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### Program structure

This is a five-year program with electives commencing in the second year. The final year contains the two-semester Research Project capstone course. Students may follow study plans specifying electives to complete a 24-unit Major and/or a 12-unit Minor within the program. Successful completion of the Program with a Major requires completion of all courses specified in that Major's study plan. All Majors consist of the same number of units and fill available electives slots, with five remaining to be chosen by the student.

### Alternative courses

There are a small number of alternative course offerings that are not indicated in the study plans. TECH 1006 may be taken as a semester 2 alternative to CEME 1004. CEME 2001 may be taken as a semester 1 alternative to MECH ENG 2002. ENG 3004 and ENG 3005 may be taken in either semester. The consecutive pair ENG 4001A and ENG 4001B may commence in either semester.

### Hands on Training

All Mechanical Engineering students are required to complete the ECMS Hands-On Training courses, information regarding this will be communicated via email to students.

### 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>.

### Computer Science Electives

Computer Science Electives may be chosen from the Computer Science courses listed in the Program Rules for the degree of Bachelor of Mathematical and Computer Sciences: <https://calendar.adelaide.edu.au/faculty/ecms>

### General Electives

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>

### 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](mailto:askecms@adelaide.edu.au)

Website: <https://ecms.adelaide.edu.au/study-with-us/student-support>

No Major

| Year 1   |  |  |  |   |  |
|--|--|--|--|---|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | ^  | ENG 1001<br>Introduction to Engineering <input type="checkbox"/>   | CHEM ENG 1009<br>Materials I <input type="checkbox"/>                           | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/> |
| Year 2   |  |  |  |   |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |  |  |   |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>  | MECH ENG 2100<br>Design Practice <input type="checkbox"/>  | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>                    |  |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>   | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>   |   |  |
| Year 3   |  |  |  |   |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>  | Major course / Elective Year 2<br>(see elective table) <b>OR</b> General Elective <input type="checkbox"/> | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>           |  |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>   | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>                               | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>                      |  |
| Internship   |  |  |  |   |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |  |  |   |  |
| Year 4   |  |  |  |   |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | Major course / Elective Year 3<br>(see elective table) <b>OR</b> General Elective <input type="checkbox"/> | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/>                              | Level III Computer Science Elective <input type="checkbox"/>                    |  |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | Major course / Elective Year 3<br>(see elective table) <b>OR</b> General Elective <input type="checkbox"/> | Major course / Elective Year 3<br>(see elective table) <b>OR</b> General Elective <input type="checkbox"/> | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/>        |  |
| Year 5   |  |  |  |   |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | Major course / Elective Year 3<br>(see elective table) <input type="checkbox"/>                            | Level III Computer Science Elective <input type="checkbox"/>   | Level III Computer Science Elective <input type="checkbox"/>                    |  |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | Major course / Elective Year 4<br>(see elective table) <input type="checkbox"/>                            | Major course / Elective Year 4<br>(see elective table) <input type="checkbox"/>                            | Major course / Elective Year 4<br>(see elective table) <input type="checkbox"/> |  |
| Year 6   |  |  |  |   |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | Major course / Elective Year 4<br>(see elective table) <input type="checkbox"/>                            | Major course / Elective Year 4<br>(see elective table) <input type="checkbox"/>                            | Major course / Elective Year 4<br>(see elective table) <input type="checkbox"/> |  |

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.

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact [askecms@adelaide.edu.au](mailto:askecms@adelaide.edu.au) to discuss an alternative study plan.

**Aerospace Engineering Major**

| Year 1   |  |   |   |  |
|--|--|---|---|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | <sup>^</sup> ENG 1001<br>Introduction to Engineering <input type="checkbox"/> | CHEM ENG 1009<br>Materials I <input type="checkbox"/>                         | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/>   |
| Year 2   |  |   |   |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |   |   |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>               | MECH ENG 2100<br>Design Practice <input type="checkbox"/>                     | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>             |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>            | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>                |  |
| Year 3   |  |   |   |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>                     | MECH ENG 2020<br>Materials & Manufacturing <input type="checkbox"/>           | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>    |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>            | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>  | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>               |
| Internship   |  |   |   |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |   |   |  |
| Year 4   |  |   |   |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | MECH ENG 3100<br>Aeronautical Engineering <input type="checkbox"/>            | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/> | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | MECH ENG 3101<br>Applied Aerodynamics <input type="checkbox"/>                | MECH ENG 3104<br>Space Vehicle Design <input type="checkbox"/>                | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/> |
| Year 5   |  |   |   |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | Elective Year 3<br>(see elective table) <input type="checkbox"/>              | Level III Computer Science Elective <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | MECH ENG 4108<br>Aircraft Design <input type="checkbox"/>                     | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |
| Year 6   |  |   |   |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | MECH ENG 4106<br>Aerospace Propulsion <input type="checkbox"/>                | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |

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

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\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact [askecms@adelaide.edu.au](mailto:askecms@adelaide.edu.au) to discuss an alternative study plan.

| Year 1   |  |   |   |  |
|--|--|---|---|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | <sup>^</sup> ENG 1001<br>Introduction to Engineering <input type="checkbox"/> | CHEM ENG 1009<br>Materials I <input type="checkbox"/>                         | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/>   |
| Year 2   |  |   |   |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |   |   |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>               | MECH ENG 2100<br>Design Practice <input type="checkbox"/>                     | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>             |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>            | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>                |  |
| Year 3   |  |   |   |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>                     | MECH ENG 2020<br>Materials & Manufacturing <input type="checkbox"/>           | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>    |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>            | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>  | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>               |
| Internship   |  |   |   |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |   |   |  |
| Year 4   |  |   |   |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | MECH ENG 3026<br>Advanced Mechanics of Materials <input type="checkbox"/>     | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/> | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | ENG 3305<br>Human Factors for Decision Making <input type="checkbox"/>        | Elective Year 3<br>(see elective table) <input type="checkbox"/>              | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/> |
| Year 5   |  |   |   |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | POLIS 1104<br>Introduction to Comparative Politics <input type="checkbox"/>   | Level III Computer Science Elective <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | ENG 4020<br>Complex Systems Engineering <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |
| Year 6   |  |   |   |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | ENG 4010<br>Defence Leadership <input type="checkbox"/>                       | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |

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

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Mechanical Engineering Major

| Year 1   |  |   |   |  |
|--|--|---|---|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | <sup>^</sup> ENG 1001<br>Introduction to Engineering <input type="checkbox"/>   | CHEM ENG 1009<br>Materials I <input type="checkbox"/>                         | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/>           |
| Year 2   |  |   |   |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |   |   |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>                 | MECH ENG 2100<br>Design Practice <input type="checkbox"/>                     | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>                     |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>              | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>                |  |
| Year 3   |  |   |   |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>                       | MECH ENG 2020<br>Materials & Manufacturing <input type="checkbox"/>           | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>            |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>              | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>  | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>                       |
| Internship   |  |   |   |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |   |   |  |
| Year 4   |  |   |   |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | MECH ENG 3026<br>Advanced Mechanics of Materials <input type="checkbox"/>       | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/> | Level III Computer Science Elective <input type="checkbox"/>                     |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | MECH ENG 3101<br>Applied Aerodynamics <input type="checkbox"/>                  | Elective Year 3<br>(see elective table) <input type="checkbox"/>              | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/>         |
| Year 5   |  |   |   |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | Elective Year 3<br>(see elective table) <input type="checkbox"/>                | Level III Computer Science Elective <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>                     |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | Elective Year 4<br>(see elective table) <input type="checkbox"/>                | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>                 |
| Year 6   |  |   |   |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | MECH ENG 4118<br>Finite Element Analysis of Structures <input type="checkbox"/> | MECH ENG 4111<br>CFD for Engineering Applications <input type="checkbox"/>    | MECH ENG 4121<br>Materials Selection & Failure Analysis <input type="checkbox"/> |

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

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### Mechatronics and Robotics Major

| Year 1   |  |  |   |  |  |
|--|--|--|---|--|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | ^  | ENG 1001<br>Introduction to Engineering <input type="checkbox"/>              | CHEM ENG 1009<br>Materials I <input type="checkbox"/>                    | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/> |
| Year 2   |  |  |   |  |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |  |   |  |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>        | MECH ENG 2100<br>Design Practice <input type="checkbox"/>                     | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>             |  |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>     | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>                |  |  |
| Year 3   |  |  |   |  |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>              | ELEC ENG 2105<br>Electronic Circuits M <input type="checkbox"/>               | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>    |  |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>     | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>  | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>               |  |
| Internship   |  |  |   |  |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |  |   |  |  |
| Year 4   |  |  |   |  |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | MECH ENG 3106<br>Mechatronics II <input type="checkbox"/>              | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/> | Level III Computer Science Elective <input type="checkbox"/>             |  |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | MECH ENG 3032<br>Micro-Controller Programming <input type="checkbox"/> | Elective Year 3<br>(see elective table) <input type="checkbox"/>              | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/> |  |
| Year 5   |  |  |   |  |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | Elective Year 3<br>(see elective table) <input type="checkbox"/>       | Level III Computer Science Elective <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>             |  |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | MECH ENG 4102<br>Advanced PID Control <input type="checkbox"/>         | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |  |
| Year 6   |  |  |   |  |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | MECH ENG 4124<br>Robotics M <input type="checkbox"/>                   | MECH ENG 4080<br>Modern Control Systems <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |  |

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

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Medical Technologies Major

| Year 1   |  |   |   |  |
|--|--|---|---|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | <sup>^</sup> ENG 1001<br>Introduction to Engineering <input type="checkbox"/>                   | CHEM ENG 1009<br>Materials I <input type="checkbox"/>                         | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/>   |
| Year 2   |  |   |   |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |   |   |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>                                 | MECH ENG 2100<br>Design Practice <input type="checkbox"/>                     | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>             |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>                              | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>                |  |
| Year 3   |  |   |   |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>                                       | ANAT SC 1102<br>Human Anatomy and Physiology IA <input type="checkbox"/>      | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>    |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>                              | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>  | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>               |
| Internship   |  |   |   |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |   |   |  |
| Year 4   |  |   |   |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | ENG 3101<br>Introduction to Medical Technologies <input type="checkbox"/>                       | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/> | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | ELEC ENG 3113<br>Principles of Medical Imaging <input type="checkbox"/>                         | Elective Year 3<br>(see elective table) <input type="checkbox"/>              | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/> |
| Year 5   |  |   |   |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | PHYSIOL 2510<br>Physiology IIA: Heart, Lung &<br>Neuromuscular Systems <input type="checkbox"/> | Level III Computer Science Elective <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | MECH ENG 4101<br>Biomechanical Engineering <input type="checkbox"/>                             | ELEC ENG 4115<br>Biomedical Instrumentation <input type="checkbox"/>          | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |
| Year 6   |  |   |   |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | Elective Year 4<br>(see elective table) <input type="checkbox"/>                                | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |

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

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### Renewable Energy Major

| Year 1   |  |   |  |  |
|--|--|---|--|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | <sup>^</sup> ENG 1001<br>Introduction to Engineering <input type="checkbox"/> | CHEM ENG 1009<br>Materials I <input type="checkbox"/>  | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/>   |
| Year 2   |  |   |  |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |   |  |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>               | MECH ENG 2100<br>Design Practice <input type="checkbox"/>                                      | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>             |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>            | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>                                 |  |
| Year 3   |  |   |  |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>                     | MECH ENG 2020<br>Materials & Manufacturing <input type="checkbox"/>                            | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>    |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>            | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>                   | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>               |
| Internship   |  |   |  |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |   |  |  |
| Year 4   |  |   |  |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | ENTREP 3006<br>Energy Management, Economics & Policy <input type="checkbox"/> | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | Elective Year 3<br>(see elective table) <input type="checkbox"/>              | Elective Year 3<br>(see elective table) <input type="checkbox"/>                               | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/> |
| Year 5   |  |   |  |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | Elective Year 3<br>(see elective table) <input type="checkbox"/>              | Level III Computer Science Elective <input type="checkbox"/>                                   | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | ELEC ENG 4111<br>Distributed Generation Technologies <input type="checkbox"/> | CHEM ENG 4048<br>Biofuels, Biomass and Wastes <input type="checkbox"/>                         | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |
| Year 6   |  |   |  |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | MECH ENG 4064<br>Renewable Power Technologies <input type="checkbox"/>        | MECH ENG 4112<br>Combustion Technologies & High Temperature Processes <input type="checkbox"/> | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |

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

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

\* If unable to take MECH ENG 1007 Engineering Mechanics – Dynamics in summer please contact [askecms@adelaide.edu.au](mailto:askecms@adelaide.edu.au) to discuss an alternative study plan.

| Year 1   |  |   |   |  |
|--|--|---|---|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | <sup>^</sup> ENG 1001<br>Introduction to Engineering <input type="checkbox"/> | CHEM ENG 1009<br>Materials I <input type="checkbox"/>                         | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/>   |
| Year 2   |  |   |   |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |   |   |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>               | MECH ENG 2100<br>Design Practice <input type="checkbox"/>                     | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>             |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>            | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>                | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>    |
| Year 3   |  |   |   |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>                     | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>  |  |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>            | Level II/III Computer Science Elective <input type="checkbox"/>               | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>               |
| Internship   |  |   |   |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |   |   |  |
| Year 4   |  |   |   |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | Level II/III Computer Science Elective <input type="checkbox"/>               | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/> | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | MECH ENG 3032<br>Micro-Controller Programming <input type="checkbox"/>        | COMP SCI 3012<br>Distributed Systems <input type="checkbox"/>                 | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/> |
| Year 5   |  |   |   |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | COMP SCI 3001<br>Computer Networks & Applications <input type="checkbox"/>    | Level III Computer Science Elective <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | ELEC ENG 4107<br>Autonomous Systems <input type="checkbox"/>                  | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |
| Year 6   |  |   |   |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |

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

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**Sports Engineering Major**

| Year 1   |  |   |   |  |
|--|--|---|---|--|
| S<br>2   | MATHS 1011<br>Mathematics IA <input type="checkbox"/>                          | <sup>^</sup> ENG 1001<br>Introduction to Engineering <input type="checkbox"/> | CHEM ENG 1009<br>Materials I <input type="checkbox"/>                         | TECH 1006<br>Engineering Mechanics Technology <input type="checkbox"/>   |
| Year 2   |  |   |   |  |
| S<br>S   | *MECH ENG 1007<br>Engineering Mechanics – Dynamics <input type="checkbox"/>    |   |   |  |
| S<br>1   | MATHS 1012<br>Mathematics IB <input type="checkbox"/>                          | ENG 1002<br>Programming (Matlab and C) <input type="checkbox"/>               | MECH ENG 2100<br>Design Practice <input type="checkbox"/>                     | ELEC ENG 1101<br>Electronic Systems <input type="checkbox"/>             |
| S<br>2   | MATHS 2107<br>Statistics & Numerical Methods II <input type="checkbox"/>       | MECH ENG 2002<br>Stress Analysis & Design <input type="checkbox"/>            | MECH ENG 2019<br>Dynamics & Control I <input type="checkbox"/>                |  |
| Year 3   |  |   |   |  |
| S<br>1   | MATHS 2106<br>Differential Equations for Engineers II <input type="checkbox"/> | MECH ENG 2021<br>Thermo-Fluids I <input type="checkbox"/>                     | ANAT SC 1102<br>Human Anatomy and Physiology IA <input type="checkbox"/>      | COMP SCI 1102<br>Object Oriented Programming <input type="checkbox"/>    |
| S<br>2   | MECH ENG 2101<br>Mechatronics IM <input type="checkbox"/>                      | MECH ENG 3111<br>Acoustics and Vibrations <input type="checkbox"/>            | COMP SCI 2103<br>Algorithm Design & Data Structures <input type="checkbox"/>  | COMP SCI 2000<br>Computer Systems <input type="checkbox"/>               |
| Internship   |  |   |   |  |
| All Engineering students commencing from 2019 are required to complete a minimum of 8 weeks of <a href="#">internship</a> during the course of their studies – see note on page 2. |  |   |   |  |
| Year 4   |  |   |   |  |
| S<br>1   | MECH ENG 3102<br>Heat Transfer & Thermodynamics <input type="checkbox"/>       | MECH ENG 3026<br>Advanced Mechanics of Materials <input type="checkbox"/>     | COMP SCI 2201<br>Algorithm & Data Structure Analysis <input type="checkbox"/> | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 3004<br>Systems Engineering & Industry Practice <input type="checkbox"/>   | MECH ENG 3101<br>Applied Aerodynamics <input type="checkbox"/>                | Elective Year 3<br>(see elective table) <input type="checkbox"/>              | COMP SCI 3006<br>Software Engineering & Project <input type="checkbox"/> |
| Year 5   |  |   |   |  |
| S<br>1   | ENG 3005<br>Research Method & Project Management <input type="checkbox"/>      | MECH ENG 3112<br>Sports Engineering <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>                  | Level III Computer Science Elective <input type="checkbox"/>             |
| S<br>2   | ENG 4001A<br>Research Project Part A <input type="checkbox"/>                  | MECH ENG 4101<br>Biomechanical Engineering <input type="checkbox"/>           | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |
| Year 6   |  |   |   |  |
| S<br>1   | ENG 4001B<br>Research Project Part B <input type="checkbox"/>                  | MECH ENG 4104<br>Advanced Topics in Fluid Mechanics <input type="checkbox"/>  | Elective Year 4<br>(see elective table) <input type="checkbox"/>              | Elective Year 4<br>(see elective table) <input type="checkbox"/>         |

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

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Mechanical Engineering Electives

Not all Majors and Double Degrees permit electives in every semester slot.

| Year 2     |               |  |  |           |                          |   |
|------------|---------------|--|--|-----------|--------------------------|---|
| <b>S1</b>  | MECH ENG 2020 | Materials & Manufacturing                            |  |           |                          |   |
| Year 3     |               |  |  |           |                          |   |
| <b>S1</b>  | MECH ENG 3026 | Advanced Mechanics of Materials                      |  | <b>S2</b> | MECH ENG 3032            | Micro-Controller Programming                              |
|            | MECH ENG 3100 | Aeronautical Engineering                             |  |           | MECH ENG 3101            | Applied Aerodynamics                                      |
|            | MECH ENG 3103 | Advanced Manufacturing Systems                       |  |           | MECH ENG 3104            | Space Vehicle Design                                      |
|            | MECH ENG 3106 | Mechatronics II                                      |  |           | ELEC ENG 2106            | Vector Calculus & Electromagnetics                        |
|            | MECH ENG 3112 | Sports Engineering                                   |  |           | ELEC ENG 3112            | Electric Drive Systems M                                  |
|            |               |  |  |           | ENG 3305                 | Human Factors for Decision Making                         |
|            |               |  |  |           | ENTREP 3900              | eChallenge  |
| <b>WIN</b> | PROJMGNT 3030 | Project Logistics and Supply Chains                  |  |           |                          |   |
| Year 4     |               |  |  |           |                          |   |
| <b>S1</b>  | MECH ENG 4064 | Renewable Power Technologies                         |  | <b>S2</b> | MECH ENG 4100            | Advanced Topics in Aerospace Engineering                  |
|            | MECH ENG 4080 | Modern Control Systems                               |  |           | MECH ENG 4101            | Biomechanical Engineering                                 |
|            | MECH ENG 4104 | Advanced Topics in Fluid Mechanics                   |  |           | MECH ENG 4102            | Advanced PID Control                                      |
|            | MECH ENG 4106 | Aerospace Propulsion                                 |  |           | MECH ENG 4105            | Advanced Vibrations                                       |
|            | MECH ENG 4111 | CFD for Engineering Applications                     |  |           | MECH ENG 4107            | Air conditioning  |
|            | MECH ENG 4112 | Combustion Technologies & High Temperature Processes |  |           | MECH ENG 4108            | Aircraft Design   |
|            | MECH ENG 4118 | Finite Element Analysis of Structures                |  |           | <del>MECH ENG 4123</del> | <del>Advanced Digital Control (not running in 2022)</del> |
|            | MECH ENG 4121 | Materials Selection & Failure Analysis               |  |           | ENG 3201                 | Essentials of Humanitarian Practice                       |
|            | MECH ENG 4124 | Robotics M   |  |           | ENG 4020                 | Complex Systems Engineering                               |
| <b>SUM</b> | MECH ENG 4115 | Engineering Acoustics                                |  |           |                          |   |
|            | MECH ENG 4126 | Topics in Welded Structures                          |  |           |                          |   |