

# Bachelor of Engineering (Honours)(Software)

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# Bachelor of Engineering (Honours)(Software) Program Notes

## Internship

All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies. Internships are self-sourced and further information can be found on the Engineering Internships web page: <https://ecms.adelaide.edu.au/study-with-us/student-support/internships/engineering>.

## Entrepreneurship Minor

An Entrepreneurship Minor can be presented within the program, please refer to the [Entrepreneurship Minor page](#). Please note the Entrepreneurship Minor can only be presented in the Standard Degree, as there is not enough elective space in the majors to accommodate the courses required for the Entrepreneurship Minor.

## Links and Further Information

- [Course Planner](#) Information about University courses, including availability, class times, restrictions and prerequisites.
- [University Calendar](#) All academic program rules.
- **Contact Ask ECMS:** [askecms@adelaide.edu.au](mailto:askecms@adelaide.edu.au) • +61 8 8313 4148 • [www.ecms.adelaide.edu.au](http://www.ecms.adelaide.edu.au)

# Bachelor of Engineering (Honours)(Software) Standard Degree

	Course	Units	Status
<b>Year 1</b>			
S1	<a href="#">ELEC ENG 1100 Analog Electronics</a>	3	
S1	<sup>^</sup> <a href="#">ENG 1001 Introduction to Engineering</a>	3	
S1	<a href="#">ENG 1002 Programming (Matlab and C)</a>	3	
S1	<a href="#">MATHS 1011 Mathematics IA</a>	3	
S2	<a href="#">COMP SCI 1102 Object Oriented Programming</a>	3	
S2	<a href="#">COMP SCI 1106 Introduction to Software Engineering</a>	3	
S2	<a href="#">ELEC ENG 1102 Digital Electronics</a>	3	
S2	<a href="#">MATHS 1012 Mathematics IB</a>	3	
<b>Year 2</b>			
S1	<a href="#">COMP SCI 2103 Algorithm Design &amp; Data Structures</a>	3	
S1	<a href="#">COMP SCI 2205 Software Engineering Workshop I</a>	3	
S1	<a href="#">COMP SCI 2207 Web &amp; Database Computing</a>	3	
S1	Software Engineering Elective A	3	
S2	<a href="#">COMP SCI 2000 Computer Systems</a>	3	
S2	<a href="#">COMP SCI 2201 Algorithm &amp; Data Structure Analysis</a>	3	
S2	<a href="#">COMP SCI 2206 Software Engineering Workshop II</a>	3	
S2	<a href="#">MATHS 2107 Statistics &amp; Numerical Methods II</a>	3	
<b>Year 3</b>			
S1	<a href="#">COMP SCI 3001 Computer Networks &amp; Applications</a>	3	
S1	<a href="#">COMP SCI 3303 Engineering Software as Services I</a>	3	
S1	<a href="#">ENG 3004 Systems Engineering and Industry Practice</a>	3	
S1	Software Engineering Elective B	3	
S2	<a href="#">COMP SCI 3004 Operating Systems</a>	3	
S2	<a href="#">COMP SCI 3304 Engineering Software as Services II</a>	3	
S2	Software Engineering Elective B	3	
S2	Software Engineering Elective B	3	
<b>Year 4</b>			
S1	<a href="#">COMP SCI 4023 Software Process Improvement</a>	3	
S1	<a href="#">COMP SCI 4405 Research Methods in Software Engineering and Computer Science</a>	3	
S1	<a href="#">COMP SCI 4414A Software Engineering Research Project A</a>	3	
S1	Software Engineering Elective C	3	
S2	<a href="#">COMP SCI 4411 Event Driven Computing</a>	3	
S2	<a href="#">COMP SCI 4414B Software Engineering Research Project B</a>	3	
S2	Software Engineering Elective C	3	
S2	Software Engineering Elective C	3	

Core Course		Elective Course (see elective tables)	
<b>CM</b> = Completed	<b>CR</b> = Credit Awarded	<b>EN</b> = Currently Enrolled	<b>ENROL</b> = Add to Enrolments

<sup>^</sup> Unless exempted, International students are required to take ENG 1011 Introduction to Engineering EAL in lieu of ENG 1001 Introduction to Engineering as advised by the Faculty.

# Bachelor of Engineering (Honours)(Software) Defence Systems Major

Course	Units	Status
<b>Year 1</b>		
S1	ELEC ENG 1100 Analog Electronics	3
S1	^ ENG 1001 Introduction to Engineering	3
S1	ENG 1002 Programming (Matlab and C)	3
S1	MATHS 1011 Mathematics IA	3
S2	COMP SCI 1102 Object Oriented Programming	3
S2	COMP SCI 1106 Introduction to Software Engineering	3
S2	ELEC ENG 1102 Digital Electronics	3
S2	MATHS 1012 Mathematics IB	3
<b>Year 2</b>		
S1	COMP SCI 2103 Algorithm Design & Data Structures	3
S1	COMP SCI 2205 Software Engineering Workshop I	3
S1	COMP SCI 2207 Web & Database Computing	3
S1	Software Engineering Elective A	3
S2	COMP SCI 2000 Computer Systems	3
S2	COMP SCI 2201 Algorithm & Data Structure Analysis	3
S2	COMP SCI 2206 Software Engineering Workshop II	3
S2	MATHS 2107 Statistics & Numerical Methods II	3
<b>Year 3</b>		
S1	COMP SCI 3001 Computer Networks & Applications	3
S1	COMP SCI 3303 Engineering Software as Services I	3
S1	ENG 3004 Systems Engineering and Industry Practice	3
S1	POLIS 1104 Introduction to Comparative Politics	3
S2	COMP SCI 3004 Operating Systems	3
S2	COMP SCI 3304 Engineering Software as Services II	3
S2	COMP SCI 3307 Secure Programming	3
S2	ENG 3305 Human Factors for Decision Making	3
<b>Year 4</b>		
S1	COMP SCI 4023 Software Process Improvement	3
S1	COMP SCI 4405 Research Methods in Software Engineering and Computer Science	3
S1	COMP SCI 4414A Software Engineering Research Project A	3
S1	ENG 4010 Defence Leadership	3
S2	COMP SCI 4411 Event Driven Computing	3
S2	COMP SCI 4092 Mobile and Wireless Systems	3
S2	COMP SCI 4414B Software Engineering Research Project B	3
S2	ENG 4020 Complex Systems Engineering	3

Core Course	Elective Course (see elective tables)	Major Course
CM = Completed	CR = Credit Awarded	EN = Currently Enrolled
		ENROL = Add to Enrolments

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering EAL in lieu of ENG 1001 Introduction to Engineering as advised by the Faculty.

# Bachelor of Engineering (Honours)(Software) Smart Technologies Major

Course	Units	Status
<b>Year 1</b>		
S1 ELEC ENG 1100 Analog Electronics	3	
S1 ^ ENG 1001 Introduction to Engineering	3	
S1 ENG 1002 Programming (Matlab and C)	3	
S1 MATHS 1011 Mathematics IA	3	
S2 COMP SCI 1102 Object Oriented Programming	3	
S2 COMP SCI 1106 Introduction to Software Engineering	3	
S2 ELEC ENG 1102 Digital Electronics	3	
S2 MATHS 1012 Mathematics IB	3	
<b>Year 2</b>		
S1 COMP SCI 2103 Algorithm Design & Data Structures	3	
S1 COMP SCI 2205 Software Engineering Workshop I	3	
S1 COMP SCI 2207 Web & Database Computing	3	
S1 Software Engineering Elective A	3	
S2 COMP SCI 2000 Computer Systems	3	
S2 COMP SCI 2201 Algorithm & Data Structure Analysis	3	
S2 COMP SCI 2206 Software Engineering Workshop II	3	
S2 MATHS 2107 Statistics & Numerical Methods II	3	
<b>Year 3</b>		
S1 COMP SCI 3001 Computer Networks & Applications	3	
S1 COMP SCI 3303 Engineering Software as Services I	3	
S1 ENG 3004 Systems Engineering and Industry Practice	3	
S1 COMP SCI 3007 Artificial Intelligence	3	
S2 COMP SCI 3004 Operating Systems	3	
S2 COMP SCI 3304 Engineering Software as Services II	3	
S2 Software Engineering Elective B or C	3	
S2 MECH ENG 3032 Micro-Controller Programming	3	
<b>Year 4</b>		
S1 COMP SCI 4023 Software Process Improvement	3	
S1 COMP SCI 4405 Research Methods in Software Engineering and Computer Science	3	
S1 COMP SCI 4414A Software Engineering Research Project A	3	
S1 ELEC ENG 2100 Digital Systems	3	
S2 COMP SCI 4411 Event Driven Computing	3	
S2 COMP SCI 4092 Mobile and Wireless Systems	3	
S2 COMP SCI 4414B Software Engineering Research Project B	3	
S2 COMP SCI 4812 Secure Software Engineering	3	

Core Course	Elective Course (see elective tables)	Major Course / Major Elective (see elective tables)
CM = Completed	CR = Credit Awarded	EN = Currently Enrolled
		ENROL = Add to Enrolments

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering EAL in lieu of ENG 1001 Introduction to Engineering as advised by the Faculty.

# Bachelor of Engineering (Honours)(Software)

## Elective Tables

Available	Course	Units	Status
<b>Software Engineering Elective A Table</b>			
S1	COMP SCI 2005 Systems Programming	3	
S1	ELEC ENG 2100 Digital Systems	3	
S1	POLIS 1104 Introduction to Comparative Politics	3	
S1 S2	ENTREP 1011 Entrepreneurship Foundations and Mindset	3	
S2	COMP SCI 2203 Problem Solving & Software Development	3	
<b>Software Engineering Elective B Table</b>			
Not Available	COMP SCI 3005 Computer Architecture	3	
Not Available	COMP SCI 3014 Computer Graphics	3	
Not Available	COMP SCI 3309 Cybersecurity A Practical Application	3	
Not Available	ENTREP 2051 Prototyping: Possibilities to Product	3	
S1	COMP SCI 3007 Artificial Intelligence	3	
S1	COMP SCI 3305 Parallel and Distributed Computing	3	
S1	COMP SCI 3306 Mining Big Data	3	
S1	COMP SCI 3308 Cybersecurity Fundamentals	3	
S1	COMP SCI 3315 Computer Vision	3	
S1	ENTREP 3015 Entrepreneurial Leadership	3	
S1	ENTREP 3017 Driving Decisions: Legal	3	
S1	ENTREP 3901 Tech eChallenge	3	
S2	COMP SCI 3012 Distributed Systems	3	
S2	COMP SCI 3307 Secure Programming	3	
S2	COMP SCI 3314 Introduction to Statistical Machine Learning	3	
S2	COMP SCI 3316 Evolutionary Computation	3	
S2	ELEC ENG 3108 Telecommunications Principles	3	
S2	ELEC ENG 4107 Autonomous Systems	3	
S2	ENG 3305 Human Factors for Decision Making	3	
S2	ENTREP 1006 Opportunity Assessment	3	
S2	ENTREP 3011 Startup Methodologies	3	
S2	ENTREP 3900 eChallenge	3	
S2	MECH ENG 3032 Micro-Controller Programming	3	
SS S2	ENTREP 3000 Innovation and Creativity	3	
<b>Software Engineering Elective C Table</b>			
Not Available	COMP SCI 4000 Software Architecture	3	
Not Available	COMP SCI 4010 Special Topics in Computer Science A	3	
Not Available	COMP SCI 4012 Special Topics in Computer Science B	3	
Not Available	COMP SCI 4094 Distributed Databases and Data Mining	3	
Not Available	COMP SCI 4408 Modelling and Analysis of Complex Systems	3	
Not Available	COMP SCI 4409 Search Based Software Engineering	3	
S1	COMP SCI 4407 Advanced Algorithms	3	
S1	COMP SCI 4413 Introduction to Quantum Computing	3	
S1	COMP SCI 4417 Applied Natural Language Processing UG	3	
S2	COMP SCI 4412 Secure Software Engineering	3	
S2	COMP SCI 4416 Applied Machine Learning UG	3	
S2	ENG 4020 Complex Systems Engineering	3	

# Bachelor of Engineering (Honours)(Software) Entrepreneurship Minor

Minors are undertaken by taking 12 units of courses as outlined below. Please note the Entrepreneurship Minor can only be presented in the Standard Degree, as there is not enough elective space in the majors to accommodate the courses required for the Entrepreneurship Minor.

Available	Course	Units	Status
<b>Entrepreneurship Minor</b>			
S1	<a href="#">ENTREP 3015 Entrepreneurial Leadership</a>	3	
S2	<a href="#">ENTREP 3011 Startup Methodologies</a>	3	
SS S2	<a href="#">ENTREP 3000 Innovation and Creativity</a>	3	
	And one of:		
S1	<a href="#">ENTREP 3901 Tech eChallenge</a>	3	
S2	<a href="#">ENTREP 3900 eChallenge</a>	3	