

## Program Guide

### Bachelor of Computer Science

#### 1. Program Details

Title	Bachelor of Information Technology
Abbreviation	BCompSci
RMIT Program Code	BP094
Credit Points	288
Career	Undergraduate
Duration/length	3 Years full-time
Campuses	City
Location	Onshore – City Offshore – AVU, RMIT Vietnam
Owning School	140H – School of Computer Science and Information Technology <a href="http://www.rmit.edu.au/csit">http://www.rmit.edu.au/csit</a>
Partnered offering / corporate client	
ASCED code:	020100
CRICOS code:	To be advised
Proposed Introduction	Semester 1, 2008
Contact Details	Santha Sumanasekara Santha.sumanasekara@rmit.edu.au 9925 9673

## 2. Plan Details

### Plan 1

RMIT Plan Code	BP094APP8
Title	Bachelor of Computer Science (Application Programming)
Award Title	Bachelor of Computer Science (Application Programming)
ASCED code:	020100
CRICOS code:	To be Advised

### Plan 2

RMIT Plan Code	BP094COM8
Title	Bachelor of Computer Science (Computational Mathematics)
Award Title	Bachelor of Computer Science (Computational Mathematics)
ASCED code:	020100
CRICOS code:	To be Advised

### Plan 3

RMIT Plan Code	BP094EMB8
Title	Bachelor of Computer Science (Embedded Systems)
Award Title	Bachelor of Computer Science (Embedded Systems)
ASCED code:	020100
CRICOS code:	To be Advised

### Plan 4

RMIT Plan Code	BP094GGD8
Title	Bachelor of Computer Science (Games, Graphics and Digital Media)
Award Title	Bachelor of Computer Science (Games, Graphics and Digital Media)
ASCED code:	020100
CRICOS code:	To be Advised

### Plan 5

RMIT Plan Code	BP094NET8
Title	Bachelor of Computer Science (Network Programming)
Award Title	Bachelor of Computer Science (Network Programming)
ASCED code:	020100
CRICOS code:	To be Advised

### Plan 6

RMIT Plan Code	BP094SEC8
Title	Bachelor of Computer Science (Security)
Award Title	Bachelor of Computer Science (Security)
ASCED code:	020100
CRICOS code:	To be Advised

**Plan 7**

RMIT Plan Code	BP162SYS8
Title	Bachelor of Computer Science (System Administration)
Award Title	Bachelor of Computer Science (System Administration)
ASCED code:	020100
CRICOS code:	To be Advised

**Plan 8**

RMIT Plan Code	BP162WEB8
Title	Bachelor of Computer Science (Web Systems)
Award Title	Bachelor of Computer Science (Web Systems)
ASCED code:	020100
CRICOS code:	To be Advised

**Plan 9**

RMIT Plan Code	BP094GEN8
Title	Bachelor of Computer Science
Award Title	Bachelor of Computer Science
ASCED code:	020100
CRICOS code:	To be Advised

**Plan 10**

RMIT Plan Code	BP094MIN8
Title	Bachelor of Computer Science
Award Title	Bachelor of Computer Science
ASCED code:	020100
CRICOS code:	To be Advised

**3. Program Map****Year One (Common for all the program plans)**

Year	Semester	BP094P7 Bachelor of Computer Science -- (common first year)			
1	Sem 1	Programming 1	Database Concepts	Computer Organisation	Mathematics for Computing
	Sem. 2	Programming 2	Web Programming	Data Communication and Net-centric Computing	Software Engineering Fundamentals

Total Credit Points = 96

Complete Eight (8) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1073	Programming 1	12
ISYS	1057	Database Concepts	12
COSC	1082	Computer Organisation	12
MATH	1074	Mathematics for Computing	12
COSC	1076	Programming 2	12
COSC	2413	Web Programming	12
COSC	1111	Data Communication and Net-Centric Computing	12

ISYS	1118	Software Engineering Fundamentals	12
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AND

**Plan 1 – Application Programming: BP094APP8**

Year	Semester	BP094APP8 – Bachelor of Computer Science (Application Programming)			
2	Sem 1	Computing Theory	Major Study Course 1	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Major Study Course 2	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Major Study Course 3	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Major Study Course 4	CS Elective	Student Elective

**Year Two**

Total Credit Points = 96

Complete following Six (6) Courses:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12

AND

Complete Two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2269	AI Concepts and Applications	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1093	Scripting Language Programming	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12

**Year Three**

Total Credit Points = 96

Complete following Two (2) Courses:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12

AND

Complete Two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2269	AI Concepts and Applications	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1093	Scripting Language Programming	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12

COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

### Plan 2 – Computational Mathematics: BP094COM8

Year	Semester	BP094COM8 – Bachelor of Computer Science (Computational Mathematics)			
2	Sem 1	Computing Theory	Mathematics for Advanced Computing	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Computational Mathematics	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Major Study Course 3	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Major Study Course 4	CS Elective	Student Elective

**Year Two**

Total Credit Points = 96

Complete Eight (8) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12
MATH	2041	Mathematics for Advanced Computing	12
MATH	2136	Computational Mathematics	12

**Year Three**

Total Credit Points = 96

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12

AND

Complete Two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
MATH	2140	Linear Algebra and Vector Calculus	12
MATH	2144	Numerical Solutions of Differential Equations	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12

COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

### Plan 3 – Embedded Systems: BP094EMB8

Year	Semester	BP094EMB8 – Bachelor of Computer Science (Embedded Systems)			
2	Sem 1	Computing Theory	Introduction to Embedded Systems	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Embedded System Engineering	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Computer Systems Engineering	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Major Study Course 4	CS Elective	Student Elective

#### Year Two

Total Credit Points = 96

Complete Eight (8) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12
EEET	2256	Introduction to Embedded Systems	12
EEET	2261	Embedded Systems Engineering	12

#### Year Three

Total Credit Points = 96

Complete Three (3) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12
EEET	2096	Computer Systems Engineering	12

AND

Complete One (1) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
EEET	2162	Advanced Digital Design 1	12
EEET	2161	Microprocessor Systems 1	12
EEET	2145	Microprocessor Systems 2	12
EEET	2166	Real Time Systems Engineering	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

**Plan 4 -- Games, Graphics, and Digital Media: BP094GRPP8**

Year	Semester	BP094GGD8 – Bachelor of Computer Science (Games, Graphics, and Digital Media)			
2	Sem 1	Computing Theory	Mathematics for Advanced Computing	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Major Study Course 2	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Interactive 3D Graphics and Animation	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Real-time Rendering and 3D Graphics Programming	CS Elective	Student Elective

**Year Two**

Total Credit Points = 96

Complete Seven (7) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12
MATH	2041	Mathematics for Advanced Computing	12

AND

Complete One (1) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1009	Design for Interactive Media 1	12
COSC	2271	Digital Media Computing	12
GRAP	2169	Imaging and Animation	12

**Year Three**

Total Credit Points = 96

Complete Four (4) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1226	Real-time Rendering and 3D Graphics Programming	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12

COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

### Plan 5 – Network Programming: BP094NETP8

Year	Semester	BP094NET8 – Bachelor of Computer Science (Network Programming)			
2	Sem 1	Computing Theory	Introduction to Distributed Systems	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Major Study Course 2	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Major Study Course 3	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Major Study Course 4	CS Elective	Student Elective

### Year Two

Total Credit Points = 96

Complete Seven (7) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12
COSC	1197	Distributed Systems	12

AND

Complete One (1) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1235	Broadcast Network Applications	12
INTE	2424	Introduction to Network Security	12
COSC	1179	Network Programming	12
COSC	2309	Mobile Application Development	12

### Year Three

Total Credit Points = 96

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12

AND

Complete Two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1235	Broadcast Network Applications	12
INTE	2425	Introduction to Network Security	12
COSC	1179	Network Programming	12
COSC	2309	Mobile Application Development	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12

COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

**Plan 6 -- Security: BP094SEC8**

Year	Semester	BP094SEC8 – Bachelor of Computer Science (Security)			
2	Sem 1	Computing Theory	Secure E-commerce	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Secure Programming Environments	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Major Study Course 3	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Major Study Course 4	CS Elective	Student Elective

**Year Two**

Total Credit Points = 96

Complete Eight (8) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12

**Year Three**

Total Credit Points = 96

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12

AND

Complete Two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
INTE	2425	Introduction to Network Security	12
INTE	2035	Cryptography and Security	12
INTE	2090	Coding for Reliable Communication	12
MATH	2148	Algebra for Information Security	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12

COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

### Plan 7 – System Administration: BP094SYS8

Year	Semester	BP094SYS8 – Bachelor of Computer Science (System Administration)			
2	Sem 1	Computing Theory	Windows Systems Administration	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Major Study Course 2	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Unix Systems Administration	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Major Study Course 4	CS Elective	Student Elective

### Year Two

Total Credit Points = 96

Complete Seven (7) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12
COSC	2424	Windows Systems Administration	12

AND

Complete One (1) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2385	CCNA Into	12
COSC	2384	CCNA ICND	12
COSC	2404	Database Administration	12
INTE	2425	Introduction to Network Security	12
COSC	1093	Script Language Programming	12
COSC	1301	Web Servers and Web Technology	12

### Year Three

Total Credit Points = 96

Complete Three (3) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12
COSC	1133	Unix Systems Administration	12

AND

Complete One (1) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2385	CCNA Intro	12
COSC	2384	CCNA ICND	12
COSC	2404	Database Administration	12
INTE	2425	Introduction to Network Security	12
COSC	1093	Script Language Programming	12
COSC	1301	Web Servers and Web Technology	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12

INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

### Plan 8 – Web Systems: BP094WEBS8

Year	Semester	BP094WEB8 – Bachelor of Computer Science (Web Systems)			
2	Sem 1	Computing Theory	Software Architecture: Design & Implement	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Web Servers and Web Technology	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Major Study Course 3	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Major Study Course 4	CS Elective	Student Elective

### Year Two

Total Credit Points = 96

Complete Eight (8) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1301	Web Servers and Web Technology	12

**Year Three**

Total Credit Points = 96

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12

AND

Complete Two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
INTE	1071	Secure E-Commerce	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12

COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2408	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

### Plan 9 – Non-specialisation: BP094GEN8

Year	Semester	BP094GEN8 – Bachelor of Computer Science			
2	Sem 1	Computing Theory	CS Elective	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	CS Elective	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	CS Elective	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	CS Elective	CS Elective	Student Elective

### Year Two

Total Credit Points = 96

Complete Six (6) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12

COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12

**Year Three**

Total Credit Points = 96

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12

AND

Complete Four (4) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12
COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12

COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

**Plan 10 -- Minor Studies: BP094MIN8**

Year	Semester	BP094MIN8 – Bachelor of Computer Science			
2	Sem 1	Computing Theory	Minor Study Course 1	Programming Techniques	Software Engineering: Process and Tools
	Sem 2	Professional Computing Practice	Minor Study Course 2	Algorithms and Analysis	Operating Systems Principles
3	Sem 1	Database Systems	Minor Study Course 3	CS Elective	Artificial Intelligence
	Sem 2	Student Elective	Minor Study Course 4	CS Elective	Student Elective

**Year Two**

Total Credit Points = 96

Complete Six (6) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	1284	Programming Techniques	12
COSC	2299	Software Engineering: Process and Tools	12
COSC	1107	Computing Theory	12
COSC	2123	Algorithms and Analysis	12
COSC	1114	Operating Systems Principles	12
COSC	1147	Professional Computing Practice	12

AND

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
ACCT	1046	Introductory Accounting	12
JUST	1016	Commercial Law	12
ACCT	2033	Financial Accounting	12

ACCT	1048	Corporate Accounting	12
ACCT	1056	Auditing 1	12
ACCT	1022	Small Business and the Accountant	12
ACCT	1028	Company Law	12
ACCT	1060	Management Accounting and Business	12
ACCT	1064	Cost Management and Applications	12
ACCT	1014	Management Accounting Systems	12
JUST	1031	Taxation 1	12
JUST	1046	Taxation 2	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COMM	2113	The Media: Australian and Global	12
COMM	2112	Theories of Communication and Persuasion	12
COMM	2072	Reading Media Texts	12
COMM	2147	Professional Writing	12
COMM	2336	Asian Cybercultures	12
GRPH	2175	Introduction to Graphic Design	12
COMM	1161	Introduction to Public Relations	12
COMM	2138	Modern Asia	12
COMM	1033	Australian Cinema	12
MKTG	1208	Introduction to Advertising	12
COMM	1086	Mass Media in Asia	12
COMM	2142	PR Practice and Writing	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
ECON	1020	Prices and Markets	12
ECON	1010	Macroeconomics 1	12
ENVI	1051	Environmental Economics	12
HUSO	1081	Asian Economic Development	12

BAFI	1008	Business Finance	12
BAFI	1018	International Finance	12
BAFI	1002	Financial Markets	12
MKTG	1025	Marketing Principles	12
MKTG	1050	Buyer Behaviour	12
MKTG	1073	International Business Strategy	12
MKTG	1087	Retailing	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
BUSM	1311	The Entrepreneurial Process	12
BUSM	1314	Entrepreneurial Ventures 1	12
MKTG	1001	Marketing for Entrepreneurs	12
BUSM	1313	Finance for Entrepreneurs	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
OMGT	1082	Intro to Logistics & Supply Chain Management	12
OMGT	1044	Services Management	12
OMGT	1070	Procurement Management	12
OMGT	1053	Advanced Supply Chain Management	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
BUSM	3118	History of Management Thought	12
BUSM	3123	Organisational Theory	
OMGT	1082	Intro to Logistics & Supply Chain Management	12
BUSM	1311	The Entrepreneurial Process	12
BUSM	3115	Ethics and Governance	12
BUSM	3125	Strategic Management	12

BUSM	1202	Managing Change	12
BUSM	1222	International Management	12
BUSM	3117	Health Care Systems and Structures	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
MATH	1276	Statistical Computing	12
MATH	1278	Statistics	12
MATH	1280	Statistical Analysis 1	12
MATH	1282	Statistical Analysis 2	12
MATH	1288	Operations Research Models 1A	12
MATH	1289	Operations Research Models 1B	12

**Year Three**

Total Credit Points = 96

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COSC	2406	Database Systems	12
COSC	1127	Artificial Intelligence	12

AND

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
ACCT	1046	Introductory Accounting	12
JUST	1016	Commercial Law	12
ACCT	2033	Financial Accounting	12
ACCT	1048	Corporate Accounting	12
ACCT	1056	Auditing 1	12
ACCT	1022	Small Business and the Accountant	12
ACCT	1028	Company Law	12
ACCT	1060	Management Accounting and Business	12
ACCT	1064	Cost Management and Applications	12
ACCT	1014	Management Accounting Systems	12

JUST	1031	Taxation 1	12
JUST	1046	Taxation 2	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
COMM	2113	The Media: Australian and Global	12
COMM	2112	Theories of Communication and Persuasion	12
COMM	2072	Reading Media Texts	12
COMM	2147	Professional Writing	12
COMM	2336	Asian Cybercultures	12
GRPH	2175	Introduction to Graphic Design	12
COMM	1161	Introduction to Public Relations	12
COMM	2138	Modern Asia	12
COMM	1033	Australian Cinema	12
MKTG	1208	Introduction to Advertising	12
COMM	1086	Mass Media in Asia	12
COMM	2142	PR Practice and Writing	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
ECON	1020	Prices and Markets	12
ECON	1010	Macroeconomics 1	12
ENVI	1051	Environmental Economics	12
HUSO	1081	Asian Economic Development	12
BAFI	1008	Business Finance	12
BAFI	1018	International Finance	12
BAFI	1002	Financial Markets	12
MKTG	1025	Marketing Principles	12
MKTG	1050	Buyer Behaviour	12
MKTG	1073	International Business Strategy	12
MKTG	1087	Retailing	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
BUSM	1311	The Entrepreneurial Process	12
BUSM	1314	Entrepreneurial Ventures 1	12
MKTG	1001	Marketing for Entrepreneurs	12
BUSM	1313	Finance for Entrepreneurs	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
OMGT	1082	Intro to Logistics & Supply Chain Management	12
OMGT	1044	Services Management	12
OMGT	1070	Procurement Management	12
OMGT	1053	Advanced Supply Chain Management	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
BUSM	3118	History of Management Thought	12
BUSM	3123	Organisational Theory	
OMGT	1082	Intro to Logistics & Supply Chain Management	12
BUSM	1311	The Entrepreneurial Process	12
BUSM	3115	Ethics and Governance	12
BUSM	3125	Strategic Management	12
BUSM	1202	Managing Change	12
BUSM	1222	International Management	12
BUSM	3117	Health Care Systems and Structures	12

OR

Complete Two (2) Courses from:			
Subject Area	Catalogue Number	Course Title	Credit Points
MATH	1276	Statistical Computing	12
MATH	1278	Statistics	12
MATH	1280	Statistical Analysis 1	12
MATH	1282	Statistical Analysis 2	12
MATH	1288	Operations Research Models 1A	12
MATH	1289	Operations Research Models 1B	12

AND

Complete Two (2) Courses (Computer Science Electives) from:			
Subject Area	Catalogue Number	Name	Credit Points
ISYS	2403	Advanced Distributed Systems	12
COSC	1204	Agent-oriented Programming and Design	12
COSC	2269	AI Concepts and Applications	12
COSC	1235	Broadcast Network Applications	12
COSC	2404	Database Administration	12
COSC	2271	Digital Media Computing	12
COSC	2104	Document Markup Languages	12
COSC	2353	E-Commerce and Enterprise Systems	12
COSC	1207	Evolutionary Computing	12
COSC	1187	Interactive 3D Graphics and Animation	12
COSC	1197	Distributed Systems	12
INTE	2425	Introduction to Network Security	12
ISYS	1073	Knowledge and Data Warehousing	12
COSC	1208	Mathematical Logic and Logic Programming	12
COSC	2309	Mobile Application Development	12
COSC	1179	Network Programming	12
COSC	1254	Object Oriented Programming	12
COSC	2391	Software Architecture: Design & Implementation	12
COSC	1226	Real-time Rendering and 3D Games	12
COSC	1093	Scripting Language Programming	12
INTE	1071	Secure E-Commerce	12
INTE	2402	Secure Programming Environments	12

COSC	1133	Unix Systems Administration	12
COSC	1221	User Interface Programming	12
ISYS	1126	Web Database Applications	12
COSC	2276	Web Development Technologies	12
COSC	1301	Web Servers and Web technology	12
COSC	2424	Windows System Administration	12
COSC	2408	Programming Project 1	12
COSC	2409	Programming Project 2	12

AND

Complete two (2) Course from:			
Subject Area	Catalogue Number	Course Title	Credit Points
		Student Elective	12
		Student Elective	12

### Program Progression Rules

The program is structured so that capabilities are developed sequentially through the three years. Assumed prerequisite capabilities are listed for each course in the individual course guides. You are strongly advised against enrolling in courses for which you do not have the required prerequisites, unless prior approval has been obtained from the Program Leader. Failure in one or more courses may make it impossible for you to complete the program within the minimum three-year period.

You are required to successfully complete all required courses in a major to graduate with the major in the title of your award.

### 4. External Accreditation and Industry Links

This program is accredited at professional level by the Australian Computer Society, which accredits Information and Communication Technology related programs in Australia.

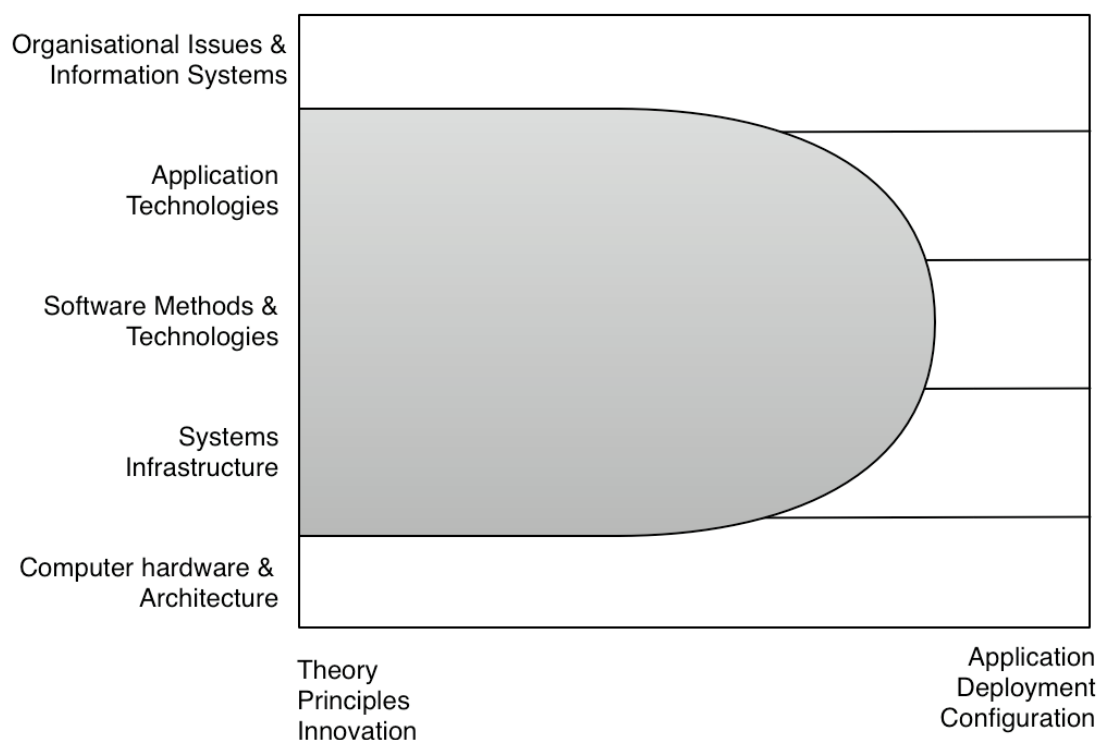
The School has a very strong Industry Advisory Committee (in some Schools called the "program advisory committee"), which is the main link to industry. Membership includes staff from major IT companies with global and local presence. The committee meets quarterly and provides feedback on the currency of our programs, the changing needs of Industry and has input into the design of new programs. It also actively contributes to the School through participation in seminars, marketing events, industry awards and scholarships.

### 5. Objectives of the Program

The School of Computer Science and Information Technology has a strong tradition of "hands on" teaching, providing students with the opportunity to mix course content and practical experience. This approach, coupled with our close involvement with industry, produces graduates who are highly regarded in the workplace. The curricula used in our various degree programs reflect these needs incorporating cutting-edge technologies while maintaining a good coverage of theoretical and algorithmic foundations of computer science, information technology, and software engineering. The Information Technology degree, in particular, develops a skills set that provides a solid foundation to application technologies, systems infrastructure, and organisational information systems and introduces cutting edge technologies in various aspects of Computer Science and Information Technology.

The curriculum guidelines for undergraduate degrees compiled by the joint task force of IEEE Computer Society and the Association of Computing Machinery provide a two-dimensional characterisation of the entire computing discipline. One dimension describes the depth of coverage between more theoretical aspects and more applied aspects. The other dimension describes the breadth of coverage of topics between lower-level computer hardware and architecture-focused coverage and higher-level organisational issues and information systems focused coverage<sup>1</sup>.

The shaded area of the following diagram represents the coverage domain of the Computer Science degree. This degree program provides an extensive treatment of systems infrastructure, software methods and technologies, and application technologies from a more theoretical aspect. In addition, as computer scientists are expected to have some understanding of all aspects of computing, some treatment of computer hardware and organisational issues will also be provided. This degree program concentrates on developing capabilities in theory, principles, and innovation of these topics; it is not intended to build capabilities of application and deployment of products to the organisational needs.



One of the options in this program is a capstone programming project in the final (third) year of the program. This 24 credit point project usually runs over two semesters and provides you experience under supervision in the development lifecycle of a substantial piece of software - integrating practice and theory.

This program was developed based on the recommendations of the curriculum development joint task force of IEEE Computer Society and Association of Computing Machinery. It was developed through a formal consultation process with a number of stakeholders, including the School's Industry Advisory Committee, academic staff of the school, alumni, and current students. This process resulted in the identification of the following graduate capabilities that are required of a computer science graduate to successfully engage in a professional capacity in the relevant field of industry of the 21st century.

<sup>1</sup> [http://www.acm.org/education/curric\\_vols/CC2005-March06Final.pdf](http://www.acm.org/education/curric_vols/CC2005-March06Final.pdf)

## 6. Statement of capabilities

The graduate capabilities developed by the Information Technology degree program are composed of the following dimensions:

- **Enabling Knowledge**  
This capability allows one to apply knowledge effectively to new situations and learn from the experience.
- **Critical Analysis**  
In general, this capability allows one to examine and consider accurately and objectively any topic, evidence, or situation.  
More specifically, this capability allows one to:
  - Analyse and model requirements and constraints for the purpose of designing and implementing software systems;
  - Evaluate and compare designs of such systems on the basis of requirements of the organisational needs.
- **Problem Solving**  
In general, this capability allows one to analyse problems and synthesise suitable solutions.  
Specifically, this capability allows one to:
  - Design and implement software systems that accommodate specified requirements and constraints, based on analysis or modelling or requirements specification
- **Communication**  
In general, this capability allows one to communicate effectively with a variety of audiences through a range of modes and media.  
Specifically, this capability allows one to:
  - Present and explain complex software systems solutions, alternative solutions, and decision recommendations to both IT and non-IT personnel via technical reports of professional standard and technical presentations.
- **Team Work**  
In general this capability allows one to work as an effective and productive team member in a range of professional and social situations.  
Specifically, this capability allows one to:
  - Work effectively in different roles, to form, manage, and successfully produce outcomes from teams, whose members may have diverse cultural backgrounds and life circumstances, and differing levels of technical expertise.
- **Responsibility**  
In general this capability refers to accepting responsibility for ones own learning and make informed decisions in judging and adopting appropriate behaviour in professional and social situations. This includes accepting the responsibility for life-long learning.  
Specifically, this capability allows to:
  - Effectively apply relevant standards, ethical considerations, and an understanding of legal and privacy issues to designing software systems.

## 7. An approach to Teaching and Learning (including a statement on assessment)

RMIT has a commitment to the principle of student-centred learning: that learning is most meaningful when topics are relevant to your life, needs, and interests and when learning activities actively engage you in creating, understanding, and connecting to knowledge<sup>2</sup>. The teaching and learning methods used in this program aim to implement student-centred learning by recognizing that your perceptions of the world are important and relevant, and encouraging you to actively participate in your learning, and to develop solutions in collaboration with your peers. Learning activities include practical exercises, case study analysis, oral presentations, technical and business reports, and individual and group project work.

Lectures (some presented by industry experts) are used to convey some of the basic information necessary for each part of the various courses. Smaller tutorials or laboratory sessions are then used to explore the ideas raised in the lectures, or to give you hands-on experience of technologies. In tutorials, you will often work in a smaller sub-group of about 5 students, to facilitate interactive discussions. Most courses use carefully constructed tutorial questions to illustrate key concepts and to help you develop your understanding.

Course materials (printed course notes, textbooks and reference books) are available from the RMIT Bookshop; the RMIT Library has copies of the books and also provides online access to electronic books and journals; course web pages contain links that let you download worksheets and assignment specifications, email teaching staff, and access message forums, as well as links to external course-related web sites. Lecturers provide additional suitably formatted electronic files and handouts to visually impaired students upon request.

### Assessment

The school views teaching and learning as a cyclic activity, with assessment and evaluation driving planning and teaching. Assessment is an integral part of learning: information derived from assessment activities is used to facilitate student learning and development, and to improve the quality of the school's programs, services and facilities. Assessment activities examine processes as well as products, and are designed to measure your work against standards, not against other students. As no one assessment can capture the full range of student learning and academic growth, courses use multiple assessments to evaluate what you know and are able to do and to inform adjustments to learning activities.

Assessment is developmental and continuous: that is, you have the opportunity to learn by building on what you already know and are able to do and to carry forward these skills and knowledge to expanded and more complex uses. To reflect industry practice in this area, as you progress through assessments at each level of the program, you are expected to demonstrate at increasingly higher levels of complexity and integration, the knowledge and capabilities set forth in the program standards.

**Formative assessment** progresses from tutorial exercises and self-test quizzes in foundation courses to participation in seminar discussions, moderated by the lecturer, in some elective courses, to seminar-style discussions in key courses, where you present additional topics in the course material, and apply your knowledge of earlier topics to recognize underlying principles and potential applications of new topics. Some courses involve group meetings and discussions relating to assignments, and participation in case study sessions within groups and with key input and guidance from lecturers and industry experts. Tutorial exercises allow you to explore team dynamics, diagnostics, and management issues.

**Summative assessment** also becomes more demanding as you progress from foundation courses to electives and key courses:

- The core courses focus on key concepts and initial capability attainment: most assessment activities are based on individual skills and capabilities, and ask you to apply fixed "toolsets"

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<sup>2</sup> McCombs, B. and Whistler, J.S. (1997). *The Learner-Centered Classroom and School: Strategies for Increasing Student Motivation and Achievement*. San Francisco: Josey-Bass Publishers.

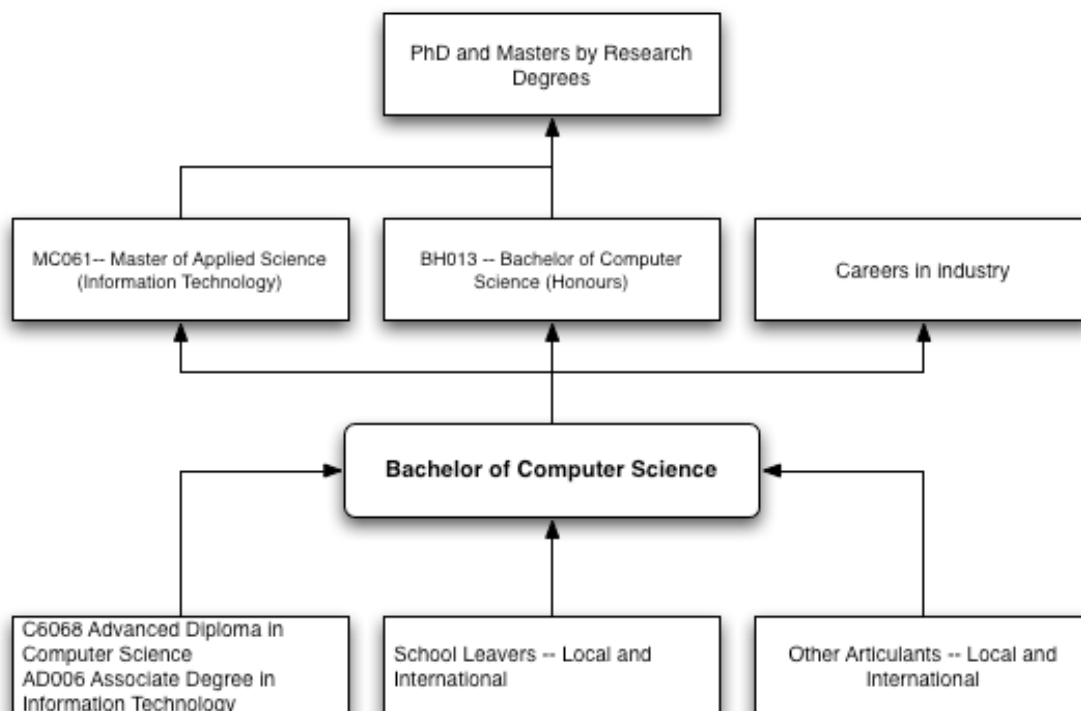
to familiar, well-defined problems, to demonstrate that you have grasped the necessary technical foundations and relevant technologies;

- Elective courses require more complex, open problem-solving, with assignments that require you to design or evaluate solutions for problems with complex or conflicting requirements, or to compare alternative solutions for such problems. In most elective courses, assessment activities also emphasize additional graduate capabilities such as written communication, where you demonstrate that you can integrate concepts and arguments into technical or business reports, or literature reviews of relevant standards, ethical considerations, and applicable research. Some elective courses involve group-focused assessment.
- Assessment of minor courses vary widely among different minor study streams mainly due to substantial differences in the disciplines covered in these minor study areas. You will be advised by an academic advisor about the specific instruments of assessment once you have chosen the minor study area.

In order to be a lifelong learner, you must be able to evaluate your own work. To support this, some group work is peer-assessed, i.e., following criteria specified by the lecturer, or agreed upon by your class, you assess, and are assessed by, the other members of your group. This is in keeping with student-centred learning, and also helps to alleviate a major misgiving about group work - the possibility of some group members being "carried" by the other members. Most courses in this program also require you to sit a written examination at the end of the semester, worth between 35% (key) and 60% (foundation) of your final result.

A **portfolio** is a collection of evidence that you prepare to demonstrate mastery, comprehension, application, and synthesis of this program's concepts. Many of the learning and assessment activities described in this and the previous section can contribute to your portfolio of evidence, in particular, your individual assignments, and your [journal of your] contributions to group activities (case study analyses, presentations, technical and business reports, and group project work).

## 8. Articulation and Pathways



The following tables indicate how this program articulates with other programs (TAFE, HE – UG and PG) at RMIT highlighting educational pathways, and indicates to students with existing qualifications the extent of exemptions.

Source Program	Owning school	Credit towards this program		Academic requirement for entry	Terms of entry (guaranteed place, merit, etc)	Date of agreement & expiry
		Courses	Time			
C6068 - Advanced Diploma of Computer Science	School of Life and Physical Sciences	- Programming 1 - Programming 2 - Computer Organisation - Mathematics for Computing - Data Communication and Net-centric Computing - Database Concepts - Two Student Electives	1 year	Must obtain a CGPA of 3.0 (Distinction Average) or above.	Merit	
AD006 – Associate Degree in Information Technology	School of Life and Physical Sciences	- Programming 1 - Programming 2 - Computer Organisation - Mathematics for Computing - Programming Techniques - Software Engineering Fundamentals - Data Communication and Net-centric Computing - Database Concepts - CCNA Intro - CCNA ICND - Two Student Electives	1.5 Years	Must obtain a CGPA of 3.0 (Distinction Average) or above.	Merit	

Program Destination	Owning school	Credit from this program towards destination program		Academic requirement for entry	Terms of entry (guaranteed place, merit, etc)	Date of agreement & expiry
		Courses	Time			
MC061 – master of	School of Computer	No exemptions	0		Merit	

Applied Science (Information technology)	Science & IT					
BH013 – Bachelor of Applied Science (Computer Science with Honours)	School of Computer Science & IT	No exemptions	0		Merit	

## 9. Entrance requirements

### Local Students

VCE Units 3 & 4 English (any) and Mathematical Methods or Specialist Mathematics. Students who obtained study scores above 20 for English will earn selection credit.

### International Students

An English IELTS language test score of 6.5 with no band less than 6.0 or equivalent. A unit of mathematics to year 12 VCE standard Mathematical Methods or Specialist Mathematics.

## 10. Library, IT and specialist resources

RMIT Library already holds or has ordered all prescribed and recommended books. A limited number of copies of books will be available from the Library; some may be available electronically via Safari Bookshelf or electronic journals. This program will be delivered only in on-campus mode.

No additional IT or specialist resources are required to support the new courses. You will use IT facilities within the school. Special software required, such as Visual Paradigm, is already licensed and installed.

## 11. Student expenses and charges in addition to fees

Expenses other than university tuition fees may be expected in relation to purchase of lecture notes, textbooks, stationery, consumables such as printer paper, fees levied by commercial internet service providers for internet access outside of the university campus, and other relevant costs.

## 12. Program Transition Plan

The proposed amendments (effective from Sem1, 2008) are for the purpose of inclusion of a few electives into the Computer Science elective list. Therefore, no transition plan is required.

## 13. Course descriptions

Part A course guides for all the courses can be found at:

<http://www.rmit.edu.au/programs/courses>

## Capability Matrix

Capability	Programming 1	Database Concepts	Computer Organisation	Mathematics for Computing	Programming 2	Web Programming	Data Communications and Networks Centric	Software Engineering Fundamental	Computing Theory	Programming Techniques
Enabling Knowledge	C	F	F	F	C	F	F	F	F	C
Critical Analysis	F				C			F	F	C
Problem Solving	F	F	F	F	C	F	F	C	C	C
Communication								C	C	
Team Work								F	C	
Responsibility								C		

Capability	Software Engineering Process and Tools	Professional Computing Practice	Algorithms and Analysis	Mathematics for Computing	Operating Systems Principles	Database Systems	Artificial Intelligence
Enabling Knowledge	C	F	A	F	A	C	C
Critical Analysis	C	C	A		A	C	C
Problem Solving	C	C	A	F	A	C	C
Communication	A	A					
Team Work	A	C					
Responsibility	C	A					

F – Foundation-level skills

C – Consolidated skills

A – Advanced skills