

## Bachelor of Computer Science – Semester 1 Start

Year 1				
S1	MATHS 1011 Mathematics IA ** or Level I Elective #	<input type="checkbox"/>	ENG 1002 Programming (Matlab and C) * <input type="checkbox"/>	Level I Elective # <input type="checkbox"/>
S2	MATHS 1012 Mathematics IB ** or MATHS 1004 Mathematics for Data Science **	<input type="checkbox"/> <input type="checkbox"/>	COMP SCI 1102 Object Oriented Programming <input type="checkbox"/>	COMP SCI 1106 Introduction to Software Engineering <input type="checkbox"/>
Level I Elective # <input type="checkbox"/>				
Year 2				
S1	COMP SCI 2103 Algorithm Design and Data Structures <input type="checkbox"/>	COMP SCI 2207 Web & Database Computing <input type="checkbox"/>	Level II Elective # <input type="checkbox"/>	Level I/II/III Elective # <input type="checkbox"/>
S2	COMP SCI 2201 Algorithm & Data Structure Analysis <input type="checkbox"/>	COMP SCI 2000 Computer Systems <input type="checkbox"/>	Level II Elective # <input type="checkbox"/>	Level I/II/III Elective # <input type="checkbox"/>
Year 3				
Please see the following page for 3 <sup>rd</sup> Year course selection. The course choice is dependent on the major stream that you choose. Your choice is from the following: Computer Science, Artificial Intelligence, Data Sciences, Cybersecurity and Distributed Systems and Networking				

### NOTES

#### \* STUDENTS WITH PRIOR PROGRAMMING EXPERIENCE

Do not need to complete ENG 1002 Programming (Matlab and C) and can replace it with a level I Elective. If it is replaced, the following courses must be completed in the order, first COMP SCI 1102, then COMP SCI 2103 and then COMP SCI 2201. However, these courses and COMP SCI 2000 may be completed one semester earlier than shown above.

\*\* Students must complete either MATHS 1004 Mathematics for Data Science or MATHS 1012 Mathematics IB, but may not present both towards their degree.

\*\* To enrol in MATHS 1012 Mathematics IB students must first pass MATHS 1011 Mathematics IA, this is presented as a level 1 elective. Entry into MATHS 1011 Mathematics IA requires SACE Stage 2 Specialist Mathematics, or a pass in MATHS 1013 Mathematics IM.

# Electives must include Broadening Electives to the value of 9 units that are not from the following subject areas: COMP SCI, MATHS, PURE MTH, APP MATH, STATS.

**Electives** may be any University of Adelaide Undergraduate course for which the student meets the pre-requisites. Please check the availability, restriction and incompatible section on the course planner for elective choices.

How to choose an elective course in your area of interest? Please refer to the steps via the link: <https://ecms.adelaide.edu.au/study-with-us/student-support/enrolment>

#### Further Information and Enrolment Advice

Faculty of Engineering, Computer and Mathematical Sciences

Email: [askecms@adelaide.edu.au](mailto:askecms@adelaide.edu.au)

[www.ecms.adelaide.edu.au](http://www.ecms.adelaide.edu.au)

### Year 3 Major List Options:

Year 3 – Computer Science				
S1	MATHS 3025 Professional Practice III or ENTREP 3901 Tech eChallenge <input type="checkbox"/>	COMP SCI Level III Elective <input type="checkbox"/>	COMP SCI Level III Elective <input type="checkbox"/>	COMP SCI Level III Elective <input type="checkbox"/>
S2	COMP SCI Level 3 Software Engineering & Project Course <input type="checkbox"/>	COMP SCI 3004 Operating Systems <input type="checkbox"/>	COMP SCI Level III Elective <input type="checkbox"/>	Level III Elective # <input type="checkbox"/>
Year 3 – Artificial Intelligence				
S1	MATHS 3025 Professional Practice III or ENTREP 3901 Tech eChallenge <input type="checkbox"/>	COMP SCI 3007 Artificial Intelligence <input type="checkbox"/>	COMP SCI 3315 Computer Vision %2 <input type="checkbox"/> or COMP SCI Level III Elective <input type="checkbox"/>	Level III Elective # <input type="checkbox"/>
S2	COMP SCI 3310 Software Engineering & Project (Artificial Intelligence) <input type="checkbox"/>	COMP SCI 3004 Operating Systems <input type="checkbox"/>	COMP SCI 3314 Introduction to Statistical Machine Learning %2 <input type="checkbox"/> or COMP SCI Level III Elective <input type="checkbox"/>	COMP SCI 3316 Evolutionary Computation <b>NOT OFFERED 2019 %2</b> <input type="checkbox"/> or COMP SCI Level III Elective <input type="checkbox"/>
Year 3 – Data Science				
S1	MATHS 3025 Professional Practice III or ENTREP 3901 Tech eChallenge <input type="checkbox"/>	COMP SCI 3306 Mining Big Data <input type="checkbox"/>	COMP SCI 3305 Parallel and Distributed Computing %1 <input type="checkbox"/> or COMP SCI Level III Elective <input type="checkbox"/>	STATS 3001 Statistical Modelling III ^ %1 <input type="checkbox"/> or STATS 3006 Mathematical Statistics III ^ %1 <input type="checkbox"/> or Level III Elective # <input type="checkbox"/>
S2	COMP SCI 3311 Software Engineering & Project (Data Science) <input type="checkbox"/>	COMP SCI 3004 Operating Systems <input type="checkbox"/>	COMP SCI 3314 Introduction to Statistical Machine Learning <input type="checkbox"/>	COMP SCI Level III Elective <input type="checkbox"/>
Year 3 – Cybersecurity				
S1	MATHS 3025 Professional Practice III or ENTREP 3901 Tech eChallenge <input type="checkbox"/>	COMP SCI 3308 Cyber Security Fundamentals <input type="checkbox"/>	COMP SCI 3001 Computer Networks and Applications %1 <input type="checkbox"/> or COMP SCI Level III Elective <input type="checkbox"/>	COMP SCI Level III Elective <input type="checkbox"/>
S2	COMP SCI 3312 Software Engineering & Project (Cybersecurity) <input type="checkbox"/>	COMP SCI 3004 Operating Systems <input type="checkbox"/>	COMP SCI 3307 Secure Programming <input type="checkbox"/>	MATHS 3026 Cryptography ^ %1 <input type="checkbox"/> or Level III Elective # <input type="checkbox"/>

**Year 3 – Distributed Systems and Networking**

S1	MATHS 3025 Professional Practice III or ENTREP 3901 Tech eChallenge	<input type="checkbox"/> <input type="checkbox"/>	COMP SCI 3001 Computer Networks and Applications	<input type="checkbox"/>	COMP SCI 3305 Parallel and Distributed Computing or COMP SCI Level III Elective	<input type="checkbox"/> <input type="checkbox"/>	COMP SCI Level III Elective	<input type="checkbox"/>
S2	COMP SCI 3313 Software Engineering & Project (Distributed Systems and Networking)	<input type="checkbox"/>	COMP SCI 3004 Operating Systems	<input type="checkbox"/>	COMP SCI 3012 Distributed Systems	<input type="checkbox"/>	Level III Elective #	<input type="checkbox"/>

^ To enrol in MATHS 3026, STATS 3001 or STATS 3006 students must first complete MATHS 1012 and then the required Level II pre-requisites.

%1 Students must complete at least one of:

- COMP SCI 3305, STATS 3001 and STATS 3006 as part of the **Data Science** major.
- COMP SCI 3001 and MATHS 3026 as part of the **Cybersecurity** major.

%2 Students must complete at least two of COMP SCI 3314, COMP SCI 3315 and COMP SCI 3316 as part of the **Artificial Intelligence** major.

**Software Engineering and Project Courses Table**

**Choose ONE of the following LEVEL 3 SOFTWARE ENGINEERING AND PROJECT Courses**

S2	COMP SCI 3006 Software Engineering & Project	<input type="checkbox"/>	COMP SCI 3310 Software Engineering & Project (Artificial Intelligence)	<input type="checkbox"/>	COMP SCI 3311 Software Engineering & Project (Data Science)	<input type="checkbox"/>	COMP SCI 3312 Software Engineering & Project (Cybersecurity)	<input type="checkbox"/>
	COMP SCI 3313 Software Engineering & Project (Distributed Systems & Networking)	<input type="checkbox"/>						

### Engineering Electives Table

COMPUTER SCIENCE ELECTIVES				
S1	COMP SCI 1010 Puzzle Based Learning <input type="checkbox"/>	COMP SCI 2005 Systems Programming <input type="checkbox"/>	COMP SCI 3001 Computer Networks and Applications <input type="checkbox"/>	COMP SCI 3005 Computer Architecture <input type="checkbox"/>
	COMP SCI 3007 Artificial Intelligence <input type="checkbox"/>	COMP SCI 3305 Parallel and Distributed Computing <input type="checkbox"/>	COMP SCI 3306 Mining Big Data <input type="checkbox"/>	COMP SCI 3308 Cybersecurity Fundamentals <input type="checkbox"/>
	COMP SCI 3315 Computer Vision <input type="checkbox"/>			
WS	COMP SCI 3309 Cybersecurity A Practical Application <input type="checkbox"/>			
S2	COMP SCI 2203 Problem Solving and Software Development <input type="checkbox"/>	COMP SCI 3012 Distributed Systems <input type="checkbox"/>	COMP SCI 3307 Secure Programming <input type="checkbox"/>	COMP SCI 3314 Introduction to Statistical Machine Learning <input type="checkbox"/>