# Bachelor of Science (BP004)
MJD Engineering Science – Mining Engineering Specialisation - Commencing: Semester 1, 2017

## Course Study Plan with Bridging MATH1722 (missing Maths Specialist ATAR)

### Option A

Note: Has restricted choice of second major and/or may not be possible to complete second major within three years

**Offered in Both Semesters**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester 1</th>
<th><strong>MATH1722</strong></th>
<th><strong>PHYS1001</strong></th>
<th>Elective</th>
<th><strong>Bridging/Elective/2nd major</strong></th>
<th>Semester 2</th>
<th><strong>MATH1011</strong></th>
<th><strong>PHYS1002</strong></th>
<th><strong>CITS2401</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mathematics Foundations: Specialist</td>
<td>Physics for Scientists and Engineers</td>
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<td></td>
<td>Material Behaviour from Atoms to Bridges</td>
<td>Computer Analysis &amp; Visualisation</td>
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<td></td>
<td></td>
<td>Prereq: Maths Methods ATAR</td>
<td>Prereq: Physics ATAR or PHYS1030</td>
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<td>Prereq: Chemistry, Maths Specialist &amp; Physics ATAR</td>
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<tr>
<td>Year 2</td>
<td>Semester 1</td>
<td><strong>MATH1012</strong></td>
<td><strong>ENSC2001</strong></td>
<td>Elective</td>
<td><strong>2nd major</strong></td>
<td>Semester 2</td>
<td><strong>ENSC3011</strong></td>
<td><strong>ENSC2002</strong></td>
<td><strong>ENSC1001</strong></td>
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<td></td>
<td></td>
<td>Mathematical Theory &amp; Methods</td>
<td>Motion</td>
<td></td>
<td></td>
<td></td>
<td>Resource Extraction Technologies</td>
<td>Energy</td>
<td>Global Challenges in Engineering</td>
</tr>
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<td></td>
<td></td>
<td>Prereq: Maths Specialist ATAR or MATH1722</td>
<td>Pre req: ENSC1002 and MATH1011</td>
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<td></td>
<td></td>
<td>Pre req: MATH1011</td>
<td>Co-req: MATH1012</td>
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<td></td>
<td>Semester 2</td>
<td><strong>ENSC3004</strong></td>
<td><strong>ENSC3009</strong></td>
<td>Elective</td>
<td><strong>2nd major</strong></td>
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<tr>
<td></td>
<td></td>
<td>Solid Mechanics</td>
<td>Geomechanics</td>
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<tr>
<td></td>
<td></td>
<td>Pre req: ENSC1002 and MATH1011 and MATH1012</td>
<td>Pre req: PHYS1001 and MATH1011 and MATH1012</td>
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<tr>
<td>Year 3</td>
<td>Semester 1</td>
<td><strong>ENSC3013</strong></td>
<td><strong>ENSC3010</strong></td>
<td>Elective</td>
<td><strong>2nd major</strong></td>
<td>Semester 2</td>
<td><strong>ENSC3012</strong></td>
<td><strong>ENSC3003</strong></td>
<td><strong>ENSC1001</strong></td>
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<tr>
<td></td>
<td></td>
<td>Environmental Systems</td>
<td>#ENSC3003 Fluid Mechanics</td>
<td></td>
<td></td>
<td></td>
<td>Data Collection and Analysis</td>
<td>#ENSC3010 Hydraulics</td>
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<td></td>
<td></td>
<td>Pre req: ENSC2001 and ENSC2002 and MATH1012</td>
<td>Pre req: ENSC2001 and MATH1012</td>
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<td></td>
<td></td>
<td>Pre req: MATH1011 and MATH1012</td>
<td>Advisable prior study: ENSC2001</td>
<td></td>
</tr>
</tbody>
</table>

**Note**  Students select one option unit: either ENSC3003 (S1) or ENSC3010 (S2); ENSC1001 may be taken earlier or later in the course.
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Option B

with concurrent enrolment in MATH1011 and MATH1012 in first year to open up choice of second major (non-Science)

** Offered in Both Semesters Broadening

| Year 1 | Semester 1 | MATH1722 ** Mathematics Foundations: Specialist 
Prereq: Maths Methods ATAR | PHYS1001** Physics for Scientists and Engineers 
Prereq: Physics ATAR or PHYS1030 | CITS2401** Computer Analysis & Visualisation | Broadening/Elective/ 2nd major |
| Year 2 | Semester 1 | ENSC1002** Material Behaviour from Atoms to Bridges 
Prereq: Chemistry, Maths Specialist & Physics ATAR | MATH1012** Mathematical Theory & Methods 
Prereq: Maths Specialist ATAR or MATH1722 | | Broadening/Elective/ 2nd major |
| Year 3 | Semester 1 | ENSC3009 Geomechanics 
Prereq: PHYS1001 and MATH1011 and MATH1012 | ENSC3004 Solid Mechanics 
Prereq: ENSC1002 and MATH1011 and MATH1012 | ENSC2001 Motion** 
Prereq: ENSC1002 and MATH1011 | Elective/2nd major |
| | Semester 2 | ENSC3011 Resource Extraction Technologies 
Pre req: 18 pts of L1 and L2 units taken from the EngSc major. | ENSC2002 Energy** 
Prereq: MATH1011 
Co-req: MATH1012 | | Elective/2nd major |
| | Semester 2 | ENSC1001 | | | |

#Note  Students select one option unit: either ENSC3003 (S1) or ENSC3010 (S2); ENSC1001 may be taken in final semester of the course
First Year Study Plan with Bridging CHEM1003 (missing Chemistry ATAR)

** Offered in Both Semesters — Broadening

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<tbody>
<tr>
<td><strong>Semester 1</strong></td>
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</table>
| MATH1011**  
Multivariable Calculus  
*Prereq: Maths Specialist ATAR or MATH1722* |
| CHEM1003  
Introductory Chemistry |
| PHYS1001**  
Physics for Scientists and Engineers  
*Prereq: Physics ATAR or PHYS1030* |
| Broadening/Elective/  
2nd major |
| **Semester 2** |
| MATH1012**  
Mathematical Theory & Methods  
*Prereq: Maths Specialist ATAR or MATH1722* |
| ENSC1002**  
Material Behaviour from Atoms to Bridges  
*Prereq: Chemistry, Maths Specialist & Physics ATAR* |
| Broadening/Elective/  
2nd major |
| CITS2401**  
Computer Analysis & Visualisation |

This study plan is an example of a full-time load of four units per semester.

The standard minimum completion time for a bachelor’s degree is three years. The maximum completion time is 10 years.

For more details about the Engineering Science major, please check out the UWA Handbook.

For course advice, find out which Student Office you are assigned to via studentConnect.
** Bachelor of Science (BP004)  
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First Year Study Plan with Bridging PHYS1030 (missing Physics ATAR)

** Offered in Both Semesters   ** Broadening

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<th>Semester 2</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>MATH1011**</td>
<td>PHYS1030**</td>
</tr>
<tr>
<td></td>
<td>Multivariable Calculus</td>
<td>Bridging Physics</td>
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</tr>
<tr>
<td></td>
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