

# BACHELOR OF COMPUTER SCIENCE (C2001) – 2021

## Advanced Computer Science Specialisation

### Year 1 / Level 1 (48 credit points)

February Semester	<a href="#">FIT1045</a> Algorithms and programming fundamentals in python	<a href="#">FIT1047</a> Introduction to computer systems, networks and security	<a href="#">MAT1830</a> Discrete mathematics for computer science	Elective
July Semester	<a href="#">FIT1008</a> Introduction to computer science [FIT1045]	<a href="#">FIT1055</a> IT professional practice and ethics [12 points of FIT units]	<a href="#">MAT1841</a> Continuous mathematics for computer science	Elective

### Year 2 / Level 2 (48 credit points)

February Semester	<a href="#">FIT2004</a> Algorithms and data structures [FIT1008 and 6 points of Level 1 mathematics]	<a href="#">FIT2099</a> Object-oriented design and implementation [One of FIT1045 or FIT1048, FIT1051, FIT1008]	Elective	Elective
July Semester	<a href="#">FIT2014</a> Theory of computation [FIT1045 & MAT1830]	<a href="#">FIT2102</a> Programming paradigms [FIT1008]	<a href="#">FIT3171</a> Databases [One of FIT1045, FIT1048, FIT1051 or ENG1003]	Elective

### Year 3 / Level 3 (48 credit points)

February Semester	<a href="#">FIT3045</a> Industry-based learning (18 points) FIT3045 is equivalent to ONE Level 3 Computer Science Approved Elective (6 points) + TWO Level 3 Electives (12 points)			
July Semester	<a href="#">FIT3161</a> Computer science project 1 [FIT2004]	<a href="#">FIT3143</a> Parallel computing [FIT2004]	<a href="#">FIT3155</a> Advanced data structures and algorithms [FIT2004]	Elective
Summer Semester	<a href="#">FIT3162</a> Computer science project 2 [FIT3161]			

### List of elective units offered at the School of Information Technology, Monash University Malaysia.

The following electives are offered at both the Australia and Malaysia campuses. If you intend to apply for the [global intercampus program](#), please refer to the [course handbook](#) for electives which are offered specifically at the Australia campus. Note that the FIT3081, FIT3134 & FIT3183 units are currently offered at the Malaysia campus. In addition to the minimum one level 3 computer science approved elective, you can utilize the elective slots in the course map to enrol for additional level 3 computer science electives.

Apart from the listed electives below, you may opt to enrol for electives offered by other courses at Monash University, provided that you fulfil the unit prerequisites.

#### Level 1 Electives

FIT1043 Introduction to data science  
FIT1051 Programming fundamentals in JAVA

#### Level 2 Electives

FIT2081 Mobile application development  
FIT2086 Modelling for data science  
FIT2093 Introduction to cybersecurity  
FIT2100 Operating systems  
FIT2101 Software engineering process & management  
FIT2107 Software quality and testing

#### \*Level 3 Computer Science Approved Electives

FIT3077 Software engineering: architecture & design  
FIT3080 Artificial intelligence  
FIT3081 Image processing  
FIT3152 Data analytics  
FIT3159 Computer architecture  
FIT3175 Usability  
FIT3181 Deep learning  
FIT3182 Big data management and processing  
FIT3183 Malicious AI & dark side security

#### Level 3 Electives

FIT3003 Business intelligence & data warehousing  
FIT3134 Entrepreneurship  
FIT3179 Data visualisation

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### Additional Notes

<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 to be able to enrol into a specific unit.
<b>Duration of degree</b>	3 years full-time, 6 years part-time
<b>Course duration</b>	You have a maximum of 8 years to complete this course including any periods of intermission and suspension and must be continuously enrolled throughout.
<b>Monash University handbook</b>	Students should follow the course requirements for the year the course was commenced <a href="https://www.monash.edu/students/handbooks/faculty-info/undergrad/it">https://www.monash.edu/students/handbooks/faculty-info/undergrad/it</a>