

# BE (Hons) - CIVIL and ENVIRONMENTAL ENGINEERING

## Study plan - Dual major

EAIT faculty home: [www.eait.uq.edu.au](http://www.eait.uq.edu.au)

CIVIL home: [www.civil.uq.edu.au](http://www.civil.uq.edu.au)

|                |   | Part A - Compulsory #56                               |   |  |   | Part B1 - Introductory Electives |   |  |   |   |  |   | Part B0 - Preparatory Electives                                 |  |  |  |
|----------------|---|---|---|--|---|----------------------------------|---|--|---|---|--|---|---|--|--|--|
| March Semester | 1 | Engineering design<br>ENGG1100                        | Engineering mechanics: Statics and Dynamics<br>ENGG1400<br>March or July Semester | Calculus & Linear algebra 1<br>MATH1051/1071<br>March or July Semester   | Elective  | March Semester                   | Earth processes and geological materials for engineers<br>ERTH1501    | Introduction to mining<br>MINE2105                                       | Mining geomechanics<br>MINE3121                       | Building construction management & economics<br>REDE1300                | Chemistry 1<br>CHEM1100<br>March or July Semester                            | Calculus & linear algebra II<br>MATH2000/2001<br>March or July Semester | Mathematical foundations<br>MATH1050<br>March or July Semester  | Introductory chemistry<br>CHEM1090   | Physical basis of biological systems<br>PHYS1171<br>March or July Semester |  |
| July Semester  | 2 | Engineering modelling and problem solving<br>ENGG1200 | Elective  | Multivariate calculus & ODE's<br>MATH1052/1072<br>March or July Semester | Engineering thermomechanics<br>ENGG1500<br>March or July Semester               | July Semester                    |   | Introduction to electrical systems<br>ENGG1300<br>March or July Semester | Introduction to research - The big issues<br>ENGG1600 | Electromagnetism & modern physics<br>PHYS1002<br>March or July Semester | Introduction to software engineering 1<br>CSSE1001<br>March or July Semester | Cells to Organisms<br>BIOL1040<br>March or July Semester                |   |  |  |  |
| March Semester | 3 | Structural mechanics<br>CIVL2330                      | Probability statistics and scientific computing<br>CIVL2530                       | Environmental Issues and Sustainability in Engineering<br>CIVL2135       | Traffic flow theory and analysis<br>CIVL2410                                    |                                  |   |  |   |   |  |   |   |  |  |  |
| July Semester  | 4 | Introduction to structural design<br>CIVL2340         | Fluid mechanics for civil & environmental engineers<br>CIVL2131                   | Reinforced concrete structures & concrete tech.<br>CIVL2360              | Fundamentals of soil mechanics<br>CIVL2210                                      |                                  | <b>Part B2 - Advanced electives</b>                                   |  |   |   |  |   |   |  |  |  |
| March Semester | 5 | Structural analysis<br>CIVL3340                       | Catchment Hydraulics: Open Channel Flow & Design<br>CIVL3140                      | Elective   | Geotechnical engineering<br>CIVL3210  | March Semester                   |   | Numerical methods in engineering<br>CIVL4250 <sup>e</sup>                | Travel behaviour and transport modelling<br>CIVL4412  |   | Introduction to fire safety engineering<br>FIRE3700                          | Fire engineering design: Solutions for implicit safety<br>FIRE4610      | Advanced fluid mechanics<br>CIVL4160 <sup>e</sup><br>ODD        |  |  |  |
| July Semester  | 6 | Structural design<br>CIVL3350                         | Transportation systems engineering<br>CIVL3420                                    | Catchment hydrology<br>CIVL3141  | Modelling of environmental systems<br>CIVL3150                                  | July Semester                    | Project<br>CIVL4560<br>March or July semester                         |  | Advanced transport engineering<br>CIVL4411            | Highway geometric design<br>CIVL4460                                    | Modelling of environmental systems<br>CIVL3150                               | Industrial wastewater and solid waste management<br>CHEE4012            | Coastal and estuarine processes<br>CIVL4110 <sup>e</sup><br>ODD | Adv. open channel flow and hydraulic structures<br>CIVL4120 <sup>e</sup><br>EVEN |  |  |
| March Semester | 7 | Civil design 1<br>CIVL4514                            | Project<br>CIVL4560*<br>March or July semester                                    | Sustainable built environment<br>CIVL4180                                | Environmental Risk Assessment and Management<br>CIVL4170                        | March Semester                   | Research thesis<br>CIVL4580 <sup>%</sup><br>#4 units over 2 semesters | Wind Engineering<br>CIVL4340   | Advanced concrete design<br>CIVL4333                  |   | Groundwater & surface flow modelling<br>CIVL4140                             | Environmental Risk Assessment and Management<br>CIVL4170                | Sustainable built environment<br>CIVL4180                       | Mine waste management and landform design<br>MINE4000                            | Geotechnical investigating and testing<br>CIVL4270                         |  |
| July Semester  | 8 | Civil design 3<br>CIVL4516                            | B1 or B2 Elective*  | Industrial wastewater and solid waste management<br>CHEE4012             | Prof. practice & the business environment<br>ENGG4900<br>March or July Semester | July Semester                    | Research thesis<br>CIVL4582 <sup>%</sup><br>#4 units over 2 semesters | Anal. methods for the design of construction Op.<br>CIVL4522             | Advanced structural analysis<br>CIVL4332              | Design of timber structures<br>CIVL4334                                 |  |   |   | Advanced soil mechanics<br>CIVL4230  | Advanced rock mechanics<br>CIVL4280  |  |

o Course offered in ODD years only.

e Course offered in EVEN years only.

% Two semester course (#4 units). CIVL4580 if starting in March semester OR CIVL4582 if starting in July semester

+ CIVL4580/4582 (Thesis) may be done in lieu of CIVL4560 and an Elective.

+ Elective may be done in March semester and CIVL4560 may be done in July semester.

# CIVL4250 is not offered in 2018