



# Mathematics courses when combined with a Bachelor of Engineering (Hons) – Climate Dynamics, Physical Oceanography, Mathematics and Statistics majors

Never Stand Still

Faculty of Science

Science Student Centre

All students undertaking a Bachelor of Engineering (Honours) degree at UNSW will complete 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 Advanced Physical Oceanography, Climate Dynamics, Mathematics, Physical Oceanography, or Statistics, the second year Mathematics courses in the Engineering program will need to be substituted with core Mathematics courses for the Science major, as follows:

Row	Engineering Core Mathematics Course	Substitute with these courses for the Science major
A	MATH2019 Engineering Mathematics 2E	<ul style="list-style-type: none"> <li>• MATH2011 or MATH2111 (Higher) Several Variable Calculus</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• MATH2121 or MATH2221 (Higher) Theory and Applications of Differential Equations</li> </ul>
B	MATH2089 Numerical Methods and Statistics	<ul style="list-style-type: none"> <li>• MATH2301 Mathematical Computing</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• MATH2801 or MATH2901 (Higher) Theory of Statistics</li> </ul>
C	MATH2069 Mathematics 2A	<ul style="list-style-type: none"> <li>• MATH2011 or MATH2111 (Higher) Several Variable Calculus</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• MATH2521 or MATH2621 (Higher) Complex Analysis</li> </ul>
D	MATH2099 Mathematics 2B	<ul style="list-style-type: none"> <li>• MATH2501 or MATH2601 (Higher) Linear Algebra</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• MATH2801 or MATH2901 (Higher) Theory of Statistics</li> </ul>
E	CVEN2002 Engineering Computations for Civil Engineers <b>OR</b> CVEN2702 Engineering Computations for Environmental Engineers	<ul style="list-style-type: none"> <li>• MATH2301 Mathematical Computing</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>• MATH2801 or MATH2901 (Higher) Theory of Statistics</li> </ul>
F	MATH2859 Probability, Statistics & Information	MATH2801 or MATH2901 (Higher) Theory of Statistics

EXAMPLES:

***Mechanical Engineering Stream***

Mechanical Engineering students have MATH2019 and MATH2089 as core Engineering Mathematics courses, and should take the relevant Science Mathematics courses as shown the third column of rows A and B (i.e. MATH2011, MATH2121, MATH2301 and MATH2801)

***Electrical Engineering Stream***

Electrical Engineering students have MATH2069 and MATH2099 as core Engineering Mathematics courses, and should take the relevant Science Mathematics courses as shown the third column of rows C and D (i.e. MATH2011, MATH2521, MATH2501 and MATH2801).

***Civil Engineering Stream***

Civil Engineering students have MATH2019 and CVEN2002 as core Engineering Mathematics courses, and should take the relevant Science Mathematics courses as shown the third column of rows A and E. (i.e. MATH2011, MATH2121, MATH2301 and MATH2801)

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 Mathematics and Statistics ([ug.MathsStats@unsw.edu.au](mailto:ug.MathsStats@unsw.edu.au)).