72</b>

**Explanatory Notes:**

1. RMSC courses at 2000 and above level as well as those labelled as # will be included in the calculation of Major GPA for honours classification.

[a] Students may take ECON1010 as a substitute for DSME1030.

[b] Students may take RMSC4006# as a substitute for FINA3080.

[c] Students may take CSCI2100# as a substitute for CSCI2520.

**Risk Analytics Stream**

Students are required to complete a minimum of 72 units of courses as follows:

	Units
1. Faculty Package: Group C: MATH1010 Group E: STAT1011 One course from the following	9

Group A: LSCI1000 or 1001 or 1002  
 Group B: CHEM1070 or 1072 or 1280  
 Group D: PHYS1001 or 1002 or 1111 or 1113, or  
 Courses from Faculty Package of the Faculty of Business Administration:  
 DSME1031 or 1040 or HTMG1010 or MGNT1020

2.	Required Courses:	48
(a)	ACCT1111 or 2111, DSME1030[a], FINA2010#, 3080#[b], MATH1030#, 2010#, RMSC1101#, 2001, 2101, 3101, 4001, 4003, STAT2001#, 2005#, 2006#, 3007#, 3008#	
(b)	One course from CSCI1510, 1520, 1530, 1540 or 1580	
3.	Elective Courses:	15
(a)	Two courses from the following list: CSCI2520#[c], 3150#, 3160#, 3170#, 3220#, 3230#, 3320#, 4130#, 4160#, 4180#, 4190#, 4230#, 5030#, 5150#, 5510#, ENGG5108#	
(b)	Two courses from the following list: RMSC4002, 4004, 4005, 4007, STAT4002#, 4003#, 4004#, 4005#, 4006#, 4008#, 4010#, 4012#	
(c)	One capstone/research course from RMSC4112 or 4212	
<b>Total:</b>		<b>72</b>

**Explanatory Notes:**

1. RMSC courses at 2000 and above level as well as those labelled as # will be included in the calculation of Major GPA for honours classification.
  2. A Risk Analytics Stream student who pursues a second Major in Statistics can be exempted from taking STAT2011 by taking either RMSC4112 or 4212. Units earned can be counted towards both Major Programmes.
- [a] Students may take ECON1010 as a substitute for DSME1030.  
 [b] Students may take RMSC4006# as a substitute for FINA3080.  
 [c] Students may take CSCI2100# as a substitute for CSCI2520.

Risk Management Science		
	Recommended Course Pattern	Units
<b>First Year of Attendance</b>	1 <sup>st</sup> term Faculty Package: Group E: STAT1011 Major Required: ACCT1111 or 2111, DSME1030, RMSC1101 Major Elective(s):	3 7
	2 <sup>nd</sup> term Faculty Package: Group C: MATH1010 One course from Science Faculty Package A, B, D or BA Faculty Package: DSME1031 or 1040 or HTMG1010 or MGNT1020 Major Required: FINA2010 Major Elective(s):	6 3
	1 <sup>st</sup> term Major Required: MATH1030, RMSC2001, 2101, STAT2001 Major Elective(s): STAT2005	10 0-3
<b>Second Year of Attendance</b>	2 <sup>nd</sup> term	

	Major Required: MATH2010, STAT2006 Major Elective(s): One CSCI course at 1000 level (if STAT2005 not taken)	6 0-3
<b>Third Year of Attendance</b>	1 <sup>st</sup> term Major Required: FINA3080 or RMSC4006, RMSC4003, STAT3007, 3008 Major Elective(s):	12
	2 <sup>nd</sup> term Major Required: RMSC3101, 4001 Major Elective(s): One MATH course, one ECON or FINA course	4 6
<b>Fourth Year of Attendance</b>	1 <sup>st</sup> term Major Required: Major Elective(s): RMSC4202, two RMSC courses	6-9
	2 <sup>nd</sup> term Major Required: Major Elective(s): RMSC4102 (if RMSC4202 not taken), one RMSC or STAT course	3-6
<b>Total (including Faculty Package):</b>		<b>72</b>

Risk Management Science (Risk Analytics Stream)		
	Recommended Course Pattern	Units
<b>First Year of Attendance</b>	1 <sup>st</sup> term Faculty Package: Group E: STAT1011 Major Required: ACCT1111 or 2111, DSME1030, MATH1030, RMSC1101 Major Elective(s):	3 10
	2 <sup>nd</sup> term Faculty Package: Group C: MATH1010 A course from Science Faculty Package A, B, D or BA Faculty Package: DSME1031 or 1040 or HTMG1010 or MGNT1020 Major Required: FINA2010 Major Elective(s):	6 3
	1 <sup>st</sup> term Major Required: RMSC2001, 2101, STAT2001, 2005 Major Elective(s): One CSCI course at 1000 level	10 3
<b>Second Year of Attendance</b>	2 <sup>nd</sup> term Major Required: MATH2010, STAT2006 Major Elective(s): CSCI2520	6 3
	1 <sup>st</sup> term Major Required: FINA3080 or RMSC4006, STAT3007, 3008, RMSC4003 Major Elective(s):	12
<b>Third Year of Attendance</b>	2 <sup>nd</sup> term Major Required: RMSC3101, 4001 Major Elective(s): One RMSC or STAT course at 4000 level, one CSCI or ENGG course	4 6
	1 <sup>st</sup> term Major Required: Major Elective(s): RMSC4212, one RMSC or STAT course at 4000 level	3-6
<b>Fourth Year of Attendance</b>	2 <sup>nd</sup> term Major Required: Major Elective(s): RMSC4112 (if RMSC4212 not taken)	0-3

**Minor Programme Title**

Risk Management Science

**Minor Programme Requirement**

Students are required to complete a minimum of 21 units of courses as follows:

	Units
1. Required Course: RMSC2001	3
2. Elective Courses:	
(a) STAT1011[a]	3
(b) STAT2102[a]	3
(c) STAT2005 or one course from CSCI1510, 1520, 1530, 1540, 1580	3
(d) Three courses from RMSC4001, 4002, 4003, 4004, 4005, 4007, STAT4004	9

**Total:** 21

## Explanatory Note:

- [a] Students can take either the STAT course or its corresponding equivalent or closely related course, but not both, as listed below to fulfill the requirement:

STAT courses		Equivalent/closely related courses	
STAT1011	Introduction to Statistics	STAT1012	Statistics for Life Sciences
		STAT2001	Basic Concepts in Statistics and Probability I
		DSME2011	Statistical Analysis for Business Decisions
		FINA2220	Quantitative Methods for Actuarial Analysis I
		ENGG2430 or 2450 or ESTR2002 or 2005	Probability and Statistics for Engineers
		ECON2121	Methods of Economic Statistics
		GRMD2102	Fundamental Statistics for Geographers
STAT2102	Basic Statistical Concepts and Methods II	SOCI2004	Social Statistics
		STAT2006	Basic Concepts in Statistics and Probability II
		DSME2021	Applied Econometrics for Business Decisions

**Course List**

Course Code	Course Title	Unit(s)
RMSC1101	Elementary Concepts in Risk Management	1

RMSC2001	Introduction to Risk Management	3
RMSC2101	Introductory Topics in Risk Management	1
RMSC3101	Special Topics in Risk Management	1
RMSC4001	Simulation Methods for Risk Management Science and Finance	3
RMSC4002	Financial Data Analytics with Machine Learning	3
RMSC4003	Statistical Modelling in Financial Markets	3
RMSC4004	Theory of Risk and Insurance	3
RMSC4005	Stochastic Calculus for Finance and Risk	3
RMSC4006	Operational Risk Management	3
RMSC4007	Risk Management with Derivatives Concepts	3
RMSC4102	Research Project	3
RMSC4112	Research Project in Risk Analytics	3
RMSC4202	Practicum	3
RMSC4212	Practicum in Risk Analytics	3