Note: This guide is only available to students who are enrolled in the Electrical and Electronic Engineering program within the Bachelor of Engineering component of the Bachelor of Engineering and Bachelor of Economics (61190) combined degree course prior to 2012.

Course details

Course Credit Points:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Engineering component</td>
<td>168</td>
</tr>
<tr>
<td>Bachelor of Economics component</td>
<td>84-90</td>
</tr>
<tr>
<td>Total required for this course</td>
<td>252-258</td>
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</tbody>
</table>

Students must complete the following:

- Bachelor of Engineering foundation core units - 36 points;
- all units in Table 6.2.2Ea (Electrical and Electronic Engineering core units) except ELEC3307 Engineering Management and Industrial Practice, and the unit from Group C (ELEC3320 Process Instrumentation and Control), and must choose only one unit from Group B - 126 points;
- one unit from Group A in Table 6.2.2Eb (Electrical and Electronic Engineering option units) - 6 points;
- a professional practicum of at least 12 weeks; and
- a Bachelor of Economics component - 84-90 points.

The following table is intended as a guide only. All units have a value of 6 points unless noted otherwise. Unit availability may be subject to change. For the most up-to-date information, please consult the Timetable at [http://www.timetable.uwa.edu.au/](http://www.timetable.uwa.edu.au/)
## 61190 Bachelor of Engineering and Bachelor of Economics

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Semester Two</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year One</strong></td>
<td><strong>Electrical and Electronic Engineering</strong></td>
</tr>
<tr>
<td>MATH1020 Calculus, Statistics and Probability</td>
<td>MATH1010 Calculus and Linear Algebra</td>
</tr>
<tr>
<td>(no longer offered)</td>
<td>(no longer offered)</td>
</tr>
<tr>
<td>PHYS1001 Physics for Scientists and Engineers</td>
<td>ELEC1300 Digital Systems 1 (Note 2)</td>
</tr>
<tr>
<td>(replaces PHYS1101 Advanced Physics A)</td>
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</tr>
<tr>
<td>GENG1001 Introduction to Engineering Mechanics</td>
<td>GENG1002 Introd. to Electrical and Electronic</td>
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<tr>
<td>(Note 1)</td>
<td>Engineering</td>
</tr>
<tr>
<td>Economics unit</td>
<td>Economics unit</td>
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<tr>
<td><strong>Year Two</strong></td>
<td></td>
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<tr>
<td>MATH2040 Engineering Mathematics (Note 4)</td>
<td>ENSC1001 Global Challenges in Engineering (replaces</td>
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<tr>
<td></td>
<td>ENSC1001 Engineering Challenges in a Global World</td>
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<tr>
<td></td>
<td>or GENG1003 Introduction to Professional</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
</tr>
<tr>
<td>ENSC3017 Circuits and Electronics (replaces</td>
<td>ELEC1302 Power and Machine Technologies (Note 3)</td>
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<tr>
<td>ELEC2300 Circuits and Electronic Systems 2)</td>
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</tr>
<tr>
<td>Economics unit</td>
<td>CITS2401 Computer Analysis &amp; Visualisation (replaces</td>
</tr>
<tr>
<td></td>
<td>GENG2140 Model. &amp; Computer Analysis for Eng.)</td>
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<tr>
<td>Economics unit</td>
<td>Economics unit</td>
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<tr>
<td><strong>Year Three</strong></td>
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</tr>
<tr>
<td>ENSC3014 Electronic Materials and Devices (replaces</td>
<td>ELEC2306 Fundamentals of Electrical Engineering</td>
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<tr>
<td>ELEC2304 Physical Electronics 2)</td>
<td>(Note 2)</td>
</tr>
<tr>
<td>Economics unit</td>
<td>ENSC3015 Signals and Systems (replaces ELEC2305</td>
</tr>
<tr>
<td>Economics unit</td>
<td>Signals and Systems</td>
</tr>
<tr>
<td>Economics unit</td>
<td>ELEC2303 Embedded Systems</td>
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<td>Economics unit</td>
<td>Economics unit</td>
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<td><strong>Year Four</strong></td>
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<tr>
<td>ELEC2301 Digital System Design (Note 2)</td>
<td>ELEC4402 Communications Systems (replaces ELEC3302</td>
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<tr>
<td></td>
<td>Communication Systems)</td>
</tr>
<tr>
<td>ELEC4401 Circuits and Electronic Sys. (replaces</td>
<td></td>
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<tr>
<td>ELEC3301 Circuits and Electronic Sys. 3 )</td>
<td>GENG4402 Control Engineering (replaces ELEC3306</td>
</tr>
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<td></td>
<td>Signals and Systems</td>
</tr>
<tr>
<td>GENG4407 Advanced Eng. Mathematics (replaces</td>
<td>ELEC4303 Embedded Systems</td>
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<td>ELEC3303 Electromagnetic Theory)</td>
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<td>Economics unit</td>
<td>Economics unit</td>
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<tr>
<td><strong>Year Five</strong></td>
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<tr>
<td>GENG5503 Modern Control Systems (replaces ELEC4300</td>
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<tr>
<td>Control Engineering)</td>
<td>ELEC5505 Power System Analysis (replaces ELEC4307</td>
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<td></td>
<td>Power Transmission and Control)</td>
</tr>
<tr>
<td>ELEC4308 Electrical and Electronic Eng. Project</td>
<td>ELEC4309 Electrical and Electronic Eng. Project</td>
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<td>Part 1</td>
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<td>BE Group A in Table 6.2.2Eb (EE Engineering</td>
<td>BE Group A in Table 6.2.2Eb (EE Engineering</td>
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<tr>
<td>options) or Commerce unit</td>
<td>options) or Commerce unit</td>
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<tr>
<td>Economics unit</td>
<td></td>
</tr>
<tr>
<td><strong>Year Six</strong></td>
<td></td>
</tr>
<tr>
<td>(replaces ELEC4302 Digital Microelec. Sys. Des.)</td>
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<tr>
<td>Economics unit</td>
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</tr>
<tr>
<td>Economics unit (if required)</td>
<td></td>
</tr>
</tbody>
</table>

**Note 1:** Students requiring GENG1001 must complete ENSC2001 Motion and ENSC1002 Material Behaviour from Atoms to Bridges.

**Note 2:** Unit no longer offered. Students missing this should contact the ECM Student Office.

**Note 3:** Students requiring GENG1002 or ELEC1302 should complete ENSC2002 Energy. Students missing both should contact the ECM Student Office.

**Note 4:** Students requiring MATH2040 must complete MATH1002 Mathematical Methods 2.

**Note 5:** Offered in Non-standard teaching period. Refer to Handbook or contact the unit coordinator for specific unit details.
## Bachelor of Engineering component

### Table 6.2.2Ea (Electrical and Electronic Engineering core units)

(Compiled for 2018 and subject to changes)

### (Group A)

#### Level 1

<table>
<thead>
<tr>
<th>Semester</th>
<th>Code</th>
<th>Course Description</th>
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</thead>
<tbody>
<tr>
<td>S1, S2</td>
<td>MATH1002</td>
<td>Mathematical Methods 2 (substitute for MATH2040 Engineering Mathematics)</td>
</tr>
<tr>
<td>N/A</td>
<td>ELEC1300</td>
<td>Digital Systems 1 (no longer offered, contact the ECM Student Office if required)</td>
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</table>

#### Level 2

<table>
<thead>
<tr>
<th>Semester</th>
<th>Code</th>
<th>Course Description</th>
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</thead>
<tbody>
<tr>
<td>S1, S2</td>
<td>CITS2401</td>
<td>Computer Analysis and Visualisation (replaces GENG2140 Modelling and Computer Analysis for Engineers)</td>
</tr>
<tr>
<td>N/A</td>
<td>ELEC2301</td>
<td>Digital System Design (no longer offered, contact the ECM Student Office if required)</td>
</tr>
<tr>
<td>S2</td>
<td>ELEC2303</td>
<td>Embedded Systems</td>
</tr>
<tr>
<td>N/A</td>
<td>ELEC2306</td>
<td>Fundamentals of Electrical Engineering (no longer offered, contact the ECM Student Office if required)</td>
</tr>
<tr>
<td>S1, S2</td>
<td>ENSC2002</td>
<td>Energy (replaces ELEC1302 Power and Machine Technologies)</td>
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</table>

#### Level 3

<table>
<thead>
<tr>
<th>Semester</th>
<th>Code</th>
<th>Course Description</th>
</tr>
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<tbody>
<tr>
<td>S2</td>
<td>ELEC3307</td>
<td>Engineering Management and Industrial Practice (last time offered in 2015)</td>
</tr>
<tr>
<td>S1</td>
<td>ENSC3014</td>
<td>Electronic Materials and Devices (replaces ELEC2304 Physical Electronics 2)</td>
</tr>
<tr>
<td>S2</td>
<td>ENSC3015</td>
<td>Signals and Systems (replaces ELEC2305 Signals and Systems 2)</td>
</tr>
<tr>
<td>S1</td>
<td>ENSC3017</td>
<td>Circuits and Electronics (replaces ELEC2300 Circuits and Electronic Systems 2)</td>
</tr>
</tbody>
</table>

#### Level 4

<table>
<thead>
<tr>
<th>Semester</th>
<th>Code</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1, S2</td>
<td>ELEC4308</td>
<td>Electrical and Electronic Engineering Project Part 1</td>
</tr>
<tr>
<td>S1, S2</td>
<td>ELEC4309</td>
<td>Electrical and Electronic Engineering Project Part 2</td>
</tr>
<tr>
<td>S1</td>
<td>ELEC4401</td>
<td>Circuits and Electronic Systems (replaces ELEC3301 Circuits and Electronic Systems 3)</td>
</tr>
<tr>
<td>N/S</td>
<td>ELEC4402</td>
<td>Communications Systems (replaces ELEC3302 Communications Systems)</td>
</tr>
<tr>
<td>S2</td>
<td>GENG4402</td>
<td>Control Engineering (replaces ELEC3306 Signals and Systems 3)</td>
</tr>
<tr>
<td>S1</td>
<td>GENG4407</td>
<td>Advanced Engineering Mathematics (replaces ELEC3303 Electromagnetic Theory)</td>
</tr>
</tbody>
</table>
### Table 6.2.2Eb (Electrical and Electronic Engineering options)

#### Group A

<table>
<thead>
<tr>
<th></th>
<th>Course Code</th>
<th>Course Title</th>
<th>Replaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1, S2</td>
<td>GENG5505</td>
<td>Project Management and Engineering Practice</td>
<td>ELEC4332 Project Engineering Practice</td>
</tr>
<tr>
<td>N/A</td>
<td>MECH4400</td>
<td>Engineering for Sustainable Development</td>
<td>Non longer offered</td>
</tr>
</tbody>
</table>

#### Key to availability of units:

- **S1** = Semester one  
- **S2** = Semester two  
- **N/S** = Non-standard Teaching Period, refer to handbook for details.  
- **N/A** = Not available in 2015