

## **Master of Science (Applied Physics)**

## **Master of Science (Astrophysics)**

## **Master of Science (Atmospheric Physics)**

## **Master of Science (Optics and Lasers)**

## **Master of Science (Theoretical Physics)**

These Program Rules should be read in conjunction with the University's policies (<http://www.adelaide.edu.au/policies>).

### **1 Duration of Program**

Except with the permission of the Faculty of Sciences, the courses of study and research report shall normally be completed in three semesters of full-time study or the equivalent of part-time study.

### **2 Admission**

- 2.1 a The Faculty may accept as a candidate for the degree any person who has qualified for an Honours degree of Bachelor of Science in Physics of the University of Adelaide or of another institution accepted for the purpose by the University

*or*

- b The Faculty may accept as a candidate a person who has qualified for a degree of Bachelor of Science of the University of Adelaide, or another institution accepted by the University for the purpose, with a major sequence in Physics and appropriate professional experience

*or*

- c 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 degree a person who does not hold the qualifications specified in 2.1(a) above but who has given evidence satisfactory to the Faculty of their fitness to undertake work for the degree.

### **3 Enrolment**

A candidate's enrolment in courses of study and choice of supervisor or supervisors must be approved by the Head of Physics, or the Program Coordinator, at enrolment each year.

### **4 Assessment and examination**

- 4.1 There shall be four classifications of pass in any course for the degree: Pass with High Distinction, Pass with Distinction, Pass with Credit, Pass.

- 4.2 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.

### **5 Qualification requirements**

- 5.1 To qualify for the degree a candidate shall:

- a satisfy examiners in courses of study as prescribed in the Academic Program Rules

*and*

- b present a satisfactory research report on a subject approved by the Head of Physics.

- 5.2 On the completion of the research report the candidate shall lodge with the Head of Physics two copies of the research report prepared in accordance with directions given to candidates from time to time. No research report or material presented for any other degree within this or any other institution shall be submitted.

- 5.3 Academic program

Unless exempted by the Faculty every candidate for the degree shall satisfactorily complete units to the value of at least 36 units from the following components:

a coursework comprising options with an aggregate value of at least 18 units, including at least nine units from the courses listed in (iii). These courses may be chosen from:

i The following courses to the value of no more than 9 units:

Semester 1

PHYSICS 7032 Advanced Dynamics and Relativity.....	3
PHYSICS 7532 Atmospheric and Astrophysics.....	3
PHYSICS 7536 Electromagnetism <sup>†</sup> .....	3
PHYSICS 7542 Quantum Mechanics A <sup>†</sup> .....	3
PHYSICS 7546 Statistical Mechanics <sup>†</sup> .....	3

<sup>†</sup>A maximum of one of these three 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

ii 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*

iii the following courses to the value of no less than 9 units:

Semester 1

PHYSICS 7007 Experimental Methods.....	3
PHYSICS 7010 Non-Linear Optics.....	3
PHYSICS 7011 Nuclear & 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 & Particle Physics.....	3
PHYSICS 7015 Statistical Mechanics and Many Body Theory*.....	3

\*not offered every year

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

b An advanced topic in Applied Physics, Astrophysics, Atmospheric Physics, Optics and Lasers, Photonics or Theoretical Physics with a value of 6 units:

PHYSICS 7017 Advanced Topic in Physics.....	6
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c An approved research project with a value of 12 units:

PHYSICS 7016 Research Project (M.Sc.Physics).....	12
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The courses to be offered in any year will be dependent on staff availability and student demand.

#### 5.4 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.

#### 5.5 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.

## **6 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.