Overview

Physics is the study of the laws of nature that govern the behaviour of the universe, from the smallest sub-atomic particles to the universe itself. It applies these laws to the solution of practical and theoretical problems and to the development of new technologies.
<table>
<thead>
<tr>
<th><strong>Faculty</strong></th>
<th>Faculty of Science</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study Level</strong></td>
<td>Undergraduate</td>
</tr>
<tr>
<td><strong>Minimum Units of Credit</strong></td>
<td>90</td>
</tr>
<tr>
<td><strong>Specialisation Type</strong></td>
<td>Major</td>
</tr>
</tbody>
</table>
Available in Program(s)

Program(s) in which this major is available

Bachelor of Advanced Science (Honours) - BAdvSci(Hons)

3962 Advanced Science (Honours)

Faculty: Faculty of Science
Campus: Kensington
Units of Credit: 192
Typical Duration: 4 Years
Specialisation Structure

Students must complete 90 UOC.

**Level 1 Core Courses**

Students must take 24 UOC of the following courses.

- **MATH1141**  6 UOC
  Higher Mathematics 1A

- **MATH1241**  6 UOC
  Higher Mathematics 1B

One of the following:

- **PHYS1131**  6 UOC
  Higher Physics 1A

- **PHYS1141**  6 UOC
  Higher Physics 1A (Special)

One of the following:

- **PHYS1231**  6 UOC
  Higher Physics 1B

- **PHYS1241**  6 UOC
  Higher Physics 1B (Special)

**Level 2 Core Courses**

Students must take 30 UOC of the following courses.

- **MATH2069**  6 UOC
  Mathematics 2A

- **MATH2089**  6 UOC
  Numerical Methods and Statistics
PHYS2111  |  6 UOC
Quantum Physics

PHYS2113  |  6 UOC
Classical Mechanics and Special Relativity

PHYS2114  |  6 UOC
Electromagnetism

**Level 3 Core Courses**

Students must take 24 UOC of the following courses.

PHYS3111  |  6 UOC
Quantum Mechanics

PHYS3112  |  6 UOC
Experimental and Computational Physics

PHYS3113  |  6 UOC
Thermal Physics and Statistical Mechanics

PHYS3114  |  6 UOC
Electrodynamics

**Electives**

Students must take at least 12 UOC of the following courses.

PHYS3115  |  6 UOC
Particle Physics and the Early Universe

PHYS3116  |  6 UOC
Astrophysics

PHYS3117  |  6 UOC
Physics Laboratory
Double Major: Mathematics and Physics

Students who are contemplating a double major in Mathematics and Physics should substitute MATH2111 Higher Several Variable Calculus and MATH2621 Higher Complex Analysis for MATH2069 Mathematics 2A; and MATH2301 Mathematical Computing and MATH2091 Higher Theory of Statistics for MATH2089 Numerical Methods and Statistics.

Enrolment Disclaimer

Unless advised otherwise by your program authority, you should follow the rules for the handbook for the year you commenced your program. You are also responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements.
Additional Information

Honours

For further information on Honours in Physics, please see the Physics Honours entry in this Handbook.
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
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Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179