# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

THE UNIVERSITY of ADELAIDE

# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

## No Major

| | | | | |
|---|---|---|---|---|
| **Year 1** | | | | |
| S 1 | ^ENG 1001 Introduction to Engineering ☐ | ELEC ENG 1100 Analog Electronics ☐ | ENG 1002 Programming (Matlab and C) ☐ | MATHS 1011 Mathematics IA ☐ |
| S 2 | PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics ☐ | ELEC ENG 1102 Digital Electronics ☐ | COMP SCI 1102 Object Oriented Programming ☐ | MATHS 1012 Mathematics IB ☐ |
| **Year 2** | | | | |
| S 1 | ELEC ENG 2100 Digital Systems ☐ | ELEC ENG 2101 Electronic Circuits ☐ | ELEC ENG 2102 Electric Energy Conversion ☐ | MATHS 2106 Differential Equations for Engineers II ☐ |
| S 2 | ELEC ENG 2103 Design & Innovation ☐ | ELEC ENG 2104 Digital Signal Processing ☐ | ELEC ENG 2106 Vector Calculus & Electromagnetics ☐ | MATHS 2107 Statistics & Numerical Methods II ☐ |
| **Year 3** | | | | |
| S 1 | ELEC ENG 3103 Engineering Electromagnetics ☐ | ELEC ENG 3101 Control ☐ | COMP SCI 2103 Algorithm Design & Data Structures ☐ | COMP SCI 2000 Computer Systems ☐ |
| S 2 | ELEC ENG 3104 Electric Drive Systems ☐ | ELEC ENG 3110 Electric Power Systems ☐ | COMP SCI 2201 Algorithm & Data Structure Analysis ☐ | ~Level II or III COMP SCI Elective ☐ |
| **Internship** | | | | |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table. | | | | |
| **Year 4** | | | | |
| S 1 | ENG 3004 Systems Engineering & Industry Practice ☐ | E&E Engineering Elective (see elective table) ☐ | ~Level III COMP SCI Elective ☐ | ~Level III COMP SCI Elective ☐ |
| S 2 | ELEC ENG 4105 Real-Time and Embedded Systems ☐ | ELEC ENG 4106 Radio Frequency Systems ☐ | ENG 3005 Research Method & Project Management ☐ | COMP SCI 3006 Software Engineering & Project ☐ |
| **Year 5** | | | | |
| S 1 | ENG 4001A Research Project Part A ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ |
| S 2 | ENG 4001B Research Project Part B ☐ | ELEC ENG 4100 Business Management Systems ☐ | E&E Engineering Elective (see elective table) ☐ | ~Level III COMP SCI Elective ☐ |

| Core Course | Elective (see table) | Double Degree Courses |
|---|---|---|

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

~ COMP SCI Electives may be chosen from the courses listed in the Program Rules for the Bachelor of Mathematics and Computer Sciences: https://calendar.adelaide.edu.au/faculty/ecms

# Electives Table

| CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES | | | | | |
|---|---|---|---|---|---|
| **S1** | COMP SCI 2103 | Algorithm Design & Data Structures | **S2** | COMP SCI 2103 | Algorithm Design & Data Structures |
| | COMP SCI 3001 | Computer Networks & Applications | | COMP SCI 3006 | Software Engineering & Project |
| | ELEC ENG 3088 | Computer Architecture | | ELEC ENG 3108 | Telecommunications Principles |
| | ELEC ENG 4058 | Power Quality & Condition Monitoring | | ELEC ENG 3113 | Principles of Medical Imaging |
| | ELEC ENG 4063 | Communications | | ELEC ENG 4061 | Image Processing |
| | ELEC ENG 4069 | Radar Principles & Systems | | ELEC ENG 4067 | Antennas and Propagation |
| | ELEC ENG 4109 | Digital Microelectronics | | ELEC ENG 4087 | Electricity Market and Power System Operations |
| | ELEC ENG 4112 | Signal Processing Applications | | ELEC ENG 4107 | Autonomous Systems |
| | | | | ELEC ENG 4111 | Distributed Generation Technologies |
| | | | | ELEC ENG 4115 | Biomedical Instrumentation |

**NOTES**

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# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

## Communication Systems Major

| | | | | |
|---|---|---|---|---|
| **Year 1** | | | | |
| S 1 | ^ENG 1001 Introduction to Engineering ☐ | ELEC ENG 1100 Analog Electronics ☐ | ENG 1002 Programming (Matlab and C) ☐ | MATHS 1011 Mathematics IA ☐ |
| S 2 | PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics ☐ | ELEC ENG 1102 Digital Electronics ☐ | COMP SCI 1102 Object Oriented Programming ☐ | MATHS 1012 Mathematics IB ☐ |
| **Year 2** | | | | |
| S 1 | ELEC ENG 2100 Digital Systems ☐ | ELEC ENG 2101 Electronic Circuits ☐ | ELEC ENG 2102 Electric Energy Conversion ☐ | MATHS 2106 Differential Equations for Engineers II ☐ |
| S 2 | ELEC ENG 2103 Design & Innovation ☐ | ELEC ENG 2104 Digital Signal Processing ☐ | ELEC ENG 2106 Vector Calculus & Electromagnetics ☐ | MATHS 2107 Statistics & Numerical Methods II ☐ |
| **Year 3** | | | | |
| S 1 | COMP SCI 2103 Algorithm Design & Data Structures ☐ | ELEC ENG 3101 Control ☐ | ELEC ENG 3103 Engineering Electromagnetics ☐ | COMP SCI 2000 Computer Systems ☐ |
| S 2 | ELEC ENG 3108 Telecommunications Principles ☐ | COMP SCI 2201 Algorithm & Data Structure Analysis ☐ | ~Level II or III COMP SCI Elective ☐ | ~Level II or III COMP SCI Elective ☐ |
| **Internship** | | | | |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table. | | | | |
| **Year 4** | | | | |
| S 1 | COMP SCI 3001 Computer Networks & Applications ☐ | ENG 3004 Systems Engineering & Industry Practice ☐ | ~Level III COMP SCI Elective ☐ | ~Level III COMP SCI Elective ☐ |
| S 2 | ELEC ENG 4054 Telecommunication Systems ☐ | ELEC ENG 4106 Radio Frequency Systems ☐ | ENG 3005 Research Method & Project Management ☐ | COMP SCI 3006 Software Engineering & Project ☐ |
| **Year 5** | | | | |
| S 1 | ENG 4001A Research Project Part A ☐ | ELEC ENG 4063 Communications ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ |
| S 2 | ENG 4001B Research Project Part B ☐ | ELEC ENG 4100 Business Management Systems ☐ | E&E Engineering Elective (see elective table) ☐ | ~Level III COMP SCI Elective ☐ |

| Core Course | Major course | Elective (see table) | Double Degree Courses |
|---|---|---|---|

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

~ COMP SCI Electives may be chosen from the courses listed in the Program Rules for the Bachelor of Mathematics and Computer Sciences: https://calendar.adelaide.edu.au/faculty/ecms

# Electives Table

| CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES | | | | | |
|---|---|---|---|---|---|
| | COMP SCI 3007 | Artificial Intelligence | | ELEC ENG 4061 | Image Processing |
| | ELEC ENG 3088 | Computer Architecture | | ELEC ENG 4067 | Antennas and Propagation |
| **S1** | ELEC ENG 4069 | Radar Principles & Systems | **S2** | ELEC ENG 4105 | Real-Time & Embedded Systems |
| | ELEC ENG 4109 | Digital Microelectronics | | | |
| | ELEC ENG 4112 | Signal Processing Applications | | | |

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# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

## Computer Engineering Major

| | | | | |
|---|---|---|---|---|
| **Year 1** | | | | |
| S1 | ^ENG 1001 Introduction to Engineering ☐ | ELEC ENG 1100 Analog Electronics ☐ | ENG 1002 Programming (Matlab and C) ☐ | MATHS 1011 Mathematics IA ☐ |
| S2 | PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics ☐ | ELEC ENG 1102 Digital Electronics ☐ | COMP SCI 1102 Object Oriented Programming ☐ | MATHS 1012 Mathematics IB ☐ |
| **Year 2** | | | | |
| S1 | ELEC ENG 2100 Digital Systems ☐ | ELEC ENG 2101 Electronic Circuits ☐ | ELEC ENG 2102 Electric Energy Conversion ☐ | MATHS 2106 Differential Equations for Engineers II ☐ |
| S2 | ELEC ENG 2103 Design & Innovation ☐ | ELEC ENG 2104 Digital Signal Processing ☐ | ELEC ENG 2106 Vector Calculus & Electromagnetics ☐ | MATHS 2107 Statistics & Numerical Methods II ☐ |
| **Year 3** | | | | |
| S1 | COMP SCI 2103 Algorithm Design & Data Structures ☐ | ELEC ENG 3101 Control ☐ | ELEC ENG 3103 Engineering Electromagnetics ☐ | COMP SCI 2000 Computer Systems ☐ |
| S2 | ELEC ENG 4105 Real-Time and Embedded Systems ☐ | COMP SCI 2201 Algorithm & Data Structure Analysis ☐ | ~Level II or III COMP SCI Elective ☐ | ~Level II or III COMP SCI Elective ☐ |
| **Internship** | | | | |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table. | | | | |
| **Year 4** | | | | |
| S1 | ELEC ENG 3088 Computer Architecture ☐ | COMP SCI 3001 Computer Networks & Applications ☐ | ~Level III COMP SCI Elective ☐ | ~Level III COMP SCI Elective ☐ |
| S2 | ENG 3004 Systems Engineering & Industry Practice ☐ | ENG 3005 Research Method & Project Management ☐ | ~Level III COMP SCI Elective ☐ | COMP SCI 3006 Software Engineering & Project ☐ |
| **Year 5** | | | | |
| S1 | ENG 4001A Research Project Part A ☐ | ELEC ENG 4109 Digital Microelectronics ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ |
| S2 | ENG 4001B Research Project Part B ☐ | COMP SCI 3004 Operating Systems ☐ | ELEC ENG 4100 Business Management Systems ☐ | E&E Engineering Elective (see elective table) ☐ |

| Core Course | Major course | Elective (see table) | Double Degree Courses |
|---|---|---|---|

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

~ COMP SCI Electives may be chosen from the courses listed in the Program Rules for the Bachelor of Mathematics and Computer Sciences: https://calendar.adelaide.edu.au/faculty/ecms

# Electives Table

| CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES | | | | | |
|---|---|---|---|---|---|
| **S1** | COMP SCI 3007 | Artificial Intelligence | **S2** | COMP SCI 3006 | Software Engineering & Project |
| | COMP SCI 3308 | Cybersecurity Fundamentals | | COMP SCI 3307 | Secure Programming |
| | ELEC ENG 4112 | Signal Processing Applications | | ELEC ENG 3104 | Electric Drive Systems |
| | | | | ELEC ENG 3108 | Telecommunications Principles |
| | | | | ELEC ENG 4061 | Image Processing |
| | | | | ELEC ENG 4106 | Radio Frequency Systems |

**NOTES**

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# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

## Cybersecurity Major

| | | | | |
|---|---|---|---|---|
| **Year 1** | | | | |
| S1 | ^ENG 1001 Introduction to Engineering ☐ | ELEC ENG 1100 Analog Electronics ☐ | ENG 1002 Programming (Matlab and C) ☐ | MATHS 1011 Mathematics IA ☐ |
| S2 | PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics ☐ | ELEC ENG 1102 Digital Electronics ☐ | COMP SCI 1102 Object Oriented Programming ☐ | MATHS 1012 Mathematics IB ☐ |
| **Year 2** | | | | |
| S1 | ELEC ENG 2100 Digital Systems ☐ | ELEC ENG 2101 Electronic Circuits ☐ | ELEC ENG 2102 Electric Energy Conversion ☐ | MATHS 2106 Differential Equations for Engineers II ☐ |
| S2 | ELEC ENG 2103 Design & Innovation ☐ | ELEC ENG 2104 Digital Signal Processing ☐ | ELEC ENG 2106 Vector Calculus & Electromagnetics ☐ | MATHS 2107 Statistics & Numerical Methods II ☐ |
| **Year 3** | | | | |
| S1 | COMP SCI 2103 Algorithm Design & Data Structures ☐ | COMP SCI 2000 Computer Systems ☐ | ELEC ENG 3101 Control ☐ | ELEC ENG 3103 Engineering Electromagnetics ☐ |
| S2 | COMP SCI 2201 Algorithm & Data Structure Analysis ☐ | COMP SCI 3004 Operating Systems ☐ | ~Level II or III COMP SCI Elective ☐ | ~Level II or III COMP SCI Elective ☐ |
| **Internship** | | | | |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table. | | | | |
| **Year 4** | | | | |
| S1 | COMP SCI 3308 Cybersecurity Fundamentals ☐ | ENG 3004 Systems Engineering & Industry Practice ☐ | ~Level II or III COMP SCI Elective ☐ | ~Level III COMP SCI Elective ☐ |
| S2 | COMP SCI 3307 Secure Programming ☐ | ENG 3005 Research Method & Project Management ☐ | ~Level II or III COMP SCI Elective ☐ | COMP SCI 3006 Software Engineering & Project ☐ |
| **Year 5** | | | | |
| S1 | ENG 4001A Research Project Part A ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ | ~Level III COMP SCI Elective ☐ |
| S2 | ENG 4001B Research Project Part B ☐ | ELEC ENG 4100 Business Management Systems ☐ | E&E Engineering Elective (see elective table) ☐ | ~Level III COMP SCI Elective ☐ |

| Core Course | Major course | Elective (see table) | Double Degree Courses |
|---|---|---|---|

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

~ COMP SCI Electives may be chosen from the courses listed in the Program Rules for the Bachelor of Mathematics and Computer Sciences: https://calendar.adelaide.edu.au/faculty/ecms

# Electives Table

| CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES | | | | | |
|---|---|---|---|---|---|
| **S1** | COMP SCI 3001 | Computer Networks & Applications | **S2** | COMP SCI 3006 | Software Engineering & Project |
| | ELEC ENG 4063 | Communications | | ELEC ENG 3104 | Electric Drive Systems |
| | ELEC ENG 4109 | Digital Microelectronics | | ELEC ENG 3108 | Telecommunications Principles |
| | | | | ELEC ENG 4061 | Image Processing |
| | | | | ELEC ENG 4105 | Real-Time & Embedded Systems |
| | | | | ELEC ENG 4106 | Radio Frequency Systems |

**NOTES**

**Internships:** 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.

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**Information and Enrolment Advice:**
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Website: https://ecms.adelaide.edu.au/study-with-us/student-support

THE UNIVERSITY of ADELAIDE

# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

## Defence Systems Major

| | | | | |
|---|---|---|---|---|
| **Year 1** | | | | |
| S1 | ^ENG 1001 Introduction to Engineering ☐ | ELEC ENG 1100 Analog Electronics ☐ | ENG 1002 Programming (Matlab and C) ☐ | MATHS 1011 Mathematics IA ☐ |
| S2 | PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics ☐ | ELEC ENG 1102 Digital Electronics ☐ | COMP SCI 1102 Object Oriented Programming ☐ | MATHS 1012 Mathematics IB ☐ |
| **Year 2** | | | | |
| S1 | ELEC ENG 2100 Digital Systems ☐ | ELEC ENG 2101 Electronic Circuits ☐ | ELEC ENG 2102 Electric Energy Conversion ☐ | MATHS 2106 Differential Equations for Engineers II ☐ |
| S2 | ELEC ENG 2103 Design & Innovation ☐ | ELEC ENG 2104 Digital Signal Processing ☐ | ELEC ENG 2106 Vector Calculus & Electromagnetics ☐ | MATHS 2107 Statistics & Numerical Methods II ☐ |
| **Year 3** | | | | |
| S1 | ELEC ENG 3103 Engineering Electromagnetics ☐ | ELEC ENG 3101 Control ☐ | COMP SCI 2103 Algorithm Design & Data Structures ☐ | COMP SCI 2000 Computer Systems ☐ |
| S2 | ENG 3305 Human Factors for Decision Making ☐ | ELEC ENG 4107 Autonomous Systems ☐ | COMP SCI 2201 Algorithm & Data Structure Analysis ☐ | ~Level II or III COMP SCI Elective ☐ |
| **Internship** | | | | |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table. | | | | |
| **Year 4** | | | | |
| S1 | POLIS 1104 Introduction to Comparative Politics ☐ | ENG 3004 Systems Engineering & Industry Practice ☐ | ~Level III COMP SCI Elective ☐ | ~Level III COMP SCI Elective ☐ |
| S2 | ELEC ENG 4106 Radio Frequency Systems ☐ | ENG 3005 Research Method & Project Management ☐ | ~Level III COMP SCI Elective ☐ | COMP SCI 3006 Software Engineering & Project ☐ |
| **Year 5** | | | | |
| S1 | ENG 4001A Research Project Part A ☐ | ENG 4010 Defence Leadership ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ |
| S2 | ENG 4001B Research Project Part B ☐ | ENG 4020 Complex Systems Engineering ☐ | E&E Engineering Elective (see elective table) ☐ | ELEC ENG 4100 Business Management Systems ☐ |

| Core Course | Major course | Elective (see table) | Double Degree Courses |
|---|---|---|---|

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# Electives Table

| CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES | | | | | |
|---|---|---|---|---|---|
| **S1** | COMP SCI 2103 | Algorithm Design & Data Structures | **S2** | COMP SCI 2103 | Algorithm Design & Data Structures |
| | COMP SCI 3001 | Computer Networks & Applications | | ELEC ENG 3108 | Telecommunications Principles |
| | ELEC ENG 4063 | Communications | | ELEC ENG 4061 | Image Processing |
| | ELEC ENG 4069 | Radar Principles & Systems | | ELEC ENG 4067 | Antennas & Propagation |
| | ELEC ENG 4109 | Digital Microelectronics | | ELEC ENG 4111 | Distributed Generation Technologies |
| | ELEC ENG 4112 | Signal Processing Applications | | | |

**NOTES**

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# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

## Medical Technologies Major

| | | | | |
|---|---|---|---|---|
| **Year 1** | | | | |
| S1 | ^ENG 1001 Introduction to Engineering ☐ | ELEC ENG 1100 Analog Electronics ☐ | ENG 1002 Programming (Matlab and C) ☐ | MATHS 1011 Mathematics IA ☐ |
| S2 | PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics ☐ | ELEC ENG 1102 Digital Electronics ☐ | COMP SCI 1102 Object Oriented Programming ☐ | MATHS 1012 Mathematics IB ☐ |
| **Year 2** | | | | |
| S1 | ELEC ENG 2100 Digital Systems ☐ | ELEC ENG 2101 Electronic Circuits ☐ | ELEC ENG 2102 Electric Energy Conversion ☐ | MATHS 2106 Differential Equations for Engineers II ☐ |
| S2 | ELEC ENG 2103 Design & Innovation ☐ | ELEC ENG 2104 Digital Signal Processing ☐ | ELEC ENG 2106 Vector Calculus & Electromagnetics ☐ | MATHS 2107 Statistics & Numerical Methods II ☐ |
| **Year 3** | | | | |
| S1 | ANAT SC 1102 Human Anatomy and Physiology IA ☐ | ELEC ENG 3103 Engineering Electromagnetics ☐ | ELEC ENG 3101 Control ☐ | COMP SCI 2103 Algorithm Design & Data Structures ☐ |
| S2 | ELEC ENG 3113 Principles of Medical Imaging ☐ | COMP SCI 2000 Computer Systems ☐ | COMP SCI 2201 Algorithm & Data Structure Analysis ☐ | ~Level II or III COMP SCI Elective ☐ |
| **Internship** | | | | |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table. | | | | |
| **Year 4** | | | | |
| S1 | ENG 3101 Introduction to Medical Technologies ☐ | ENG 3004 Systems Engineering & Industry Practice ☐ | ~Level III COMP SCI Elective ☐ | ~Level III COMP SCI Elective ☐ |
| S2 | ELEC ENG 4115 Biomedical Instrumentation ☐ | ENG 3005 Research Method & Project Management ☐ | ~Level III COMP SCI Elective ☐ | COMP SCI 3006 Software Engineering & Project ☐ |
| **Year 5** | | | | |
| S1 | ENG 4001A Research Project Part A ☐ | PHYSIOL 2510 Physiology IIA: Heart, Lung & Neuromuscular Systems ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ |
| S2 | ENG 4001B Research Project Part B ☐ | MECH ENG 4101 Biomechanical Engineering ☐ | ELEC ENG 4100 Business Management Systems ☐ | E&E Engineering Elective (see elective table) ☐ |

| Core Course | Major course | Elective (see table) | Double Degree Courses |
|---|---|---|---|

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

~ COMP SCI Electives may be chosen from the courses listed in the Program Rules for the Bachelor of Mathematics and Computer Sciences: https://calendar.adelaide.edu.au/faculty/ecms

# Electives Table

| CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES | | | | | |
|---|---|---|---|---|---|
| **S1** | ANAT SC 2006 | Foundations of Human Neuroanatomy | **S2** | COMP SCI 2103 | Algorithm Design & Data Structures |
| | ANAT SC 2109 | Biology and Development of Human Tissues | | ELEC ENG 3108 | Telecommunications Principles |
| | COMP SCI 2103 | Algorithm Design & Data Structures | | ELEC ENG 4061 | Image Processing |
| | ELEC ENG 4063 | Communications | | ELEC ENG 4067 | Antennas & Propagation |
| | ELEC ENG 4109 | Digital Microelectronics | | | |
| | ELEC ENG 4112 | Signal Processing Applications | | | |

**NOTES**

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THE UNIVERSITY of ADELAIDE

# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

## Renewable Energy Major

| | | | | |
|---|---|---|---|---|
| **Year 1** | | | | |
| S1 | ^ENG 1001 Introduction to Engineering ☐ | ELEC ENG 1100 Analog Electronics ☐ | ENG 1002 Programming (Matlab and C) ☐ | MATHS 1011 Mathematics IA ☐ |
| S2 | PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics ☐ | ELEC ENG 1102 Digital Electronics ☐ | COMP SCI 1102 Object Oriented Programming ☐ | MATHS 1012 Mathematics IB ☐ |
| **Year 2** | | | | |
| S1 | ELEC ENG 2100 Digital Systems ☐ | ELEC ENG 2101 Electronic Circuits ☐ | ELEC ENG 2102 Electric Energy Conversion ☐ | MATHS 2106 Differential Equations for Engineers II ☐ |
| S2 | ELEC ENG 2103 Design & Innovation ☐ | ELEC ENG 2104 Digital Signal Processing ☐ | ELEC ENG 2106 Vector Calculus & Electromagnetics ☐ | MATHS 2107 Statistics & Numerical Methods II ☐ |
| **Year 3** | | | | |
| S1 | ELEC ENG 3103 Engineering Electromagnetics ☐ | ELEC ENG 3101 Control ☐ | COMP SCI 2103 Algorithm Design & Data Structures ☐ | COMP SCI 2000 Computer Systems ☐ |
| S2 | ELEC ENG 3104 Electric Drive Systems ☐ | ELEC ENG 3110 Electric Power Systems ☐ | COMP SCI 2201 Algorithm & Data Structure Analysis ☐ | ~Level II or III COMP SCI Elective ☐ |
| **Internship** | | | | |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table. | | | | |
| **Year 4** | | | | |
| S1 | MECH ENG 4064 Renewable Power Technologies ☐ | ENG 3004 Systems Engineering & Industry Practice ☐ | ~Level III COMP SCI Elective ☐ | ~Level III COMP SCI Elective ☐ |
| S2 | ELEC ENG 4111 Distributed Generation Technologies ☐ | ENG 3005 Research Method & Project Management ☐ | ~Level III COMP SCI Elective ☐ | COMP SCI 3006 Software Engineering & Project ☐ |
| **Year 5** | | | | |
| S1 | ENG 4001A Research Project Part A ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ |
| S2 | ENG 4001B Research Project Part B ☐ | CHEM ENG 4048 Biofuels, Biomass and Wastes ☐ | ELEC ENG 4100 Business Management Systems ☐ | E&E Engineering Elective (see elective table) ☐ |

| Core Course | Major course | Elective (see table) | Double Degree Courses |
|---|---|---|---|

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

~ COMP SCI Electives may be chosen from the courses listed in the Program Rules for the Bachelor of Mathematics and Computer Sciences: https://calendar.adelaide.edu.au/faculty/ecms

# Electives Table

| CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES | | | | | |
|---|---|---|---|---|---|
| **S1** | COMP SCI 2103 | Algorithm Design & Data Structures | **S2** | COMP SCI 2103 | Algorithm Design & Data Structures |
| | COMP SCI 3001 | Computer Networks & Applications | | ELEC ENG 3108 | Telecommunications Principles |
| | ELEC ENG 4058 | Power Quality & Condition Monitoring | | ELEC ENG 4087 | Electricity Market and Power System Operations |
| | ELEC ENG 4109 | Digital Microelectronics | | ~~MECH ENG 4145~~ | ~~Sustainable Thermal Technologies~~ *(not offered 2022)* |

**NOTES**

**Internships:** 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.

**Program Rules:** For academic program rules please refer to the following website: https://calendar.adelaide.edu.au/faculty/ecms

**Information and Enrolment Advice:**
Ask ECMS
Email: askecms@adelaide.edu.au
Website: https://ecms.adelaide.edu.au/study-with-us/student-support

THE UNIVERSITY of ADELAIDE

# 2022 Study Plan
## Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Mathematical and Computer Sciences – Computer Science Major - Semester 1 Start

## Smart Technologies Major

| | | | | |
|---|---|---|---|---|
| **Year 1** | | | | |
| S1 | ^ENG 1001 Introduction to Engineering ☐ | ELEC ENG 1100 Analog Electronics ☐ | ENG 1002 Programming (Matlab and C) ☐ | MATHS 1011 Mathematics IA ☐ |
| S2 | PHYSICS 1510 Physics 1E: Mechanics & Thermodynamics ☐ | ELEC ENG 1102 Digital Electronics ☐ | COMP SCI 1102 Object Oriented Programming ☐ | MATHS 1012 Mathematics IB ☐ |
| **Year 2** | | | | |
| S1 | ELEC ENG 2100 Digital Systems ☐ | ELEC ENG 2101 Electronic Circuits ☐ | ELEC ENG 2102 Electric Energy Conversion ☐ | MATHS 2106 Differential Equations for Engineers II ☐ |
| S2 | ELEC ENG 2103 Design & Innovation ☐ | ELEC ENG 2104 Digital Signal Processing ☐ | ELEC ENG 2106 Vector Calculus & Electromagnetics ☐ | MATHS 2107 Statistics & Numerical Methods II ☐ |
| **Year 3** | | | | |
| S1 | COMP SCI 2103 Algorithm Design & Data Structures ☐ | ELEC ENG 3101 Control ☐ | ELEC ENG 3103 Engineering Electromagnetics ☐ | COMP SCI 2000 Computer Systems ☐ |
| S2 | MECH ENG 3032 Micro-Controller Programming ☐ | ~COMP SCI 2201 Algorithm & Data Structure Analysis ☐ | ~Level II or III COMP SCI Elective ☐ | ~Level II or III COMP SCI Elective ☐ |
| **Internship** | | | | |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of internship during the course of their studies – see note below elective table. | | | | |
| **Year 4** | | | | |
| S1 | COMP SCI 3001 Computer Networks & Applications ☐ | ENG 3004 Systems Engineering & Industry Practice ☐ | ~Level III COMP SCI Elective ☐ | ~Level III COMP SCI Elective ☐ |
| S2 | ELEC ENG 4107 Autonomous Systems ☐ | ENG 3005 Research Method & Project Management ☐ | ~Level III COMP SCI Elective ☐ | COMP SCI 3006 Software Engineering & Project ☐ |
| **Year 5** | | | | |
| S1 | ENG 4001A Research Project Part A ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ | E&E Engineering Elective (see elective table) ☐ |
| S2 | ENG 4001B Research Project Part B ☐ | ELEC ENG 3108 Telecommunications Principles ☐ | ELEC ENG 4100 Business Management Systems ☐ | E&E Engineering Elective (see elective table) ☐ |

| Core Course | Major course | Elective (see table) | Double Degree Courses |
|---|---|---|---|

^ Unless exempted, International students are required to take ENG 1011 Introduction to Engineering - EAL in lieu of ENG 1001 Introduction to Engineering.

~ COMP SCI Electives may be chosen from the courses listed in the Program Rules for the Bachelor of Mathematics and Computer Sciences: https://calendar.adelaide.edu.au/faculty/ecms

# Electives Table

| CHOOSE FROM THE FOLLOWING ELECTRICAL & ELECTRONIC (E&E) ENGINEERING ELECTIVES | | | | | |
|---|---|---|---|---|---|
| **S1** | ELEC ENG 3088 | Computer Architecture | **S2** | COMP SCI 3006 | Software Engineering & Project |
| | ELEC ENG 4063 | Communications | | ELEC ENG 3108 | Telecommunications Principles |
| | ELEC ENG 4069 | Radar Principles & Systems | | ELEC ENG 4061 | Image Processing |
| | ELEC ENG 4109 | Digital Microelectronics | | ELEC ENG 4067 | Antennas & Propagation |
| | ELEC ENG 4112 | Signal Processing Applications | | | |

**NOTES**

**Internships:** 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.

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