ENGINEERING Stream Details

The University Preparation Program (UPP) is an opportunity for you to build your academic skills, experience part-time study in an area of interest and consider university level study. At UNSW it is not a case of 'how much you are willing to pay or how 'mature' you are, it's about hard work and potential. Once you complete the UPP you can use your results to apply for further studies at UNSW or at another institution which accepts UPP results for entry.

### ELIGIBILITY

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
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<tbody>
<tr>
<td><strong>Age</strong></td>
<td>You should be 20 years or over on 1 March in the year you start the program (please note: younger applicants who are eligible for the UNSW ACCESS Scheme may be eligible for entry to UNSW Prep).</td>
</tr>
<tr>
<td><strong>Citizenship / Residency</strong></td>
<td>You should be an Australian citizen, New Zealand citizen or hold a current Australian Permanent Resident visa.</td>
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<tr>
<td><strong>Language</strong></td>
<td>English language proficiency is required if your previous schooling was not completed in English. Read the <a href="#">English Requirements Policy</a> for further information.</td>
</tr>
<tr>
<td><strong>Previous Study</strong></td>
<td>You should have not already attempted university study. If you have attempted university study (either in Australia or overseas) since leaving high school you need to contact UNSW Admissions, who will advise on your best pathway.</td>
</tr>
<tr>
<td><strong>Additional Criteria</strong></td>
<td>You should not be enrolled in another program of study at the same time.</td>
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### TIME COMMITMENT

**Structure - 4 x 10 week terms**  
(February - April, June - August, September - November and February - April)  
Time commitments are based on the subjects undertaken within each term (see Course Component details).

At least 6-8 hours of independent study per week is recommended for each UPP course, as well as some time each week for online learning. 80% attendance is a requirement for each UPP course.

### APPLICATION

Applications must be made online via the Universities Admissions Centre (UAC) from August [www.uac.edu.au](http://www.uac.edu.au).  
You may apply until the end of January, and you must accept your offer and enrol no later than 11 February.

### COST

- UPP is fully funded by the Australian Government so there are no course fees. This may change. Please check fee details prior to application: [www.futurestudents.unsw.edu.au/upp](http://www.futurestudents.unsw.edu.au/upp)
- You need to pay the Student Services and Amenities Fee ($111.75 per year in 2018), which lets you access all the services for students at UNSW.
- You pay the cost of any materials you need for your course.

### FURTHER INFO

**The Learning Centre**  
Ph: +61 2 9385 2060  
Email: [upp@unsw.edu.au](mailto:upp@unsw.edu.au)  
**Type of enquiry:**  
- Course information  
- General enquiries

**UNSW Admissions**  
Ph: +61 2 9385 3656  
[www.enquiry.unsw.edu.au](http://www.enquiry.unsw.edu.au)  
**Type of enquiry:**  
- Eligibility & application  
- Future study options
### Term 1

**University Orientation and Study Skills 1 (UNSW course code - REGZ9000)**

<table>
<thead>
<tr>
<th>Units of credit:</th>
<th>6 (3 UoC per term)</th>
<th>Hours per week:</th>
<th>3</th>
<th>Available: Terms 1 and 2 (exclusively to UPP students)</th>
</tr>
</thead>
</table>

**Timetable:**
The UOSS 1 course continues over two consecutive terms. In 2019 classes are offered as follows:
Each week students attend one of the following 2 hr class sessions, plus an hour online:
Monday 6pm - 8pm OR Tuesday 6pm - 8pm OR Friday 12pm - 2pm

**Prior Knowledge:**
Must be proficient in written and spoken English

The UOSS 1 course provides a practical engagement with the academic skills needed for success at university: for example, time management, critical thinking and academic writing. UOSS 1 has a particular focus on the understanding of, and the preparation required, to produce an academic essay. Topics covered include:

- orientation to the academic system
- critical/analytical thinking
- note making
- tutorial presentations
- essay writing
- referencing and citation skills
- assignment planning
- research and critical reading
- examination techniques

**UPP Mathematics Skills 1 (UNSW course code - REGZ9070)**

<table>
<thead>
<tr>
<th>Units of credit:</th>
<th>6</th>
<th>Hours per week:</th>
<th>6</th>
<th>Available: Term 1 (exclusively to UPP students)</th>
</tr>
</thead>
</table>

**Timetable:**
In 2019, students attended BOTH sessions:
- Monday 6pm - 9pm AND Wednesday 6pm - 9pm

**Prior Knowledge:**
Year 10 Advanced Level Mathematics is assumed (Confident with algebra, such as simplification of expressions, solving equations & in-equations, factorisation including quadratic equations and using a scientific calculator including the fraction, power and exponential keys).

**UPP Mathematics Skills 1** UPP Mathematic Skills 1 is for students who have not achieve an appropriate level of mathematics at high school or equivalent and wish to apply to UNSW degree programs with assumed knowledge in mathematics. Topics include:

- basic arithmetic and algebra (2.5 weeks);
- further arithmetic and algebra (2.5 weeks);
- coordinate geometry (2 weeks);
- functions and graphs (2 weeks).
Term 2

**University Orientation and Study Skills 1 Contd. (UNSW course code - REGZ9000)**

| Units of credit: | 6 (3 UoC per term) | Hours per week: | 3 | Available: | Terms 1 and 2 (exclusively to UPP students) |

**Timetable:**
The UOSS 1 course continues over two consecutive terms. In 2019 classes are offered as follows:
Each week students attend one of the following 2 hr class sessions, plus an hour online:
Monday 6pm - 8pm OR Tuesday 6pm - 8pm OR Friday 12pm - 2pm

**Prior Knowledge:**
Must be proficient in written and spoken English

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**UPP Mathematics Skills 2 (UNSW course code - REGZ9072)**

| Units of credit: | 6 | Hours per week: | 6 | Available: | Term 2 (exclusively to UPP students) |

**Timetable:**
In 2019 students attend BOTH sessions:
• Monday 6pm - 9pm AND Wednesday 6pm - 9pm

**Pre-requisites:**
Successful completion of REGZ9070.

**UPP Mathematics Skills 2** It is designed to provide a level of competency in mathematics for students who have not studied HSC Mathematics (or equivalent) at high school and who wish to apply to UNSW programs with assumed knowledge in Mathematics, and follows on from REGZ9070. It takes students to the equivalent of 2 Unit Yr 12 Mathematics. Topics include:

- differential calculus (3 weeks);
- integral calculus (1.5 weeks);
- trigonometry and trigonometric functions (2.5 weeks);
- exponential and logarithmic functions (2 weeks)

**NOTE:** Engineering stream students who attain a Distinction result or higher in REGZ9070 in Term 1 MAY, after consultation with the UPP Maths Coordinator, be permitted to take MATH1011 in place of REGZ9072.

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**Term 3**

**UPP Mathematics Skills 3 (UNSW course code - REGZ9073)**

| Units of credit: | 6 | Hours per week: | 6 | Available: | Term 3 (exclusively to UPP students) |

**Timetable:**
In 2019 students attend BOTH sessions:
• Monday 6pm - 9pm AND Wednesday 6pm - 9pm

**Pre-requisites:**
Successful completion of REGZ9072.

**UPP Mathematics Skills 3** is for students who have not achieved an appropriate level of mathematics at high school or equivalent and wish to apply to UNSW degree programs with assumed knowledge in mathematics. Topics include:

- applications of calculus (2 weeks);
- sequences and series (2 weeks);
- introductory probability (2 weeks);
- introductory statistics (3 weeks).

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**Communicating in Engineering (UNSW course code - ENGO360)**

| Units of credit: | 6 | Hours per week: | 6 | Available: | Term 3 |

**Prerequisites:**
Successful completion of UOSS 1 (REGZ9000) and REGZ9070 (UPP Mathematics Skills 1)

**Communicating in Engineering** explores the expectations and conventions applying to spoken and written communications within engineering and science; different textual genres; aspects of rhetoric; ethical use of material; formal language structure; grammar and syntax. Students will improve their ability to collect and build ideas into coherent arguments, learn how to construct texts that demonstrate critical thinking, and develop their communication skills (speaking, listening, writing, & reading), in preparation for subsequent study in a professional context.
Term 1, 2020*

**Fundamentals of Mathematics B (UNSW course code - MATH1011)**

<table>
<thead>
<tr>
<th>Units of credit</th>
<th>6</th>
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<tbody>
<tr>
<td>Hours per week</td>
<td>6</td>
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</table>

Functions (and their inverses), limits, asymptotes, continuity; differentiation and applications; integration, the definite integral and applications; inverse trigonometric functions; the logarithmic and exponential functions and applications; sequences and series; mathematical induction; the binomial theorem and applications; introduction to probability theory; introduction to 3-dimensional geometry; introduction to linear algebra.

*or Term 2, 2019 for students who attained a Distinction level or higher in REGZ9070

**Fundamentals of Physics (UNSW course code - PHYS1011)**

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<tr>
<th>Units of credit</th>
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</table>

This is an introductory level course in physics for students from all disciplines. The course will cover the methods of Physics, including: the description of motion; forces and momentum; the dynamics of particles; kinetic and potential energy; the conservation of energy; temperature and thermal equilibrium; specific and latent heat; thermal energy; fluids and fluid flow; oscillations and simple harmonic motion; waves, wave reflection, refraction and interference; the wave nature of light; electric fields and charge; electric potential and energy; electric currents; magnetism; electromagnetic induction and Faraday’s law; early quantum theory and models of the atom; nuclear physics and radioactivity; nuclear energy.