



# Mathematics courses when combined with a Bachelor of Engineering (Hons) – Physics or Advanced Physics major

Never Stand Still

Faculty of Science

Science Student Centre

All students undertaking a Bachelor of Engineering (Honours) degree at UNSW will complete first and second year Mathematics courses as part of their core Engineering program. However, when these students combine their Engineering program with a Bachelor of Science or Bachelor of Advanced Science (Honours) majoring in Physics or Advanced Physics, there is a variation to the Mathematics courses students need to complete to ensure that the mathematics studied is appropriate for both the Physics and Engineering major. Students need to adjust the courses taken as follows:

Row	Core Mathematics Courses in the Engineering Stream	Courses students need to complete to satisfy both the Engineering and Physics majors
A	<ul style="list-style-type: none"> <li>MATH2019 Engineering Mathematics 2E</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2089 Numerical Methods and Statistics</li> </ul>	<ul style="list-style-type: none"> <li>MATH2069 Mathematics 2A</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2121 or MATH2221 (Higher) Theory and Applications of Differential Equations</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2089 Numerical Methods and Statistics</li> </ul>
B	<ul style="list-style-type: none"> <li>MATH1081 Discrete Mathematics</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2801 Theory of Statistics</li> </ul>	<ul style="list-style-type: none"> <li>MATH1081 Discrete Mathematics</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2801 Theory of Statistics</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2301 Mathematical Computing</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2069 Mathematics 2A</li> </ul>
C	<ul style="list-style-type: none"> <li>MATH2019 Engineering Mathematics 2E</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>CVEN2002 Engineering Computations for Civil Engineers</li> </ul>	<ul style="list-style-type: none"> <li>MATH2069 Mathematics 2A</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2121 or MATH2221 (Higher) Theory and Applications of Differential Equations</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>CVEN2002 Engineering Computations for Civil Engineers</li> </ul>
D	<ul style="list-style-type: none"> <li>MATH2069 Mathematics 2A</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2099 Mathematics 2B</li> </ul>	<ul style="list-style-type: none"> <li>MATH2069 Mathematics 2A</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2099 Mathematics 2B</li> </ul> <p><b>AND</b></p> <ul style="list-style-type: none"> <li>MATH2301 Mathematical Computing</li> </ul>

**Row A**

This applies to students completing one of the following majors in the Engineering (Honours) programs:

- Aerospace Engineering;
- Chemical Engineering;
- Industrial Chemistry;
- Mechanical and Manufacturing Engineering;
- Mechanical Engineering;
- Mechatronic Engineering;
- Mining Engineering;
- Naval Architecture;
- Petroleum Engineering.
- Photovoltaics and Solar Energy;
- Renewable Energy Engineering;

**Row B**

This applies to students completing the Bioinformatics Engineering major.

**Row C**

This applies to students completing one of the following majors:

- Civil Engineering
- Environmental Engineering
- Geospatial Engineering
- Surveying

**Row D**

This applies to students completing one of the following majors:-

- Computer Engineering
- Electrical Engineering
- Telecommunications

**QUESTIONS:**

If students have questions regarding this, they should contact the Science Student Centre ([sso@unsw.edu.au](mailto:sso@unsw.edu.au)) or the School of Physics ([info@phys.unsw.edu.au](mailto:info@phys.unsw.edu.au))