

# Bachelor of Engineering (Honours)

## Mechatronic Engineering

### No Major

Undergraduate Program - Consists of 64 units  
Suggested Study Plans from **2025** Commencement Onwards



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## Program and Course requirements

For the **Bachelor of Engineering (Honours)** full program and course requirements, [click here](#). Make sure to check your program's rules to ensure you are compliant with requirements.

## Prerequisite Courses

Students are expected to be aware if a course has prerequisites and must have successfully completed any required prerequisites before enrolling. A prerequisite course provides the foundational knowledge needed to progress to the next course and may be high school subjects or university-level study/courses.

Prerequisites are listed on the course profile and the course page on the [Programs and Courses website](#).

## Electives

Depending on your program, you may need to complete compulsory and elective courses.

Electives are courses you can choose, while compulsory courses are mandatory courses that you must study. You must successfully complete all the required units of elective and compulsory courses to meet the program requirements. Your program rules outline how many electives you can study and the types of electives you can choose from.

Search [Programs and Courses website](#) for your program to confirm program rules and elective options.

## Academic Advice

Academic advisors provide specialist help in course selection and can look at your individual study history to make personalised recommendations on your study plan.

If you need assistance with your program, you can [seek Academic Advice](#).

## Additional Information

Course profiles are underlined and hyperlinked to their relevant course page which can be accessed by clicking the underlined text.

Program/General/Breadth/Advanced Electives can be found by clicking the hyperlinked elective text, and selecting "Mechatronic Engineering Plan Options/Mechatronic Engineering No Major Option" options for more information.

Students must follow the [program rules and requirements](#) listed on the my.UQ website. Future course offerings are subject to change. [Seek academic advice](#) if you are undertaking a dual degree, have any questions or if you fail any courses.

Published: July 2025

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Suggested Study Plan from **Semester 1, 2025** Commencement Onwards

The following is a colour reference guide, including notes around course offerings and units:

|                   |                   |                    |
|-------------------|-------------------|--------------------|
| Core Courses      | Specialisation    | Program Electives  |
| General Electives | Breadth Electives | Advanced Electives |
| Extension Courses |                   |                    |



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|  |                                                                                   |
|--|-----------------------------------------------------------------------------------|
|  | Course offered in both Semester 1 & 2                                             |
|  | This course does not consist of 2 units                                           |
|  | Elective may be substituted for another Elective type as per Program requirements |

| YEAR 1        |                                              |                                                                        |                                                       |                                                          |
|---------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|
| Sem 1<br>Feb  | <b>ENGG1100</b><br>Professional Engineering  | <b>MATH1051</b><br>Calculus and Linear Algebra I                       | <b>ENGG1300</b><br>Introduction to Electrical Systems | <b>GENERAL ELECTIVE</b><br>OR<br><b>PROGRAM ELECTIVE</b> |
| Sem 2<br>July | <b>ENGG1001</b><br>Programming for Engineers | <b>MATH1052</b><br>Multivariate Calc & Ordinary Differential Equations | <b>ENGG1700</b><br>Statics and Materials              | <b>GENERAL ELECTIVE</b><br>OR<br><b>PROGRAM ELECTIVE</b> |

| YEAR 2        |                                                              |                                                        |                                                               |                                                                |
|---------------|--------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------|
| Sem 1<br>Feb  | <b>MATH2001</b><br>Calculus & Linear Algebra II              | <b>METR2800</b><br>Mechatronic System Design Project 1 | <b>MECH2300</b><br>Structures and Materials                   | <b>ELEC2300</b><br>Fundamentals of Electro-magnetism/mechanics |
| Sem 2<br>July | <b>MATH2010</b> <sup>1</sup><br><b>STAT2201</b> <sup>1</sup> | <b>CSSE2010</b><br>Introduction to Computer Systems    | <b>MECH2210</b><br>Intermediate Mechanical and Space Dynamics | <b>ELEC2004</b><br>Circuits, Signals and Systems               |

| YEAR 3        |                                                  |                                                     |                                                 |                          |
|---------------|--------------------------------------------------|-----------------------------------------------------|-------------------------------------------------|--------------------------|
| Sem 1<br>Feb  | <b>METR3100</b><br>Control System Implementation | <b>ELEC2400</b><br>Electronic Devices and Circuits  | <b>ELEC3004</b><br>Signals, Systems and Control | <b>GENERAL ELECTIVE</b>  |
| Sem 2<br>July | <b>MECH2100</b><br>Machine Element Design        | <b>MECH3200</b><br>Advanced Dynamics and Vibrations | <b>BREADTH ELECTIVE</b>                         | <b>ADVANCED ELECTIVE</b> |

| YEAR 4        |                                          |                                                                                      |                                                         |                                          |
|---------------|------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------|
| Sem 1<br>Feb  | <b>METR4911</b><br>Thesis/Design Project | <b>ENGG4901</b> <sup>2</sup><br>Professional Practice and the Business Environment A | <b>METR4201</b><br>Control Engineering 1                | <b>ADVANCED ELECTIVE</b>                 |
| Sem 2<br>July |                                          | <b>METR4202</b><br>Robotics and Automation                                           | <b>METR4810</b><br>Mechatronic System Design Project II | <b>METR6203</b><br>Control Engineering 2 |

| NOTES                                                                                                                   |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| <sup>1</sup> MATH2010: Analysis of Ordinary Differential Equations; STAT2201: Analysis of Engineering & Scientific Data |  |  |  |  |
| <sup>2</sup> Offered in Semester 2 under the course code ENGG4902, Professional Practice and the Business Environment B |  |  |  |  |

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The following is a colour reference guide, including notes around course offerings and units:

|                   |                   |                    |
|-------------------|-------------------|--------------------|
| Core Courses      | Specialisation    | Program Electives  |
| General Electives | Breadth Electives | Advanced Electives |
| Extension Courses |                   |                    |



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|  |                                                                                   |
|--|-----------------------------------------------------------------------------------|
|  | Course offered in both Semester 1 & 2                                             |
|  | This course does not consist of 2 units                                           |
|  | Elective may be substituted for another Elective type as per Program requirements |

#### YEAR 1

|               |                                              |                                                                        |                                                       |                                                          |
|---------------|----------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|
| Sem 2<br>July | <b>ENGG1100</b><br>Professional Engineering  | <b>MATH1051</b><br>Calculus and Linear Algebra I                       | <b>ENGG1300</b><br>Introduction to Electrical Systems | <b>GENERAL ELECTIVE</b><br>OR<br><b>PROGRAM ELECTIVE</b> |
| Sem 1<br>Feb  | <b>ENGG1001</b><br>Programming for Engineers | <b>MATH1052</b><br>Multivariate Calc & Ordinary Differential Equations | <b>ENGG1700</b><br>Statics and Materials              | <b>GENERAL ELECTIVE</b><br>OR<br><b>PROGRAM ELECTIVE</b> |

#### YEAR 2

|               |                                                     |                                        |                                                               |                                                               |
|---------------|-----------------------------------------------------|----------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Sem 2<br>July | <b>MATH2001</b><br>Calculus & Linear Algebra II     | <b>MATH2010</b> <sup>1</sup><br>1 unit | <b>MECH2210</b><br>Intermediate Mechanical and Space Dynamics | <b>ELEC2004</b><br>Circuits, Signals and Systems              |
| Sem 1<br>Feb  | <b>CSSE2010</b><br>Introduction to Computer Systems | <b>STAT2201</b> <sup>1</sup><br>1 unit | <b>METR2800</b><br>Mechatronic System Design Project 1        | <b>ELEC2300</b><br>Fundamentals of Electromagnetism/mechanics |

#### YEAR 3

|               |                                                  |                                                         |                                                     |                                                 |
|---------------|--------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------|
| Sem 2<br>July | <b>MECH2100</b><br>Machine Element Design        | <b>METR4810</b><br>Mechatronic System Design Project II | <b>MECH3200</b><br>Advanced Dynamics and Vibrations | <b>GENERAL ELECTIVE</b>                         |
| Sem 1<br>Feb  | <b>METR3100</b><br>Control System Implementation | <b>METR4201</b><br>Control Engineering 1                | <b>ELEC2400</b><br>Electronic Devices and Circuits  | <b>ELEC3004</b><br>Signals, Systems and Control |

#### YEAR 4

|               |                                          |                                                                                      |                                          |                          |
|---------------|------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------|--------------------------|
| Sem 2<br>July | <b>METR4912</b><br>Thesis/Design Project | <b>METR4202</b><br>Robotics and Automation                                           | <b>METR6203</b><br>Control Engineering 2 | <b>BREADTH ELECTIVE</b>  |
| Sem 1<br>Feb  |                                          | <b>ENGG4901</b> <sup>2</sup><br>Professional Practice and the Business Environment A | <b>ADVANCED ELECTIVE</b>                 | <b>ADVANCED ELECTIVE</b> |

#### NOTES

<sup>1</sup> MATH2010: Analysis of Ordinary Differential Equations; STAT2201: Analysis of Engineering & Scientific Data

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