The UNSW School of Physics is one of the leading Physics schools in Australia and well recognised internationally. The school has more than 45 staff, including 25 academic and 20 research staff, and more than 50 postgraduate students from all over the world who are engaged in a variety of research projects. Many of the projects have strong international collaborations and links. The School receives significant external research funding each year from various Australian and international funding agencies. Postgraduate students have access to first-rate laboratories, equipment and projects, which have been independently judged to be of the highest quality. Research projects are available in all areas of the School, including Astrophysics, Biophysics, Condensed Matter Physics, Music Acoustics, Theoretical Physics, and in the Australian Centre of Excellence for Quantum Computation and Communication Technology. Current research projects within the School include: searching for extra-solar planets; astronomy from Antarctica; plant membrane biophysics; high-temperature superconductivity; quantum properties of black holes; acoustics of brass and woodwind instruments; semiconductor nanostructures; high speed quantum devices. Study areas vary over time.

Research Degrees

Master of Philosophy

Program Code: 2475 (Physics)
Length of study: 1.5 to 2 years of advanced study leading to the submission of a thesis. Minimum duration for completion is 1.5 years.
Entry Requirements: An undergraduate Bachelor of Science degree majoring in Physics, with a credit or higher average (or equivalent).

Master of Science (by Research)

Program Code: 2930 (Physics)
Length of study: 1.5 to 2 years of advanced study leading to the submission of a thesis. Minimum duration for completion is 1.5 years.
Entry Requirements: A four year Bachelor degree with first or upper second class honours (or equivalent).

Doctor of Philosophy

Program Code: 1890 (Physics)
Length of study: 3 to 4 years of advanced study leading to the submission of a thesis. Minimum duration for completion is 3 years.
Entry Requirements: A four year Bachelor degree with first or upper second class honours (or equivalent).

Advanced training and experience in scientific research. 48 units of credit (UOC) are gained by the completion of a research project and 24 UOC are gained by coursework. Postgraduate courses can be taken in the School of Physics, or in other schools at UNSW. Research projects are available in all departments in the School. It is expected that this qualification will allow entry to a higher degree program for students without an Honours degree.

This program requires the completion of an original piece of research, more limited in scope and nature than PhD. Candidates develop mastery of appropriate methodology and learn the fundamentals of research. Findings are presented in a thesis that places the work in the wider context of their discipline. Research projects are available in all departments in the School.

A PhD requires the completion of a piece of research that demonstrates a significant and original contribution to knowledge in the field of study. Candidates acquire advanced specialist research training under academic supervision. The candidate’s thesis summarises the research and provides evidence for independent thought and critical analysis, effective communication and expert knowledge of the discipline in the international context. Research projects are available in all departments in the School.

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Information about applying for research degrees is available from
UNSW Graduate Research School www.grs.unsw.edu.au
## Graduate Diploma in Physics

**Program Code:** 5533  
**Commencement:** Semester 1 or Semester 2  
**Units of credit:** 48  
**Length of study:** 1 year full-time or equivalent part-time  
**Entry requirement:** An undergraduate science degree majoring in physics from a recognised institution.  

The coursework and research project requirements are similar to Physics Level Four (Honours), with approved substitutions if required. Students normally complete the courses in quantum mechanics, statistical mechanics, electro-magnetism and solid-state physics. Other lecture courses and research projects are offered in general areas of physics including astrophysics, condensed matter physics and theoretical physics. Potential students may also wish to consider the Master of Philosophy degree.

## Graduate Diploma in Physics Research Techniques

**Program Code:** 5663  
**Commencement:** Semester 1 or Semester 2  
**Units of credit:** 48  
**Length of study:** 1 year full-time or equivalent part-time  
**Entry requirement:** An undergraduate science degree majoring in physics, with a credit average, from a recognised institution.  

An advanced training program for graduates who wish to upgrade their knowledge of physics and/or satisfy requirements for admission to a research degree in physics. The program requires 48 units of credit (UOC), consisting of courses at Level Three/Four totalling 30 UOC and a research project (18 UOC). Most courses selected should be from the School of Physics but courses from other schools may be included. Potential students may also wish to consider the Master of Philosophy degree.