Bachelor of Engineering (Honours)  
Mechatronic Systems Major

Instructions
1. Make sure that you are familiar with the program requirements of your degree.
2. Make sure you are following the program requirements for the academic year that you commenced your degree.
3. Fill in the boxes once you have successfully passed the course (or if you have been awarded course credit or exemption).
4. Ensure that you have completed the listed requirements for each section.
5. Always check your enrolments with CECS Student Services to ensure that you are on track to graduate.

The Bachelor of Engineering (Honours) requires completion of 192 units, of which:
A maximum of 10 courses may come from completion of 1000-level courses.

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Compulsory Courses

Complete the 14x courses listed below

- PHYS1013 Physics of Materials
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 1
  - Prerequisites: N/A

- ENGN1211 Discovering Engineering
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 1
  - Prerequisites: N/A

- ENGN1217 Introduction to Mechanics
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 2
  - Prerequisites: N/A

- ENGN1218 Introduction to Electronics
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 2
  - Prerequisites: N/A

- ENGN2217 Mechanical Systems and Design
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 1
  - Prerequisites:
    - Successful completion of ENGN1217

- ENGN2218 Electronic Systems and Design
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 1
  - Prerequisites:
    - Successful completion of ENGN1218

- ENGN2219 Computer Architecture and Simulation
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 1
  - Prerequisites:
    - Successful completion of COMP1100 or COMP1130 or COMP1730

- ENGN2222 Engineering Thermodynamics
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 2
  - Prerequisites:
    - Successful completion of MATH1013 or MATH1014

- ENGN2228 Signals and Systems
  - 6 units
  - completed at the ANU
  - awarded as credit
  - awarded as exemption
  - Availability: Semester 2
  - Prerequisites:
    - Successful completion of MATH1013 or MATH1014
| Course Code | Course Title                                      | Units | Complete | Awarded as Credit | Awarded as Exemption |
|-------------|--------------------------------------------------|-------|----------|-------------------|----------------------|                      |
| ENGN2300    | Engineering Design 2: Systems Approaches for Design | 6     | ✔        |       ✔           |                      |                      |
| ENGN2301    | Engineering Design 3: Systems Approaches for Analysis | 6     | ✔        |       ✔           |                      |                      |
| ENGN3100    | Practical Experience                             | 0     | ✔        |       ✔           |                      |                      |
| ENGN3300    | Engineering Design 4A: Systems Approaches for Management | 6     | ✔        |       ✔           |                      |                      |
| ENGN3301    | Engineering Design 4B: Systems Approaches for Operations | 6     | ✔        |       ✔           |                      |                      |
| COMP1100    | Programming as Problem Solving                    | 6     |          |       ✔           |                      |                      |
| COMP1730    | Programming for Scientists                        | 6     |          |       ✔           |                      |                      |
| MATH1013    | Mathematics and Applications                      | 6     |          |       ✔           |                      |                      |
| MATH1115    | Advanced Mathematics and Applications              | 6     |          |       ✔           |                      |                      |
| MATH1014    | Mathematics and Applications                      | 6     |          |       ✔           |                      |                      |
| MATH1116    | Advanced Mathematics and Applications              | 6     |          |             ✔      |                      |                      |

**Compulsory Courses**

Complete 1x of the courses listed below.

- **COMP1100** Programming as Problem Solving
- **COMP1730** Programming for Scientists
- **MATH1013** Mathematics and Applications
- **MATH1115** Advanced Mathematics and Applications
- **MATH1014** Mathematics and Applications
- **MATH1116** Advanced Mathematics and Applications
Compulsory Research Courses

Complete 1x of the courses listed below

☐ ENGN4300 Capstone Design Project (12 units)
  □ completed at the ANU □ awarded as credit □ awarded as exemption
  Availability: Semester 1 / Semester 2
  Prerequisites:
  − Successful completion of ENGN3301
  This course must be completed over two consecutive semesters

☐ ENGN4350 Individual Project (12 units)
  □ completed at the ANU □ awarded as credit □ awarded as exemption
  Availability: Semester 1 / Semester 2
  Prerequisites:
  − Successful completion of 4x ENGN-coded 3000-level or 4000-level courses
  Before you enrol into this course you must:
  − Have a weighted average mark of 75%
  − Find a Project Supervisor
  − Complete an 'Independent Study Contract'
  − Obtain approval from the Course Convenor

Major Courses – Mechatronic Systems

Complete the 6x courses listed below

☐ ENGN3331 System Dynamics (6 units)
  □ completed at the ANU □ awarded as credit □ awarded as exemption
  Availability: Semester 1
  Prerequisites:
  − Successful completion of MATH1013 or MATH1014

☐ ENGN3223 Control Systems (6 units)
  □ completed at the ANU □ awarded as credit □ awarded as exemption
  Availability: Semester 2
  Prerequisites: N/A

☐ ENGN3213 Digital Systems and Microprocessors (6 units)
  □ completed at the ANU □ awarded as credit □ awarded as exemption
  Availability: Semester 1
  Prerequisites:
  − Successful completion of ENGN2218 or COMP2300

☐ ENGN4528 Computer Vision (6 units)
  □ completed at the ANU □ awarded as credit □ awarded as exemption
  Availability: Semester 1
  Prerequisites: N/A

☐ ENGN4627 Robotics (6 units)
  □ completed at the ANU □ awarded as credit □ awarded as exemption
  Availability: Semester 2
  Prerequisites:
  − Successful completion of ENGN3331

☐ ENGN4628 Network Optimisation and Control (6 units)
  □ completed at the ANU □ awarded as credit □ awarded as exemption
  Availability: Semester 1
  Prerequisites:
  − Successful completion of ENGN2228
  − Successful completion of MATH1013 or MATH1014
## Unspecified Elective Courses

**Complete 8x ANU-wide courses**

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**Additional electives as a result of awarded course exemption(s)**

You are required to complete an additional ____ COMP-coded elective courses

You are required to complete an additional ____ ANU-wide elective courses
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<td>COMP1100</td>
<td>Programming as Problem Solving</td>
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Please make sure to enrol and complete **ENGN3100** Practical Experience in your final year.