6 CURRICULUM AND PROFESSIONAL EXAMINATIONS

6.1 Curriculum

Key: C = Compulsory   CA = Continuous Assessment   E =Elective   EXAM= Examination
Z = Required Zero-credit subject depending on student's entrance qualification

Subject code	Subject title	C/E/Z	Credit	Assessment CA: EXAM (%)	Pre-requisite (P)/ Co-requisite(Co)/ Exclusion (Ex)
Year 1- Semester One					
AMA1008	Calculus and Linear Algebra #	Z	0	40:60	Nil
AMA2222A	Principles of Programming *	Z	0	60:40	E: AMA2222
AMA2691	Probability & Distribution	C	3	40:60	P: AMA1007 or MA1008 or AMA1120 or AMA1130 or AMA1500 or equivalent E: AMA269
AMA3632	Programming for Data Science	C	3	60:40	Nil
COMP2411	Database Systems	C	3	55:45	P: COMP1011 or equivalent
	One CAR subject† (GUR ##)	C	3		
	One Service Learning subject (GUR ##)	C	3		
Year 1 – Semester Two					
AMA3001	Mathematical Methods for Data Science	C	3	40:60	P: AMA1008 or equivalent
AMA3631	Statistics for Data Science	C	3	40:60	P: AMA2691 or equivalent
AMA484	Decision Analysis	C	3	40:60	P: AMA2691or equivalent
ELC3123	English for Technical Project Writing	C	2	100:0	LCR English Subjects‡
	One Elective subject^	E	3		
	One CAR subject† (GUR ##)	C	3		
Year 1 - Summer					
AMA243	Work-integrated Education (summer)	C	2 (Training credits)		Nil

Only those admitted students with insufficient background in mathematics are required to pass this zero credit subject.
* Only those admitted students with insufficient background in programming are required to pass this zero credit subject.
^ Please refer to the elective subjects listed on P.5.

Remarks: Students are strongly recommended to follow the study pattern designed by the programme. Students have to submit a written request to the Programme Leader for approval, in case their study plan deviates from the study pattern listed on P.4 & 5.

---

‡ LCR – Language and Communication Requirements (Please refer to P.6)
GUR – General University Requirement
† CAR – Cluster Area Requirement (Please refer to P.6-P.7)

Subject code	Subject title	C/E/Z	Credit	Assessment CA: EXAM (%)	Pre-requisite (P)/ Co-requisite(Co)/ Exclusion (Ex)
Year 2 – Semester One					
AMA4001	Statistical Modeling for Discovery	C	3	40:60	P: AMA3631 or equivalent
AMA4951	Capstone Project (one-year subject)	C	6		Nil
CBS3212P	Professional Communication in Chinese for Data Science	C	2	100:0	LCR Chinese Subjects‡
COMP3134	Business Intelligence and Customer Relationship Management	C	3	55:45	Nil
COMP4433	Data Mining and Data Warehousing	C	3	55:45	P: COMP2411 or equivalent
	One Elective subject^	E	3		
Year 2 – Semester Two					
AMA465	Forecasting and Applied Time Series Analysis	C	3	40:60	P: AMA4001 or equivalent
AMA4002	High Dimensional Data Analysis	C	3	40:60	P: AMA4001 or equivalent
AMA488	Simulation	C	3	40:60	P: AMA2691 or equivalent
AMA4951	Capstone Project (one-year subject)	C	6		Nil
COMP4434	Big Data Analytics	C	3	60:40	P: AMA1104 or equivalent and COMP1011 or equivalent and COMP2011 or equivalent and COMP2411 or equivalent

Electives^					
Students can choose to take the elective subjects either in Semester one or Semester two, provided that their study load does not exceed the maximum of 21 credits per semester.					
Subject code	Subject title	C/E/Z	Credit	Assessment CA: EXAM (%)	Pre-requisite (P)/ Co-requisite(Co)/ Exclusion (Ex)
AMA301	Computational Methods	E	3	40:60	P: AMA3001 or equivalent
AMA304	Financial Computations and Programming	E	3	50:50	Nil
AMA358	Applied Probability Models for Investment	E	3	40:60	P: AMA2691 or equivalent
AMA382	Operations Research Methods	E	3	40:60	P: AMA1008 or equivalent
AMA481	Econometrics	E	3	40:60	P: AMA4001 or equivalent
AMA485	Optimization Methods	E	3	40:60	P: AMA3001 or equivalent
COMP3421	Web Application Design and Development	E	3	55:45	P: COMP1011 or equivalent
COMP4121	E-commerce Technology and Applications	E	3	55:45	P: COMP2411 or equivalent and COMP3421 or equivalent
COMP4127	Information Systems Audit and Control	E	3	55:45	Nil
BRE461	Environmental Impact and Assessment	E	3	40:60	Nil
BRE464	Urban Planning (Workshops)	E	3	100:0	Nil
HTI37102	Medical Informatics	E	3	100:0	Nil

Note:　Equivalent subjects may be accepted in considering Pre-requisite/Co-requisite requirement for all the above subjects.

‡ LCR – Language and Communication Requirements (Please refer to P.9 for details.)
GUR – General University Requirement (Please refer to P.9 for details.)
† CAR – Cluster Area Requirement (Please refer to P.9-10 for details.)