BACHELOR OF COMPUTER SCIENCE (C2001) – 2026

(Specialisation : Algorithms and software)

Year 1 / Level 1 (48 credit points)

February Semester	**FIT1045** Introduction to programming	**FIT1047** Introduction to computer systems, networks and security	**FIT1058** Foundations of computing	**Elective**
July Semester	**FIT1008** Fundamentals of algorithms [FIT1045 & (FIT1058 or MAT1830)]	**FIT1055** IT professional practice and ethics [12 points of FIT units]	**Elective**	**Elective**

Year 2 / Level 2 (48 credit points

February Semester	**FIT2004** Algorithms and data structures [FIT1008 & (MAT1830 or FIT1058)]	**FIT2099** Object-oriented design and implementation [One of FIT1045 or FIT1051 or FIT1008]	**FIT2094** Databases [FIT1045 or FIT1051]	**Elective**
July Semester	**FIT2014** Theory of computation [FIT1008 & (FIT1058 or MAT1830)]	**FIT2102** Programming paradigms [FIT1008]	**FIT2109** Computer science workshop [FIT1047 & 1008]	**Elective**

Year 3 / Level 3 (48 credit points)

February Semester	**FIT3045** Industry-based learning (18 points) FIT3045 is equivalent to ONE Level 3 Algorithms and software Approved Elective (6 points) + TWO Level 3 Electives (12 points)			
July Semester	**FIT3161** Computer science project 1 [FIT1055, FIT2004, FIT2094, FIT2099 & 72 pts of study inc. 60 pts of FIT/MAT units]	**FIT3143** Parallel computing [FIT2004]	**FIT3155** Advanced data structures and algorithms [FIT2004]	**Elective**
Summer Semester	**FIT3162** Computer science project 2 [FIT3161]			

Important:

- ***Co-requisites and Pre-requisites units are subject to change. Please refer to the relevant Monash unit handbook or the most up-to-date information.***
- ***Students must also complete all General Studies requirements as part of their degree.***

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. In addition to the minimum one level 3 algorithms and software approved elective, you can utilize the elective slots in the course map to enrol for additional level 3 algorithms and software 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
FIT1056 Introduction to software engineering
FIT1061 Introduction to artificial intelligence

Level 2 Electives

FIT2081 Mobile application development
FIT2086 Modelling for data analysis
FIT2093 Cybersecurity tools and techniques
FIT2100 Operating systems
FIT2101 Software engineering process and management
FIT2107 Software quality and testing
FIT2179 Data visualisation

***Level 3 Algorithms and software Approved Elective**

FIT3080 Artificial intelligence
FIT3159 Computer architecture
FIT3182 Big data management and processing

Level 3 Electives

FIT3003 Business intelligence & data warehousing
FIT3077 Software engineering: Architecture and design
FIT3134 Entrepreneurship
FIT3152 Data analytics
FIT3154 Advanced data analysis
FIT3175 Usability
FIT3181 Deep learning
FIT3183 Malicious AI & dark side security

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Additional Notes

Credit points	Unless specified, all units are worth 6 credit points Bachelor of Computer Science 24 units x 6 credit points = Total of 144 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 to be able to enrol into a specific unit.
Duration of degree	3 years full-time
Course duration	You have a maximum of 8 years to complete this course including any periods of intermission and suspension and must be continuously enrolled throughout.
Monash University handbook	Students should follow the course requirements for the year the course was commenced https://www.monash.edu/students/handbooks/faculty-info/undergrad/it

While the information provided here was correct at the time of viewing and/or printing, you should carefully read all official correspondence and other sources of information for students to stay informed about any changes.

The placement and offering of units may be rearranged or revised based on school resources or faculty planning.

If you opt for the IBL and the semester placement of FIT3045 differs from the above, and/or opt for an overseas exchange program, you may need to either overload a semester, undertake a summer unit or extend an additional semester in order to complete your course. Please consult the course coordinator.