

Graduate Certificate in Physics

Note: This program involves courses that may be attended by both undergraduate and postgraduate students.

1 Duration of program

To qualify for the Graduate Certificate in Physics, a candidate shall satisfactorily complete a program of full-time study extending over at least one semester or part-time study extending over at least two semesters.

2 Admission

- 2.1 An applicant for admission to the program of study for the Graduate Certificate shall have qualified for a degree of the University of Adelaide or hold qualifications from another institution accepted by the University for the purpose; and obtained the approval of the Head of Physics.
- 2.2 Subject to the approval of Council, the Faculty may in special cases and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the Graduate Certificate a person who does not hold the qualifications specified in 2.1 above but has given evidence satisfactory to the Faculty of their fitness to undertake work for the Graduate Certificate.

3 Assessment and examinations

- 3.1 There shall be four classifications of pass in each course for the Graduate Certificate: Pass with High Distinction, Pass with Distinction, Pass with Credit, and Pass.
- 3.2
- a A candidate who fails in a course and desires to take the course again shall again attend lectures and satisfactorily do such written and practical work as the teaching staff concerned may prescribe, unless specifically exempted after written application for such exemption.
 - b A candidate who has twice failed the examination in any course or division of a course may not enrol for that course again except by special permission to be obtained in writing and then only under such conditions as may be prescribed.
 - c For the purpose of this Rule, a candidate who is refused permission to sit for examination, or who fails, without a reason accepted by the Head of Physics, to attend all or part of a final examination (or supplementary examination if granted) after remaining enrolled for at least nine teaching weeks of that semester, shall be deemed to have failed the examination.

4 Qualification requirements

- 4.1 A candidate for the Graduate Certificate shall regularly attend lectures and tutorials, do such written work and practical work as may be prescribed, and pass examinations in a selection of courses to an aggregate value of at least 12 units, including at least 6 units from the courses listed at 4.2(c).

4.2 Academic program

Courses may be chosen from:

- a The following, to the value of no more than 6 units:

Semester 1

PHYSICS 7032 Advanced Dynamics & Relativity.....	3
PHYSICS 7532 Atmospheric and Astrophysics	3
PHYSICS 7536 Electromagnetism [†]	3
PHYSICS 7542 Quantum Mechanics A [†]	3
PHYSICS 7546 Statistical Mechanics [†]	3

[†]A maximum of 1 of these 3 courses may be chosen.

Semester 2

PHYSICS 7534 Computational Physics	3
PHYSICS 7028 Experimental Physics.....	3
PHYSICS 7540 Optics & Photonics.....	3
PHYSICS 7209 Photonics P	3
PHYSICS 7544 Quantum Mechanics B	3

Semester 1 or 2

PHYSICS 7550 Radiation Biology, Protection & Epidemiology*	3
PHYSICS 7548 Human Biology for Medical Physics*.....	3

- b Courses listed under Academic Program Rules for other postgraduate coursework degrees offered by the Faculty of Sciences or the Faculty of Engineering, Computer and Mathematical Sciences, subject to approval by the Program Coordinator

and

- c the following courses to the value of no less than 6 units:

Semester 1

PHYSICS 7007 Experimental Methods	3
PHYSICS 7010 Non-Linear Optics	3
PHYSICS 7011 Nuclear and Radiation Physics	3
PHYSICS 7013 Quantum Field Theory	3
PHYSICS 7014 Relativistic Quantum Mechanics and Particle Physics	3
PHYSICS 7104 Electronic Data Acquisition	3
Semester 2	
PHYSICS 7002 Advanced Astrophysics.....	3
PHYSICS 7004 Advanced Electromagnetism.....	3
PHYSICS 7003 Advanced Atmospheric and Environmental Physics	3
PHYSICS 7008 Gauge Theory	3
PHYSICS 7009 General Relativity	3
PHYSICS 7012 Nuclear Theory and Particle Physics	3
PHYSICS 7015 Statistical Mechanics and Many Body Theory*	3
Semester 1 or 2	
PHYSICS 7551 Radiotherapy Physics*	3
PHYSICS 7549 Physics of Medical Imaging*	3

*not offered every year

The courses to be offered in any year will be dependent on staff availability and student demand.

4.3 The Faculty may require a candidate to undertake additional work needed as background to the program.

4.4 Unacceptable combinations of courses

No candidate will be permitted to count towards an award any course, together with any other course, which, in the opinion of the Faculty concerned, contains a substantial amount of the same material; and no course or portion of a course may be counted twice towards an award.

4.5 Graduation

Subject to Chapter 89 of the Statutes, candidates who have satisfied the requirements for any award of the University shall be admitted to that award.

5 Special circumstances

When in the opinion of the relevant Faculty special circumstances exist, the Council, on the recommendation of the Faculty in each case, may vary any of the provisions of the Academic Program Rules for any particular award.