

BACHELOR OF COMPUTER SCIENCE (C2001) – 2021

Advanced Computer Science Specialisation

Year 1 / Level 1 (48 credit points)

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

Year 2 / Level 2 (48 credit points)

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|-------------------|--|--|---|----------|
| July Semester | FIT2014 Theory of computation [FIT1045 & MAT1830] | FIT2102 Programming paradigms [FIT1008] | FIT2004 Algorithms and data structures [FIT1008 and 6 points of Level 1 mathematics] | Elective |
| February Semester | FIT3161 Computer science project 1 [FIT2004] | FIT2099 Object-oriented design and implementation [One of FIT1045, FIT1048, FIT1051, FIT1008] | FIT3155 Advanced data structures and algorithms [FIT2004] | Elective |

Year 3 / Level 3 (48 credit points)

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|-------------------|--|--|---|----------|
| July Semester | FIT3162 Computer science project 2 [FIT3161] | FIT3171 Databases [One of FIT1045, FIT1048, FIT1051 or ENG1003] | FIT3143 Parallel computing [FIT2004] | Elective |
| Summer Semester | Elective | | | |
| February Semester | FIT3045 Industry-based learning (18 points) FIT3045 is equivalent to ONE Level 3 Computer Science Approved Elective (6 points) + TWO Level 3 Electives (12 points) | | | |

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

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|-----------------------------------|---|
| 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, 6 years part-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 |