

# Course progression map for 2023 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It does not substitute for the list of required units as described in the course 'Requirements' section of the Handbook.

## S3003 Bachelor of Applied Data Science Advanced (Honours)

Year 1 Semester 1	ADS1001 Data challenges 1	MAT1830 Discrete mathematics for computer science	MTH1020 Analysis of change or MTH1030 Techniques for modelling or MTH1035 Techniques for modelling (advanced)	Applied studies
Year 1 Semester 2	ADS1002 Data challenges 2	FIT1045 Introduction to programming	MTH1030 Techniques for modelling or MTH1035 Techniques for modelling (advanced) or MTH2010 Multivariable calculus or MTH2015 - Multivariable calculus (advanced)	Applied studies
Year 2 Semester 1	ADS2001 Data challenges 3	FIT1008 Introduction to computer science	MTH2019 Multivariate mathematics for data science or MTH2021 Linear algebra with equations or MTH2025 Linear algebra (advanced)	Applied studies
Year 2 Semester 2	ADS2002 Data challenges 4	FIT2086 Modelling for data analysis	MTH2051 Introduction to computational mathematics	Applied studies
Year 3 Semester 1	Free elective	Free elective	MTH3241 Random processes in the sciences and engineering or MTH3320 Computational linear algebra	MTH3330 Optimisation and operations research
Year 3 Semester 2	ADS3001 Advanced data challenges (12 points)		FIT3181 Deep learning	FIT3154 Advanced data analysis
Year 4 Semester 1	ADS4001 Research methods	ADS4010 Frontiers of data science	Free elective	Free elective
Year 4 Semester 2	ADS4100 Industry research project (24 points)			

A	Data challenges
B	Techniques for data science
C	Applied studies
D	Advanced practice
E	Free elective

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**Note:** Students who choose MTH2222 or MTH2225, please follow this map

Year 1 Semester 1	ADS1001 Data challenges 1	MAT1830 Discrete mathematics for computer science	MTH1020 Analysis of change or MTH1030 Techniques for modelling or MTH1035 Techniques for modelling (advanced)	Applied studies
Year 1 Semester 2	ADS1002 Data challenges 2	FIT1045 Algorithms and programming fundamentals in python	MTH1030 Techniques for modelling or MTH1035 Techniques for modelling (advanced) or MTH2010 Multivariable calculus or MTH2015 - Multivariable calculus (advanced)	Applied studies
Year 2 Semester 1	ADS2001 Data challenges 3	MTH2222 Mathematics of uncertainty or MTH2225 Mathematics of uncertainty (advanced)	MTH2019 Multivariate mathematics for data science or MTH2021 Linear algebra with equations or MTH2025 Linear algebra (advanced)	Applied studies
Year 2 Semester 2	ADS2002 Data challenges 4	FIT2086 Modelling for data analysis	FIT1008 Introduction to computer science	Applied studies
Year 3 Semester 1	Free elective	Free elective	MTH3241 Random processes in the sciences and engineering or MTH3320 Computational linear algebra	MTH3330 Optimisation and operations research
Year 3 Semester 2	ADS3001 Advanced data challenges (12 points)		FIT3181 Deep learning	FIT3154 Advanced data analysis
Year 4 Semester 1	ADS4001 Research methods	ADS4010 Frontiers of data science	Free elective	Free elective
Year 4 Semester 2	ADS4100 Industry research project (24 points)			

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