# Bachelor of Computer Science Advanced (Honours) (C3001) – 2017

## Year 1 (48 credit points)

### First Semester
- **FIT1045** Algorithms and programming fundamentals in python
- **FIT1047** Introduction to computer systems, networks and security
- **MAT1830** Discrete mathematics for computer science

### Second Semester
- **FIT1008** Introduction to computer science [FIT1045]
- **FIT1041** Research project 1
- **MAT1841** Continuous mathematics for computer science

## Year 2 (48 credit points)

### Summer Semester
- Elective

### First Semester
- **FIT2004** Algorithms and data structures [FIT1008]
- **FIT2083** Research methods in computer science [24 pts of level 1 FIT]

### Second Semester
- **FIT2014** Theory of computation [FIT1045 and MAT1830]
- **FIT2102** Programming paradigms [FIT1008]
- **FIT2082** Research project 2 [FIT1041 and FIT2083]

## Year 3 (48 credit points)

### First Semester
- **FIT3153** Research-based learning OR **FIT3045** Industry-based learning (18 points)

### Second Semester
- **FIT3155** Advanced data structures and algorithms [FIT2004 and FIT2102]
- **FIT3143** Parallel computing [FIT2004]
- **FIT3171** Databases [FIT2099]
- Level 3 Computer Science Approved Elective*

## Year 4 (48 credit points)

### First Semester
- **FIT4441** Honours thesis – part 1
- **FIT4442** Honours thesis – part 2
- **FIT4443** Honours thesis – part 3

### Second Semester
- **FIT4444** Honours thesis – final

### Approved Computer Science Electives:
- FIT3031 Information and network security
- FIT3077 Software engineering: architecture and design
- FIT3080 Artificial intelligence and virtual environments
- FIT3094 Artificial life, artificial intelligence and virtual environments
- FIT3139 Computational science
- FIT3142 Distributed computing
- FIT3146 Emerging technologies and interfaces
- FIT3152 Data analytics
- FIT3159 Computer architecture
- FIT3165 Computer networks
- FIT3173 Software security
- FIT3175 Usability
- MTH3170 Network mathematics
- Note that not all units will be taught in every year and come will be offered only in alternate years

## Notes
- 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.
- Monash University handbook: Students should follow the course requirements for the year the course was commenced

C3001: October 2016