THE UNIVERSITY OF HONG KONG
DEPARTMENT OF STATISTICS AND ACTUARIAL SCIENCE

1 August 2024

Suggested / Example Structure of BSc (Major in Decision Analytics) Curriculum (for students admitted to Year 1 in 2021 and before)

Year	One		Two		Three		Four	
Semester	One	Two	One	Two	One	Two	One	Two
Disciplinary Core	**COMP1117** Computer Programming **MATH1013** University Mathematics II	**MATH2014** Multivariable Calculus and Linear Algebra **STAT2601** Probability and Statistics I	**STAT2602** Probability and Statistics II	**COMP2119** Introduction to Data Structures and Algorithms **STAT3600** Linear Statistical Analysis	**MATH3904** Introduction to Optimization **STAT3612** Statistical Machine Learning	**COMP3278** Introduction to Database Management Systems		**STAT4609** Big Data Analytics
Capstone and Other			**COMP2113** Programming Technologies (Pre-requisite of COMP2119)		**Capstone** (at least 6 credits) **STAT3799** Directed Studies in Statistics **STAT4710** Capstone Experience for Statistics Undergraduates **STAT4766** Statistics Internship **STAT4799** Statistics Project			
Disciplinary Elective					At least 12 credits (2 courses) selected from the following courses: **COMP3250** Design and Analysis of Algorithms **COMP3251**[4] Algorithm Design **COMP3252**[4] Algorithm Design and Analysis **COMP3270** Artificial Intelligence **COMP3323** Advanced Database Systems **COMP3407** Scientific Computing **MATH3408** Computational Methods and Differential Equations with Applications **MATH3600** Discrete Mathematics **MATH3601** Numerical Analysis **MATH3901** Operations Research I **STAT3010** Image Processing and Computer Vision **STAT3620** Modern Nonparametric Statistics **STAT3621** Statistical Data Analysis **STAT3622** Data Visualization **STAT3655** Survival Analysis **STAT4011** Natural Language Processing **STAT4023** Medical Image Analysis **STAT4601** Time-series Analysis **STAT4602** Multivariate Data Analysis **STAT4610** Bayesian Learning			
Science Foundation Courses	**SCNC1111** Scientific Method and Reasoning	**SCNC1112** Fundamentals of Modern Science						
Common Core	Six common core courses within the first three years							
Language	**CAES1000** Core University English (offered in both semesters)		**CAES9820** Academic English for Science Students or **CAES9821** Professional & Technical Communication for Mathematical Sciences (offered in both semesters)		**CSCI9001** Practical Chinese for Science Students (offered in both semesters)			

Note 1: If there are any courses (offered by SAAS or not) mutually exclusive to any Core courses, students must take the course stated in the curriculum to fulfil the degree requirement of the First Major. Course replacement should only be applied for the other Major(s) or Minor(s).

Note 2: This table is for students' reference only for planning their studies ahead. Course offering semester and availability are subject to changes. Some courses are offered in both semesters.

Note 3: Please read the Faculty of Science's Student Handbook and Syllabuses & Regulations for more details.

Note 4: It is recommended that students opt for COMP3251 Algorithm design instead of COMP3252 Algorithm design and analysis when selecting elective courses between COMP3251 and COMP3252.