BE (Honours) in Telecommunications/BCommerce (Program code: 3764  Plan code: TELEAH3764)
Duration: 5.5 years - Total 264uoc are required to the completion of this dual degree program.

<table>
<thead>
<tr>
<th>Course (each 6uoc)</th>
<th>Course Name</th>
<th>Pre-requisite course passed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 1/Session 1</strong></td>
<td>Math1131 or 1141</td>
<td>Maths1A or Higher Maths 1A</td>
</tr>
<tr>
<td></td>
<td>Phys1131</td>
<td>Higher Physics 1A</td>
</tr>
<tr>
<td></td>
<td>Comp1911 or 1917</td>
<td>Computing 1A or Computing 1</td>
</tr>
<tr>
<td></td>
<td>Engg1000</td>
<td>Introduction to Eng Design &amp; Innovation</td>
</tr>
</tbody>
</table>

| Year 1/Session 2 | Math1231 or 1241 | Maths 1B or Higher Maths 1B | Math1131 or math1141 |
| Phys1231 | Higher Physics 1B | Phys1131 | |
| Comp1921 or 1927 | Computing 1B or Computing 2 | Comp1911 or Comp1917 | |
| Elect1112 or 1111 | Electrical Circuits | | |

| Year 2/Session 1 | Math2069 | Maths 2A | Math1231 |
| Elec2141 | Digital Circuit Design | Elec1112 or Elec1111 |
| Elec2134 | Circuits and Signals | Elec1112 or Elec1111 |
| Commerce Course | 6uoc from Faculty of Commerce | | |

| Year 2/Session 2 | Math2099 | Maths2B | Math1231 or Math1241 |
| Elec2142 | Embedded Systems Design | (Elec2141&Comp1921) or Com1917 |
| Elec2133 | Analogue Electronics | Elec2134 |
| Commerce Course | 6uoc from Faculty of Commerce | | |

| Year 3/Session 1 | Elec3115 | Electromagnetic Engineering | Phys1231 and Math2069 |
| Elec3106 | Electronics | Elec2133 and Elec2141 |
| Elec3104 | Digital Signal Process | Elec2134 |
| Tele3118 | Network Technologies | Elec2142 |

| Year 3/Session 2 | Tele3113 | Analogue & Digital Communications | Elec2134 |
| Elec3114 | Control Systems | Elec2134 |
| Tele3117 | Electrical Engineering Design | Elec2133 |
| Tele3119 | Trusted Networks | Tele3118 |

| Year 4/Session 1 | Tele4120 | Thesis A | Elec3117 and 120uoc passed |
| Tele4123 | Electrical Design Proficiency | Passed all L3 core courses |
| L4 elective | choose from L4 elective list | pre-requisite shown in L4 elective list |
| L4 elective | choose from L4 elective list | pre-requisite shown in L4 elective list |

| Year 4/Session 2 | Tele4121 | Thesis B | Elec4120 |
| Elec4122 | Strategic Leadership and Ethics | Passed 120uoc |
| Commerce Course | 6uoc from Faculty of Commerce | | |
| Commerce Course | 6uoc from Faculty of Commerce | | |

| Year 5/Session 1 | 24uoc from Faculty of Commerce | | |

| Year 5/Session 2 | 24uoc from Faculty of Commerce | | |

| Year 6/Session 1 | 24uoc from Faculty of Commerce | | |
**L3 elective courses list**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elec3111</td>
<td>Distributed Energy Generation</td>
<td>Pre-requisite: Elec2134</td>
</tr>
<tr>
<td>Elec3145</td>
<td>Real Time Instrumentation</td>
<td>Pre-requisite: Comp1911 &amp; Elec2134</td>
</tr>
<tr>
<td>Elec2146</td>
<td>Engineering Modelling and Simulation</td>
<td>Pre-requisite: Comp1911 &amp; Elec2134</td>
</tr>
<tr>
<td>Comp2041</td>
<td>Software Construction</td>
<td>Pre-requisite: Comp1921 or Comp1927</td>
</tr>
<tr>
<td>Elec3105</td>
<td>Electrical Energy</td>
<td>Pre-requisite: Elec3115 &amp; Elec2134</td>
</tr>
<tr>
<td>Math3411</td>
<td>Information, Codes and Ciphers</td>
<td></td>
</tr>
<tr>
<td>Math3101</td>
<td>Computational Mathematics</td>
<td>Pre-requisite: Math2069 &amp; Math2099</td>
</tr>
<tr>
<td>Math3121</td>
<td>Mathematical Methods and Partial Differential</td>
<td>Pre-requisite: Math2069 &amp; Math2099</td>
</tr>
<tr>
<td>Math3161</td>
<td>Optimization</td>
<td>Pre-requisite: Math2069 &amp; Math2099</td>
</tr>
<tr>
<td>Math3201</td>
<td>Dynamical Systems and Chaos</td>
<td>Pre-requisite: Math2069 &amp; Math2099</td>
</tr>
<tr>
<td>Math3261</td>
<td>Fluids, Oceans and Climate</td>
<td>Pre-requisite: Math2069 &amp; Math2099</td>
</tr>
<tr>
<td>Comp3211</td>
<td>Computer Architecture</td>
<td>Pre-requisite: Comp2021 &amp; Comp3222</td>
</tr>
<tr>
<td>Comp3231</td>
<td>Operating Systems</td>
<td>Pre-requisite: Comp1921 or Comp1927 &amp; Comp2121 or Elec2142.</td>
</tr>
</tbody>
</table>

**L4 elective courses list**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elec4601</td>
<td>Digital and Embedded Systems</td>
<td>Pre-requisite: Elec3106</td>
</tr>
<tr>
<td>Elec4602</td>
<td>Microelectronics Design and Technology</td>
<td>Pre-requisite: Elec3106</td>
</tr>
<tr>
<td>Elec4603</td>
<td>Solid-State Electronics</td>
<td>Pre-requisite: Elec2133</td>
</tr>
<tr>
<td>Elec4604</td>
<td>RF Electronics</td>
<td>Pre-requisite: Elec3106</td>
</tr>
<tr>
<td><strong>Microelectronics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elec4611</td>
<td>Power System Equipment</td>
<td>Pre-requisite: Elec3105</td>
</tr>
<tr>
<td>Elec4612</td>
<td>Power System Analysis</td>
<td>Pre-requisite: Elec3105</td>
</tr>
<tr>
<td>Elec4613</td>
<td>Electrical Drive Systems</td>
<td>Pre-requisite: Elec2135</td>
</tr>
<tr>
<td>Elec4614</td>
<td>Power Electronics</td>
<td>Pre-requisite: Elec2133</td>
</tr>
<tr>
<td>Elec4617</td>
<td>Power System Protection</td>
<td>Pre-requisite: Elec4612</td>
</tr>
<tr>
<td><strong>Energy Systems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elec4621</td>
<td>Advanced Digital Signal Processing</td>
<td>Pre-requisite: Elec3104</td>
</tr>
<tr>
<td>Elec4622</td>
<td>Multimedia Signal Processing</td>
<td>Pre-requisite: Elec3104</td>
</tr>
<tr>
<td>Elec4623</td>
<td>Biomedical Instrumentation, Measurement and Design</td>
<td>Pre-requisite: Elec3104</td>
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</tbody>
</table>

.........L4 elective list to be continued next page.......
### Systems and Control

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elec4631</td>
<td>Continuous-Time Control System Design</td>
<td>Elec3114</td>
</tr>
<tr>
<td>Elec4632</td>
<td>Computer Control System</td>
<td>Elec3114</td>
</tr>
<tr>
<td>Elec4633</td>
<td>Real Time Engineering</td>
<td>Elec3114</td>
</tr>
</tbody>
</table>

### Data and Mobile Communications

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tele4651</td>
<td>Wireless Communication Technologies</td>
<td>Tele3113</td>
</tr>
<tr>
<td>Tele4652</td>
<td>Mobile and Satellite Communication System</td>
<td>Tele3113</td>
</tr>
<tr>
<td>Tele4653</td>
<td>Digital Modulation and Coding</td>
<td>Tele3113</td>
</tr>
<tr>
<td>Tele4642</td>
<td>Network Performance</td>
<td>Tele3118</td>
</tr>
</tbody>
</table>

### Photonics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phtn4661</td>
<td>Optical Circuits and Fibres</td>
<td>Elec3115</td>
</tr>
<tr>
<td>Phtn4662</td>
<td>Photonic Networks</td>
<td>Tele3113</td>
</tr>
</tbody>
</table>

### Business Administration

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elec4445</td>
<td>Entrepreneurial Engineering</td>
<td>132 uoc</td>
</tr>
</tbody>
</table>

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**Notes:**

All students are required to undertake 60 full days of mandatory industrial training. Each student is personally responsible for arranging and completing the compulsory industrial training. Please view the details information in this site:

[https://www.engineering.unsw.edu.au/electrical-engineering/industrial-training-0](https://www.engineering.unsw.edu.au/electrical-engineering/industrial-training-0)

Core courses may not be substituted with other courses.

L4 Electives may be substituted with postgraduate courses (Elec97xx or Tele97xx) subject to approval from our Director of Academic Studies. Students’ academic performance and supporting reasons to enroll a postgraduate course are taken into consideration. Substitution form has to be filled out to apply for it.

Not all courses are offered in both sessions. You need to view the timetable website to find out each course’s availability in each session:


For further information regarding the program rules, please view:


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*GF updated 3rd April 2015*