

# Bachelor of Computer Science (with specialisation)

*includes:*

## **Bachelor of Computer Science (with specialisation)**

Students completing this course are prepared for a software development and maintenance role in the Information Technology industry. They have computer software design and development skills with an emphasis on the underlying mathematics, data management and computer science aspects required in the field. Students have been exposed to several computer programming languages and tools and a variety of application programmer interfaces. In addition to the fifteen core computer science subjects, students have completed eight subjects in one of two streams: computer graphics analysis and processing or software development for interactive games production. The course is accredited by the Australian Computer Society at the Professional level.

## **The course includes the following awards:**

Bachelor of Computer Science *BCompSc*

Bachelor of Computer Science (Games Programming) *BCompSc(GamesProg)*

## **Course Study Modes and Locations**

### **Bachelor of Computer Science (2404CS)**

*Distance Education - Bathurst*

*On Campus - Bathurst*

Availability is subject to change, please verify prior to enrolment.

## **Normal course duration**

### **Bachelor of Computer Science (with specialisation)**

Full-time 3.0 years (6.0 sessions)

Normal course duration is the effective period of time taken to complete a course when

studied Full-time (Full-time Equivalent: FTE). Students are advised to consult the Enrolment Pattern for the actual length of study. Not all courses are offered in Full-time mode.

## Admission criteria

[CSU Admission Policy](#)

### Admission criteria for Internal students

For admission to the Bachelor of Computer Science applicants must have one of the following:

- a NSW HSC ATAR equal to or greater than the minimum approved by the Academic Senate, or equivalent; or
- a NSW HSC (or equivalent) with strong performances in subjects in the Software Development, English and/or Mathematics areas; or
- a report from the School Principal, equivalent to that used in the PREP (Principals' Report Entry Program), recommending the applicant as well-suited for university study; or
- 2 years relevant professional IT work experience (i.e. in areas such as programmer, analyst, systems administration, help desk, network support but NOT clerical roles such as data entry or secretarial);
- a completed AQF Certificate IV in Information Technology (including any specialisation of Information Technology) or a completed AQF Certificate IV in an area related to Information Technology.

## Credit

[CSU Credit Policy](#)

No special arrangements apply.

## Graduation requirements

To graduate students must satisfactorily complete 192 points.

## Course Structure

### Bachelor of Computer Science

This course comprises 24 subjects (192 points): a core of 18 compulsory subjects (144 points), and subjects from either the Games Programming Specialisation (48 points) or from a list of restricted electives (48 points).

**Core subjects (18 x 8 point subjects)**[ITC105](#)Communication and Information Management[ITC106](#)Programming Principles[ITC114](#)Introduction to Database Systems[ITC161](#)Computer Systems[ITC203](#)Object-Oriented Systems Analysis & Design[ITC204](#)Human Computer Interaction[ITC205](#)Professional Programming Practice[ITC206](#)Programming in Java 1[ITC211](#)Systems Analysis[ITC212](#)Internet Technologies[ITC262](#)Operating Systems[ITC303](#)Software Development Project 1[ITC309](#)Software Development Project 2[ITC313](#)Programming in Java 2[ITC322](#)Data Structures[ITC331](#)Ethics and Professional Practice[MTH105](#)Introductory Mathematics[MTH129](#)Discrete Mathematics

Students must also choose to complete either the Games Programming specialisation or six restricted electives from the list below

**Games Programming Specialisation****Core:**[ITC108](#)Games 1 – Games Design[ITC209](#)Mobile Application Development[ITC320](#)Advanced Graphics for Games[ITC372](#)Games 2 - Advanced Games Programming[ITC363](#)Computer Graphics[MTH101](#)Computer Aided Mathematics 1 with Applications**Restricted Electives**

(For students not undertaking the Games Programming Specialisation. Choose six subjects from the list below. Three of these subjects must be at level 3 (coded ITC3xx). Other subjects may be available with approval from the Course Director)

[ITC108](#)Games 1 – Games Design[ITC209](#)Mobile Application Development[ITC218](#)ICT Project Management[ITC254](#)Wireless Networks[ITC314](#)Virtualisation Technologies[ITC320](#)Advanced Graphics for Games[ITC358](#)IT Security

[ITC363](#)Computer Graphics

[MTH101](#)Computer Aided Mathematics 1 with Applications

## **Enrolment Pattern**

### **Full-time on campus**

#### **Games Programming Specialisation**

##### **Session 1**

[ITC105](#)Communication and Information Management

[ITC106](#)Programming Principles

[ITC161](#)Computer Systems

[MTH105](#)Introductory Mathematics

##### **Session 2**

[ITC206](#)Programming in Java 1

[ITC211](#)Systems Analysis

[ITC212](#)Internet Technologies

[MTH129](#)Discrete Mathematics

##### **Session 3**

[ITC203](#)Object-Oriented Systems Analysis and Design

[ITC204](#)Human Computer Interaction

[ITC322](#)Data Structures

[MTH101](#)Computer Aided Mathematics 1 with Applications

##### **Session 4**

[ITC108](#)Games 1 - Games Design

[ITC114](#)Introduction to Database Systems

[ITC205](#)Professional Programming Practice

[ITC313](#)Programming in Java 2

##### **Session 5**

[ITC303](#)Software Development Project 1

[ITC331](#)Ethics and Professional and Practice

[ITC363](#)Computer Graphics

[ITC372](#)Games 2 – Advanced Games Programming

##### **Session 6**

[ITC209](#)Mobile Application Development

[ITC262](#)Operating Systems

[ITC309](#)Software Development Project 2

[ITC320](#)Advanced Computer Graphics

**Distance education**  
**Games Programming Specialisation**

**Session 1**

[ITC106](#)Programming Principles

[ITC161](#)Computer Systems

**Session 2**

[ITC206](#)Programming in Java 1

[ITC211](#)Systems Analysis

**Session 3**

[ITC105](#)Communication and Information Management

[MTH105](#)Introductory Mathematics

**Session 4**

[ITC212](#)Internet Technologies

[MTH129](#)Discrete Mathematics

**Session 5**

[ITC203](#)Object-Oriented Systems Analysis and Design

[ITC204](#)Human Computer Interaction

**Session 6**

[ITC108](#)Games 1 - Games Design

[ITC114](#)Introduction to Database Systems

**Session 7**

[ITC322](#)Data Structures

[MTH101](#)Computer Aided Mathematics 1 with Applications

**Session 8**

[ITC205](#)Professional Programming Practice

[ITC313](#)Programming in Java 2

**Session 9**

[ITC363](#)Computer Graphics

[ITC372](#)Games 2 – Advanced Games Programming

**Session 10**

[ITC209](#)Mobile Application Development

[ITC320](#)Advanced Computer Graphics

**Session 11**

[ITC303](#)Software Development Project 1  
[ITC331](#)Ethics and Professional and Practice

**Session 12**

[ITC262](#)Operating Systems  
[ITC309](#)Software Development Project 2

**Full-time on campus**

**Computer Science with Restricted Electives**

**Session 1**

[ITC105](#)Communication and Information Management  
[ITC106](#)Programming Principles  
[ITC161](#)Computer Systems  
[MTH105](#)Introductory Mathematics

**Session 2**

[ITC206](#)Programming in Java 1  
[ITC211](#)Systems Analysis  
[ITC212](#)Internet Technologies  
[MTH129](#)Discrete Mathematics

**Session 3**

[ITC203](#)Object-Oriented Systems Analysis and Design  
[ITC204](#)Human Computer Interaction  
[ITC322](#)Data Structures  
Restricted elective

**Session 4**

[ITC114](#)Introduction to Database Systems  
[ITC205](#)Professional Programming Practice  
[ITC313](#)Programming in Java 2  
Restricted elective

**Session 5**

[ITC303](#)Software Development Project 1  
[ITC331](#)Ethics and Professional and Practice  
Restricted elective  
Restricted elective

**Session 6**

[ITC262](#)Operating Systems  
[ITC309](#)Software Development Project 2  
Restricted elective

Restricted elective

**Distance education**

**Computer Science with Restricted Electives**

**Session 1**

[ITC106](#)Programming Principles

[ITC161](#)Computer Systems

**Session 2**

[ITC206](#)Programming in Java 1

[ITC211](#)Systems Analysis

**Session 3**

[ITC106](#)Communication and Information Management

[MTH105](#)Introductory Mathematics

**Session 4**

[ITC212](#)Internet Technologies

[MTH129](#)Discrete Mathematics

**Session 5**

[ITC203](#)Object-Oriented Systems Analysis and Design

[ITC204](#)Human Computer Interaction

**Session 6**

[ITC114](#)Introduction to Database Systems

Restricted elective

**Session 7**

[ITC322](#)Data Structures

Restricted elective

**Session 8**

[ITC205](#)Professional Programming Practice

[ITC313](#)Programming in Java 2

**Session 9**

Restricted elective

Restricted elective

**Session 10**

Restricted elective

Restricted elective

**Session 11**

[ITC303](#) Software Development Project 1

[ITC331](#) Ethics and Professional and Practice

**Session 12**

[ITC262](#) Operating Systems

[ITC309](#) Software Development Project 2

**Accreditation**

The Bachelor of Computer Science is accredited by the Australian Computer Society (ACS) at the professional level, which is the highest level of ACS accreditation. This accreditation is effective until 2017.

**Contact**

For further information about Charles Sturt University, or this course offering, please contact info.csu on 1800 334 733 (free call within Australia) or email [inquiry@csu.edu.au](mailto:inquiry@csu.edu.au)

*The information contained in the 2016 CSU Handbook was accurate at the date of publication: October 2015. The University reserves the right to vary the information at any time without notice.*

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