BACHELOR OF COMPUTER SCIENCE ADVANCED (HONOURS) (C3001) – 2018

Year 1 (48 credit points)

First Semester	**FIT1053** Algorithms and programming in python (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	**MAT1841** Continuous mathematics for computer science	**Elective**

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 [24 pts of level 1 FIT]	**FIT2099** Object oriented design and implementation [One of FIT1045, FIT1048, FIT1051, FIT1008]	**Elective**
Second Semester	**FIT2014** Theory of computation [FIT1045 or FIT1053 and MAT1830]	**FIT2102** Programming paradigms [FIT1008 or FIT1054]	**FIT2082** Computer science research project [FIT2083]	**Elective**

Year 3 (48 credit points)

First Semester	**FIT3144** Advanced computer science project (12 points) [FIT2004 & FIT2083]	**FIT3171** Databases [One of FIT1045, FIT1048, FIT1051, FIT1053 or ENG1003]	**Level 3** Computer Science Approved Elective*	**Elective**
Second Semester		**FIT3155** Advanced data structures and algorithms [FIT2004]	**FIT3143** Parallel computing [FIT2004]	**Elective**

Year 4 (48 credit points)

First Semester	**FIT4441** Honours thesis – part 1	**FIT4442** Honours thesis – part 2	**Level 3** 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 Approved Computer Science Electives:	
FIT3031 Information and network security	FIT3142 Distributed computing
FIT3077 Software engineering: architecture and design	FIT3146 Emergent technologies and interfaces
FIT3080 Intelligent systems	FIT3152 Data analytics
FIT3081 Image processing	FIT3159 Computer architecture
FIT3088 Computer graphics	FIT3165 Computer networks
FIT3094 Artificial life, artificial intelligence and virtual environments	FIT3173 Software security
	FIT3175 Usability
FIT3139 Computational science	MTH3170 Network mathematics
Note that not all units will be taught in every year and come 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.

BACHELOR OF COMPUTER SCIENCE ADVANCED (HONOURS) (C3001) – 2018
(Industry Based Learning/Research Based Learning placement)

Year 1 (48 credit points)

First Semester	**FIT1053** Algorithms and programming in python (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	**MAT1841** Continuous mathematics for computer science	**Elective**

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 [24 pts of level 1 FIT]	**FIT2099** Object oriented design and implementation [One of FIT1045, FIT1048, FIT1051, FIT1008]	**Elective**
Second Semester	**FIT2014** Theory of computation [FIT1045 or FIT1053 and MAT1830]	**FIT2102** Programming paradigms [FIT1008 or FIT1054]	**FIT2082** Computer science research project [FIT2083]	**Elective**

Year 3 (42 credit points)

First Semester	**FIT3153** Research-based learning (18 points) OR **FIT3045** Industry-based learning (18 points)			
Second Semester	**FIT3155** Advanced data structures and algorithms [FIT2004]	**FIT3143** Parallel computing [FIT2004]	**FIT3171** Databases [One of FIT1045, FIT1048, FIT1051, FIT1053 or ENG1003]	**Level 3** Computer Science Approved 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	**Elective**	**Elective**

* Level 3 Approved Computer Science Electives:	
FIT3031 Information and network security	FIT3142 Distributed computing
FIT3077 Software engineering: architecture and design	FIT3146 Emergent technologies and interfaces
FIT3080 Intelligent systems	FIT3152 Data analytics
FIT3081 Image processing	FIT3159 Computer architecture
FIT3088 Computer graphics	FIT3165 Computer networks
FIT3094 Artificial life, artificial intelligence and virtual environments	FIT3173 Software security
	FIT3175 Usability
FIT3139 Computational science	MTH3170 Network mathematics
Note that not all units will be taught in every year and come 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.