Bachelor of Computer Science Advanced (Honours) (C3001) – 2023
Data science specialisation

Year 1 (48 credit points

First Semester	**FIT1053** Introduction to programming (advanced)	**FIT1047** Introduction to computer systems, networks and security	**MAT1830** Discrete mathematics for computer science	**Elective**
Second Semester	**FIT1054** Computer science (advanced) [FIT1053]	**FIT1049** IT professional practice [12 points FIT units]	**MAT1841** Continuous mathematics for computer science	**FIT1043** Introduction to data science

Year 2 (48 credit points)

First Semester	**FIT2004** Algorithms and data structures [FIT1008 or FIT1054 & 6 pts L1 Maths]]	**FIT2083** Innovation and research in computer science [MAT1841 or MTH1030]	**FIT2094** Databases [One of FIT1045, FIT1048, FIT1051, ENG1003]	**Elective**
Second Semester	**FIT2014** Theory of computation [FIT1045 or FIT1053 and MAT1830]	**FIT2086** Modelling for data science [FIT1045 & MAT1830 & one of MAT1841, MAT2003, MTH1030 or MTH1035]	**FIT2082** Computer science research project [FIT2083]	**Elective**

Year 3 (48 credit points)

First Semester	**FIT3144** Advanced computer science project (12 points) [FIT2004 & FIT2083]	**Level 3** Data science approved elective*	**Elective**	**Elective**
Second Semester		**Level 3** Data science approved elective*	**FIT3179** Data visualisation [FIT2004]	**Elective**

Year 4 (48 credit points)

First Semester	**FIT4441** Honours thesis – part 1	**FIT4442** Honours thesis – part 2	**Level 4/5** Computer science approved elective	**Elective**
Second Semester	**FIT4443** Honours thesis – part 3	**FIT4444** Honours thesis – final	**Level 4/5** Computer science approved elective	**Elective**

* Level 3 data science approved electives (choose 2)
FIT3003 Business intelligence and data warehousing FIT3139 Computational modelling and simulation FIT3152 Data analytics FIT3154 Advanced data analysis FIT3181 Deep learning FIT3182 Big data management and processing FIT3183 Malicious AI and dark side security Note that not all units will be taught in every year and some will be offered only in alternate years

Bachelor of Computer Science Advanced (Honours) (C3001) – 2023
Data science specialisation
Industry Based Learning placement

Year 1 (48 credit points)

First Semester	**FIT1053** Introduction to programming (advanced)	**FIT1047** Introduction to computer systems, networks and security	**MAT1830** Discrete mathematics for computer science	**Elective**
Second Semester	**FIT1054** Computer science (advanced) [FIT1053]	**FIT1049** IT professional practice [12 points FIT units]	**MAT1841** Continuous mathematics for computer science	**FIT1043** Introduction to data science

Year 2 (54 credit points)

Summer Semester	**Elective**			
First Semester	**FIT2004** Algorithms and data structures [FIT1008 or FIT1054 & 6 pts L1 Maths]]	**FIT2083** Innovation and research in computer science [MAT1841 or MTH1030]	**FIT2094** Databases [One of FIT1045, FIT1048, FIT1051, ENG1003]	**Elective**
Second Semester	**FIT2014** Theory of computation [FIT1045 or FIT1053 and MAT1830]	**FIT2086** Modelling for data science [FIT1045 & MAT1830 & one of MAT1841, MAT2003, MTH1030 or MTH1035]	**FIT2082** Computer science research project [FIT2083]	**Elective**

Year 3 (42 credit points)

First Semester	**FIT3045** Industry-based learning (18 points)			
Second Semester	**Level 3** Data science approved elective*	**FIT3179** Data visualisation [FIT2004]	**Elective**	**Elective**

Year 4 (48 credit points)

First Semester	**FIT4441** Honours thesis – part 1	**FIT4442** Honours thesis – part 2	**Level 4/5** Computer science approved elective	**Elective**
Second Semester	**FIT4443** Honours thesis – part 3	**FIT4444** Honours thesis – final	**Level 4/5** Computer science approved elective	**Elective**

* Level 3 data science approved electives (choose 1)
FIT3003 Business intelligence and data warehousing FIT3139 Computational modelling and simulation FIT3152 Data analytics FIT3154 Advanced data analysis FIT3181 Deep learning FIT3182 Big data management and processing FIT3183 Malicious AI and dark side security Note that not all units will be taught in every year and some will be offered only in alternate years

Notes

Credit points	Unless specified, all units are worth 6 credit points Bachelor of Computer Science Advanced (Honours) 32 units x 6 credit points = Total of 192 credit points
Year Level Requirements	1) Normally 48 points, and a maximum of 60 points, of first year level units will be counted; 2) At least 36 points must be completed at third year level.
Unit requisites	All pre-requisite and co-requisite requirements must be undertaken in order to be able to enrol into a specific unit
Duration of degree	4 years full-time, 8 years part-time
Time limit	Time limit = 10 years. Students have ten years in which to complete this award from the time they commence first year. Periods of intermission are counted as part of the ten years.