

Bachelor of Science (High Performance Computational Physics)(Honours)

These rules should be read in conjunction with Academic Program Rules parts 1, 2, and 3 of the Bachelor of Science.

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

1 Duration of program

The program of study for the degree shall extend over four years of full-time study or the part-time equivalent.

2 Qualification requirements

2.1 To qualify for the degree a candidate shall pass courses, listed in 2.2 below, to the value of 96 units, which satisfy the following requirements:

- a a candidate shall present passes in courses to the value of 24 units at each of Level I, II, III and IV
- b a candidate may substitute an appropriate course chosen from Level II to fulfil the requirements of Level I, or from Level III to fulfil the requirements of Level I or II
- c a candidate may complete a major in a discipline as set out in Academic Program Rule 4.4 of the degree of Bachelor of Science.

2.2 Academic program

2.2.1 Level I

Level I courses, which shall include:

- i passes in core courses

Semester 1

COMP SCI1101 Introduction to Programming	3
MATHS 1011 Mathematics IA.....	3
PHYSICS 1100 Physics IA	3

Semester 2

COMP SCI 1102 Object Orientated Programming	3
MATHS 1012 Mathematics IB.....	3
PHYSICS 1200 Physics IB	3

- ii passes in additional Level I courses to the value of 6 units chosen from:

Semester 1

COMP SCI 1012 Scientific Computing I.....	3
CHEM 1100 Chemistry IA.....	3
ELEC ENG 1009 Electrical & Electronic Engineering IA.....	3

Semester 2

CHEM 1200 Chemistry IB.....	3
STATS 1005 Statistical Analysis and Modelling I.....	3

or

courses selected in consultation with the Program Coordinator and in accordance with Academic Program Rules 4.2, 4.5.1 and 4.5.2 for the degree of Bachelor of Science.

2.2.2 Level II

Level II courses, which shall include:

- i passes in core courses

Semester 1

MATHS 2101 Multivariable and Complex Calculus	3
MATHS 2102 Differential Equations	3
PHYSICS 2510 Physics IIA	3

Semester 2

MATHS 2104 Numerical Methods.....	3
PHYSICS 2532 Classical Physics II.....	3

PHYSICS 2534 Electromagnetism II	3
ii passes in additional Level II courses to the value of 6 units chosen from:	
Semester 1	
COMP SCI 2000 Computer Systems	3
MATHS 2103 Probability and Statistics	3
Semester 2	
COMP SCI 2005 Systems Programming in C and C+ +.....	3
MATHS 2100 Real Analysis	3
PHYSICS 2520 Physics IIB.....	3
<i>or</i>	
courses selected in consultation with the Program Coordinator and in accordance with Academic Program Rules 4.5.3 and 4.5.4 for the degree of Bachelor of Science in the disciplines of Applied Mathematics, Computer Science, Physics and Pure Mathematics.	

2.2.3 Level III

Level III courses, which shall include:

i passes in core courses	
Semester 1	
PHYSICS 3006 Advanced Dynamics and Relativity III	3
PHYSICS 3542 Physics III.....	6
Semester 2	
PHYSICS 3534 Computational Physics III	3
PHYSICS 3544 Quantum Mechanics III	3
ii passes in additional Level III course to the value of 9 units chosen from:	
Semester 1	
APP MTH 3000 Computational Mathematics.....	3
PHYSICS 3532 Atmospheric and Astrophysics III.....	3
Semester 2	
PHYSICS 3002 Experimental Physics III	3
PHYSICS 3540 Optics and Photonics III	3
APP MTH 3002 Fluid Mechanics III	3
PURE MTH 3012 Fields & Geometry III	3
PURE MTH 3019 Complex Analysis III.....	3
<i>or</i>	
courses selected in consultation with the Program Coordinator and in accordance with Academic Program Rules 4.5.5 and 4.5.6 for the degree of Bachelor of Science in the disciplines of Applied Mathematics, Computer Science, Physics and Pure Mathematics.	

2.2.4 Level IV

An acceptable standard, in accordance with the Academic Program Rule 4.6 for the Bachelor of Science (Honours) for the Honours degrees, in

PHYSICS 4000A/B Honours Physics	24
<i>or</i>	
PHYSICS 4001A/B Honours Mathematical Physics	24

including some Level IV content selected in consultation with the Program Coordinator from COMP SCI 4999A/B Honours Computer Science.

2.3 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, contains a substantial amount of the same material, and no course or portion of a course may be counted twice towards an award.

Note: A list of unacceptable combinations of courses is available from the Faculty of Sciences.

2.4 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.

3 Special circumstances

When in the opinion of the 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.