

# BACHELOR OF COMPUTER SCIENCE (C2001) – 2016

## Advanced Computer Science Specialisation

### Year 1 (48 credit points)

<b>First Semester</b>	<b>FIT1045</b> Algorithms and programming fundamentals in python	<b>FIT1047</b> Introduction to computer systems, networks and security	<b>MAT1830</b> Discrete mathematics for computer science	<b>Elective</b>
<b>Second Semester</b>	<b>FIT1008</b> Introduction to computer science [FIT1045]	<b>FIT1049</b> IT professional practice [12 pts FIT study]	<b>MAT1841</b> Continuous mathematics for computer science	<b>Elective</b>

### Year 2 (48 credit points)

<b>First Semester</b>	<b>FIT2004</b> Algorithms and data structures [FIT1008]	<b>FIT2099</b> Object-oriented design and implementation [One of FIT1045 or FIT1048, FIT1051, FIT1008]	<b>Elective</b>	<b>Elective</b>
<b>Second Semester</b>	<b>FIT2014</b> Theory of computation [FIT1045 & MAT1830]	<b>FIT2102</b> Programming paradigms [FIT1008]	<b>Elective</b>	<b>Elective</b>

### Year 3 (48 credit points)

<b>First Semester</b>	<b>FIT3045</b> Industry-based learning (18 points) (FIT3161 + FIT3162 + ONE Level 3 CS Approved Electives)			
<b>Second Semester</b>	<b>FIT3155</b> Advanced data structures and algorithms [FIT2004]	<b>FIT3143</b> Parallel computing [FIT2004]	<b>Level 3</b> Computer Science Approved Elective*	<b>Elective</b>
<b>Summer Semester</b>	<b>Elective</b>			

#### \* 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	FIT3171	Databases
FIT3139	Computational science	FIT3173	Software security
		FIT3175	Usability
		MTH3170	Network mathematics

Note that not all units will be taught in every year and some will be offered only in alternate years

#### NOTE :

<b>Credit points</b>	Unless specified, all units are worth 6 credit points Bachelor of Computer Science 24 units x 6 credit points = Total of 144 credit points
<b>Year Level Requirements</b>	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.
<b>Unit requisites</b>	All pre-requisite and co-requisite requirements must be undertaken in order to be able to enrol into a specific unit
<b>Duration of degree</b>	3 years full-time, 6 years part-time
<b>Time limit</b>	Time limit = 8 years. Students have eight years in which to complete this award from the time they commence first year. Periods of intermission are counted as part of the eight years.
<b>Monash University handbook</b>	Students should follow the course requirements for the year the course was commenced <a href="http://monash.edu/pubs/2016handbooks/courses/index-byfaculty-it.html">http://monash.edu/pubs/2016handbooks/courses/index-byfaculty-it.html</a>