Bachelor of Computer Science (Advanced)

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

1 General

There shall be a degree of Bachelor of Computer Science (Advanced).

2 Duration of program

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

3 Assessment and examinations

3.1 A candidate shall not be eligible to attend for examination unless the prescribed work has been completed to the satisfaction of the teaching staff concerned.

3.2 In determining a candidate's final result in a course (or part of a course) the examiners may take into account oral, written, practical and other work, provided that the candidate has been given adequate notice at the commencement of the teaching of the course of the way in which such work will be taken into account and of its relative importance in the final result.

3.3 There shall be four classifications of pass in the final assessment of any course for the Bachelor degree, as follows: Pass with High Distinction, Pass with Distinction, Pass with Credit, Pass.

3.4 A candidate who fails a course for the Bachelor degree and who desires to take that course again shall, unless exempted wholly or partially there from by the Head of the School concerned, again complete the required work in that course to the satisfaction of the teaching staff concerned.

3.5 A candidate who has twice failed any course for the Bachelor degree may not enrol for that course again or for any other course which in the opinion of the Faculty contains a substantial amount of the same material, except by permission of the Faculty and then only under such conditions as the Faculty may prescribe.

4 Qualification requirements

4.1 General: Bachelor of Computer Science (Advanced)

4.1.1 To qualify for the Bachelor degree a candidate shall present courses from 4.2 to the value of at least 72 units including:

a at least 24 units for Level I courses

b at least 18 units for Level II courses

c at least 24 units for Level III courses

4.1.2 The courses presented must include:

a The following core courses:

COMP SCI 1102 Object Oriented Programming

COMP SCI 1103 Algorithm Design & Data Structures

COMP SCI 1104 Grand Challenges in Computer Science

MATHS 1012 Mathematics IB

MATHS 3015 Communication Skills

b At least 3 units of Level I Computer Science courses chosen from:

COMP SCI 1003 Internet Computing

COMP SCI 1010 Puzzle Based Learning

COMP SCI 1012 Scientific Computing

c At least 12 units of Level II Computer Science courses including the following core courses:

COMP SCI 2000 Computer Systems

COMP SCI 2201 Algorithm and Data Structure Analysis

COMP SCI 2008 Topics in Computer Science

d At least 18 units of Level III Computer Science courses including the following core courses:

COMP SCI 3006 Software Engineering & Project

COMP SCI 3020 Advanced Topics in Computer Science

Note (not forming part of the Academic Program Rules)

A graduate who qualifies for the Bachelor of Computer Science (Advanced) will be considered to have qualified for a major in Computer Science.

4.1.3 Students enrolled in an Engineering program offered by the Faculty may qualify for the B.Comp.Sc.(Adv) by fulfilling the requirements of 4.1.4(a) of these Academic Program Rules.

Note (not forming part of the Academic Program Rules)

This clause enables Engineering students to complete the requirements of the B.Comp.Sc.(Adv) degree before completing the requirements of the Bachelor of Engineering degree. Students wishing to qualify for the B.Comp.Sc.(Adv) in this way must apply for admission to the B.Comp.Sc.(Adv) program. Engineering students are likely to require more than one additional year of full-time study to complete bother the Engineering and B.Comp.Sc.(Adv) programs.

4.1.4 A graduate who wishes to qualify for the degree of Bachelor of Computer Science (Advanced) and to count towards that degree courses that have already been presented for another award may do so providing such a candidate:

a presents a range of courses that fulfil the requirements of 4.1.1 and 4.1.2 above, except for the requirements of 4.1.2b, may present COMP SCI 1202 in lieu of COMP SCI 1102, and may present COMP SCI 1203 in lieu of COMP SCI 1103. The courses presented must include Level II and Level III courses from 4.2 below to the value of at least 24 units, which have not been presented for any other degree. At least 18 units of those courses must be at Level III

or

b presents a range of courses as determined by the Faculty in accordance with any formal articulation programs approved by the Faculty.

4.1.5 No candidate will be permitted to count for the degree 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 may be counted twice towards the same degree. No candidate may present the same section of a course in more than one course for the degree.

4.1.6 Students who have completed at another institution part of the equivalent of the requirements for the Adelaide degree of Bachelor of Computer Science (Advanced) will be required as a minimum to complete courses from 4.1.2 with an aggregate value of 24 units. At least 12 units of these must be courses satisfying 4.1.2d.

4.1.7 With special permission of the Faculty, a student who has completed most of the courses for the degree of Bachelor of Computer Science (Advanced) at the University of Adelaide including Level III Computer Science courses with an aggregate value of 12 units may be permitted to complete the requirements for the degree at another institution. All applications must be made in writing to the Faculty.

4.2 Recommended program of study for the degree of Bachelor of Computer Science (Advanced)

Note: Students are advised to check their chosen electives with the Faculty Program Adviser.

Notwithstanding the Academic Program Rules, a number of the elective courses listed in the program leading to the degree of B.Comp.Sc.(Adv) may not be offered in every calendar year. The availability of all courses is conditional upon the availability of staff and facilities. Core courses will be offered every year.

4.2.1 Level I

Semester 1

COMP SCI 1101 Introduction to Programming+ 3

MATHS 1011 Mathematics IA** 3

Level I elective courses* 6

Semester 2

COMP SCI 1102 Object Oriented Programming 3

MATHS 1008 Mathematics for Information Technology I^ 3

MATHS 1012 Mathematics IB** ^ 3

COMP SCI 1104 Grand Challenges in Computer Science 3

* Students who do not have prior programming experience or who are not confident in their programming ability should complete COMP SCI 1101 Introduction to Programming prior to undertaking COMP SCI 1102 Object Oriented Programming followed by COMP SCI 1103 Algorithm Design & Data Structures in the following year. COMP SCI 1101 Introduction to Programming may be replaced by a Level I elective if not required.

^ Students are encouraged to complete MATHS 1008 Mathematics for Information Technology I. MATHS 1008 Mathematics for Information Technology I may be replaced by a Level I elective if not required.

* Level I electives can be chosen from courses offered towards any degree program at the university with the exception of courses listed in 4.2.4, provided that the student is eligible to do that course e.g. has satisfied the prerequisite/s. As required by 4.1.2b the Level I electives must include at least 3 units selected from COMP SCI 1003 Internet Computing, COMP SCI 1010 Puzzle Based Learning and COMP SCI 1012 Scientific Computing.

** Students intending to complete MATHS 1012 Mathematics IB who have undertaken SACE Stage 2 Specialist Maths must enrol in MATHS 1011 Mathematics IA followed by Mathematics IB. Students who have not taken SACE Stage 2 Specialist Maths will be required to enrol in MATHS 1013 Mathematics IM then MATHS 1011 Mathematics IA in the following semester, and then MATHS 1012 Mathematics IB in the Summer Semester or

following year. Students who are required to undertake MATHS 1013 Mathematics IM will present it in lieu of an elective.

4.2.2 Level II

Semester 1

COMP SCI 2006 Introduction to Software Engineering# 3

COMP SCI 1103 Algorithm Design & Data Structures+ 3

Level II Computer Science course 3

Level II elective course* 3

Semester 2

COMP SCI 2000 Computer Systems 3

COMP SCI 2201 Algorithm and Data Structure Analysis 3

COMP SCI 2008 Topics in Computer Science ^ 6

Students are encouraged to undertake COMP SCI 2006 Introduction to Software Engineering. Although this course is not specifically required under the academic program rules of the degree it is Assumed Knowledge for COMP SCI 3006 Software Engineering & Project. COMP SCI 2006 Introduction to Software Engineering may be replaced by a Level II Computer Science elective if not required.

^ COMP SCI 2008 Topics in Computer Science can be taken in semester 1 if the student prefers, in which case the electives listed in semester 1 would be taken in semester 2.

* Level II electives can be chosen from courses offered towards any degree program at the university with the exception of courses listed in 4.2.4, provided that the student is eligible to do that course e.g. has satisfied the prerequisite/s.

4.2.3 Level III

Semester 1

COMP SCI 3002 Programming Techniques# 3

Level III Computer Science course 3

Level III Computer Science course 3

Level III elective course* 3

Semester 2

COMP SCI 3006 Software Engineering & Project 3

MATHS 3015 Communication Skills III 3

COMP SCI 3020 Advanced Topics in Computer Science ^ 6

Students are encouraged to undertake COMP SCI 3002 Programming Techniques. Although this course is not specifically required under the academic program rules of the degree it is Assumed Knowledge for COMP SCI 3006 Software Engineering & Project. COMP SCI 3002 Programming Techniques may be replaced by a Level III Computer Science elective if not required.

^ COMP SCI 3020 Advanced Topics in Computer Science can be taken in semester 1 if the student prefers, in which case the electives listed in semester 1 would be taken in semester 2.

* Level III electives can be chosen from courses offered towards any degree program at the university with the exception of courses listed in 4.2.4, provided that the student is eligible to do that course e.g. has satisfied the prerequisite/s.

4.2.4 Courses not permitted

C&ENVENG 1012 Engineering Modelling and Analysis IA

ECOMMRCE 1000 Information Systems I

ECON 1005 Mathematics for Economists I

ECON 1008 Business & Economics Statistics I

MATHS 1009 Introduction to Financial Mathematics I

MATHS 1010 Applications of Quantitative Methods in Finance I

MECH ENG 1100 Introduction to Mechanical Engineering

MECH ENG 1101 Introduction to Automotive Engineering

MECH ENG 1102 Introduction to Aerospace Engineering

MECH ENG 1103 Introduction to Mechatronic Engineering

MECH ENG 1104 Introduction to Sports Engineering

MECH ENG 1105 Introduction to Sustainable Energy Engineering

STATS 1004 Statistical Practice I (Life Sciences)

COMP SCI 2202 Foundations of Computer Science

ECON 2503 Mathematical Economics II

ECON 2504 Intermediate Econometrics II

ENG 2001 Communication and Study Skills

ENG 2002 Financial Computing II

MATHS 2201 Engineering Mathematics I

MATHS 2202 Engineering Mathematics II

COMP SCI 3017 Software Engineering Group Project I – Part A

COMP SCI 3018 Software Engineering Group Project I – Part B

4.3 Students enrolled in this program must maintain a GPA of 5.0 or will be required to transfer to the Bachelor of Computer Science.

4.4. Candidates who satisfy the requirements of the Bachelor of Computer Science (Advanced) degree or equivalent may be admitted to the Honours degree.

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.