

Program Guide Master of Computing

1. Program Details

Title	Master of Computing
Abbreviation	M Computing
RMIT Program Code	MC062
Credit Points	144
Career	Postgraduate
Duration/length	1.5 years (3 semesters) full time or 3 years (6 semesters) part time.
Campuses	City
Location	Onshore
Owning School	School of Computer Science and IT http://www.rmit.edu.au/csit/
Partnered offering / corporate client	N/A
ASCED code:	020100
CRICOS code: (If known)	065136B
Proposed Introduction	2009 Semester 1
Contact Details	Dr. Santha Sumanasekara santha.sumanasekara@rmit.edu.au 9925 9673

2. Plan Details

RMIT Plan Code	MC062P9
Title	Master of Computing
Award Title	Master of Computing
ASCED code:	020100
CRICOS code:	065136B

3. Program Structure

Before starting your officially enrolled courses in your program plan, you are strongly advised to complete the Lab Induction and Unix Survival Skills, a total of 8 hours intensive practical training course delivered in computer labs at the School of Computer Science and IT during the Orientation period. These skills are essential for all courses in your program plan.

Many courses have prerequisites: these are listed in the program summary, which can be downloaded from <http://www.rmit.edu.au/browse;ID=spagdcjou91>

All Specialisation Options

Complete these four core courses:

Subject area	Catalogue number	Title	Credit points
COSC	1321	Introduction to Programming	12
COSC	1295	Java for Programmers	12
ISYS	1055	Database Concepts	12
ISYS	1117	Software Engineering Fundamentals	12

AND select one course from Net-centric Computing core courses:

Note: Specialisation Options C, E and G include one or both of these courses as Related Electives; Follow specific instructions given with these specializations about choosing Related Electives.)

Subject area	Catalogue number	Title	Credit points
COSC	2061	Data Communications & Net-Centric Computing	12
COSC	1300	Web Servers and Web Technology	12

AND

select two courses from combined Computing Electives:

Subject area	Catalogue number	Title	Credit points
COSC	1283	Programming Techniques	12
COSC	1285	Algorithms and Analysis	12
COSC	2425	Unix Essentials for System Administrators	12
COSC	1300	Web Servers and Web Technology	12
COSC	2061	Data Communications & Net-Centric Computing	12
COSC	2426	Web Programming	12
COSC	2427	Windows Systems Administration	12
COSC	1233	Broadcast Networks & Applications	12
ISYS	1106	Engineering Software Projects	12
COSC	2405	Database Administration	12

COSC	1092	Scripting Language Programming	12
COSC	2106	Document Markup Languages	12
COSC	1213	Web Media Technologies	12
COSC	2401	Software Architecture: Design & Implementation	12
COSC	2347	Mobile Application Development	12
COSC	2354	Electronic Commerce & Enterprise Systems	12
COSC	2428	Software Engineering Process & Tools	12
COSC	2272	Digital Media Computing	12
COSC	1219	User Interface Programming	12
ISYS	1124	Web Database Applications	12
ISYS	1101	Implementation of Database Applications	12
COSC	2277	Web Development Technologies	12
COSC	1318	Internet Industry Project	12
COSC	1125	Artificial Intelligence	12
COSC	1105	Computing Theory	12
COSC	1112	Operating Systems Principles	12
COSC	1131	Unix Systems Admin (Linux)	12
COSC	1252	Programming Using C++	12
COSC	1186	Interactive 3D Graphics and Animation	12
COSC	1224	Real-Time Rendering and 3D Games Programming	12
COSC	1174	Advanced Client/Server Architecture	12
ISYS	2402	Advanced Topics in Distributed Systems (seminar)	12
COSC	2456	Advanced Topics in Computer Networking	12
COSC	2308	Advanced Topics in Bioinformatics (seminar)	12
COSC	2048	Agent Oriented Programming and Design (seminar)	12
COSC	2306	Search Technology (seminar)	12
MATH	1300	Analysis of Medical Data	12
BIOL	2034	Bioinformatics	12
COSC	2302	Computer and Internet Forensics	12
INTE	1125	Cryptography and Security	12
COSC	2111	Data Warehousing and Data Mining	12
COSC	2407	Database Systems	12
INTE	2469	Enterprise Database Integration (seminar)	12
INTE	2471	Frontiers of Information Retrieval (seminar)	12
ISYS	1072	Knowledge & Data Warehousing	12
ISYS	1095	Distributed Databases	12
ISYS	2377	Enterprise Architecture	12
COSC	2033	Evolutionary Computing (seminar)	12
COSC	1170	Foundations of Distributed Computing	12
ISYS	1078	Information Retrieval	12
INTE	2396	Information Systems and Risk Management	12
COSC	1163	Intelligent Agents and Agent Systems (seminar)	12
COSC	1165	Intelligent Web Systems (seminar)	12
COSC	1168	Internet and Intranet Document Engineering	12
COSC	2151	Introduction to Computational Biology	12
COSC	2049	Mathematical Logic and Logic Programming (seminar)	12
COSC	2304	Mobile and Wireless Computing	12
COSC	1176	Network Programming	12
COSC	2107	Network Security	12
COSC	2149	Research Methods	12
INTE	2473	Search Engine Optimisation (seminar)	12

INTE	1070	Secure Electronic Commerce	12
INTE	2401	Secure Programming Environments	12
ISYS	2404	Software Engineering for Large Scale Systems (seminar)	12
COSC	2275	Software Requirements Engineering	12
INTE	2475	Sustainable Energy Efficient Data Storage (seminar)	12
ISYS	1083	Object Oriented Software Design	12
ISYS	1081	Software Reuse	12
ISYS	1085	Software Testing	12
ISYS	1088	Systems Architecture	12
Note: you may select COSC1182 OR ISYS2040 – not both			
ISYS	2040	Usability Analysis	12
COSC	1182	Usability Engineering	12
COSC	2279	Web Services	12

AND

complete one Specialisation Option:

Specialisation Option A: Intelligent Systems

Select Three (3) Courses from: Advanced Electives

Subject area	Catalogue number	Title	Credit points
COSC	2033	Evolutionary Computing (seminar)	12
COSC	1163	Intelligent Agents and Agent Systems (seminar)	12
COSC	2049	Mathematical Logic and Logic Programming (seminar)	12
COSC	1165	Intelligent Web Systems (seminar)	12

And

select Two (2) Courses from: Advanced and Related Electives

Subject area	Catalogue number	Title	Credit points
COSC	2033	Evolutionary Computing (seminar)	12
COSC	1163	Intelligent Agents and Agent Systems (seminar)	12
COSC	2049	Mathematical Logic and Logic Programming (seminar)	12
COSC	1165	Intelligent Web Systems (seminar)	12
COSC	2048	Agent Oriented Programming and Design (seminar)	12
ISYS	1072	Knowledge & Data Warehousing	12
COSC	2111	Data Warehousing and Data Mining	12
COSC	1283	Programming Techniques	12
COSC	1285	Algorithms and Analysis	12
COSC	1125	Artificial Intelligence	12
COSC	1105	Computing Theory	12

Specialisation Option B: Databases

Select Three (3) Courses from: Advanced Electives

Subject area	Catalogue number	Title	Credit points
COSC	2407	Database Systems	12
ISYS	1072	Knowledge & Data Warehousing	12
COSC	1168	Internet and Intranet Document Engineering	12
COSC	2111	Data Warehousing and Data Mining	12
INTE	2469	Enterprise Database Integration (seminar)	12
INTE	2475	Sustainable Energy Efficient Data Storage (seminar)	12

And

select Two (2) Courses from: Advanced and Related Electives

Subject area	Catalogue number	Title	Credit points
COSC	2407	Database Systems	12
ISYS	1072	Knowledge & Data Warehousing	12
COSC	1168	Internet and Intranet Document Engineering	12
COSC	2111	Data Warehousing and Data Mining	12
INTE	2469	Enterprise Database Integration (seminar)	12
INTE	2475	Sustainable Energy Efficient Data Storage (seminar)	12
COSC	1283	Programming Techniques	12
COSC	1285	Algorithms and Analysis	12
COSC	2405	Database Administration	12
COSC	2106	Document Markup Languages	12
COSC	2426	Web Programming	12
ISYS	1124	Web Database Applications	12
ISYS	1101	Implementation of Database Applications	12
COSC	2277	Web Development Technologies	12

Specialisation Option C: Web-Based Computing

Select Three (3) Courses from: Advanced Electives

Subject area	Catalogue number	Title	Credit points
COSC	2302	Computer and Internet Forensics	12
ISYS	1078	Information Retrieval	12
COSC	1165	Intelligent Web Systems (seminar)	12
COSC	1168	Internet and Intranet Document Engineering	12
COSC	2304	Mobile and Wireless Computing	12
COSC	2107	Network Security	12
INTE	1070	Secure Electronic Commerce	12
INTE	2473	Search Engine Optimisation (seminar)	12
COSC	2279	Web Services	12

Note: you may select COSC1182 OR ISYS2040 – not both

COSC	1182	Usability Engineering	12
ISYS	2040	Usability Analysis	12

And

complete these Two (2) Related Electives:

Note: we recommend that you complete COSC1300 as your Net-centric Computing core course

Subject area	Catalogue number	Title	Credit points
COSC	1300	Web Servers and Web Technology	12
COSC	2426	Web Programming	12

If you completed COSC1300 as an Net-centric Computing core course, then select One (1) Course from: Advanced and Related Electives

Subject area	Catalogue number	Title	Credit points
COSC	2106	Document Markup Languages	12
COSC	2354	Electronic Commerce & Enterprise Systems	12
ISYS	1124	Web Database Applications	12
ISYS	1101	Implementation of Database Applications	12
COSC	2277	Web Development Technologies	12
COSC	2302	Computer and Internet Forensics	12
ISYS	1078	Information Retrieval	12
COSC	1165	Intelligent Web Systems (seminar)	12
COSC	1168	Internet and Intranet Document Engineering	12
COSC	2304	Mobile and Wireless Computing	12
COSC	2107	Network Security	12
INTE	1070	Secure Electronic Commerce	12
INTE	2473	Search Engine Optimisation (seminar)	12
COSC	2279	Web Services	12
Note: you may select COSC1182 OR ISYS2040 – not both			
COSC	1182	Usability Engineering	12
ISYS	2040	Usability Analysis	12

Specialisation Option D: Software Engineering

Select Three (3) Courses from: Advanced Electives

Subject area	Catalogue number	Title	Credit points
ISYS	2377	Enterprise Architecture	12
ISYS	2404	Software Engineering for Large Scale Systems (seminar)	12
COSC	2275	Software Requirements Engineering	12
ISYS	1083	Object Oriented Software Design	12
ISYS	1081	Software Reuse	12
ISYS	1085	Software Testing	12
ISYS	1088	Systems Architecture	12
Note: you may select COSC1182 OR ISYS2040 – not both			
COSC	1182	Usability Engineering	12
ISYS	2040	Usability Analysis	12

And

select Two (2) Courses from: Advanced and Related Electives

Subject area	Catalogue number	Title	Credit points
COSC	2354	Electronic Commerce & Enterprise Systems	12
ISYS	1106	Engineering Software Projects	12
COSC	1252	Programming Using C++	12
COSC	2401	Software Architecture: Design & Implementation	12
COSC	2428	Software Engineering Process & Tools	12
ISYS	2377	Enterprise Architecture	12
ISYS	2404	Software Engineering for Large Scale Systems (seminar)	12
COSC	2275	Software Requirements Engineering	12
ISYS	1083	Object Oriented Software Design	12
ISYS	1081	Software Reuse	12
ISYS	1085	Software Testing	12
ISYS	1088	Systems Architecture	12
Note: you may select COSC1182 OR ISYS2040 – not both			
COSC	1182	Usability Engineering	12
ISYS	2040	Usability Analysis	12

Specialisation Option E: Networked and Distributed Systems

Complete this Advanced Elective:

Subject area	Catalogue number	Title	Credit points
COSC	1170	Foundations of Distributed Computing	12

And

select Two (2) Courses from: Advanced Electives

Subject area	Catalogue number	Title	Credit points
COSC	1174	Advanced Client/Server Architectures	12
ISYS	2402	Advanced Topics in Distributed Systems (seminar)	12
COSC	2456	Advanced Topics in Computer Networking (seminar)	12
COSC	2304	Mobile and Wireless Computing	12
COSC	1176	Network Programming	12
COSC	2107	Network Security	12
ISYS	2401	Secure Programming Environments	12

And complete this Related Elective:

Note: we recommend that you complete COSC2061 as your Net-centric Computing core course

Subject area	Catalogue number	Title	Credit points
COSC	2061	Data Communications & Net-Centric Computing	12

And

select One (1) Course from: Advanced and Related Electives

Note: The Net-centric Computing core course you completed does not count towards the specialisation, you must select two other courses from the list.)

Subject area	Catalogue number	Title	Credit points
COSC	1174	Advanced Client/Server Architectures	12
ISYS	2402	Advanced Topics in Distributed Systems (seminar)	12
COSC	2456	Advanced Topics in Computer Networking (seminar)	12
ISYS	1095	Distributed Databases	12
COSC	2304	Mobile and Wireless Computing	12
COSC	1176	Network Programming	12
COSC	2107	Network Security	12
INTE	2401	Secure Programming Environments	12
COSC	1283	Programming Techniques	12
COSC	1233	Broadcast Networks & Applications	12
COSC	1112	Operating Systems Principles	12

Specialisation Option F: Search Engines

Select Three (3) Courses from: Advanced Electives

Subject area	Catalogue number	Title	Credit points
COSC	2407	Database Systems	12
COSC	2306	Search Technology (seminar)	12
ISYS	1078	Information Retrieval	12
INTE	2471	Frontiers of Information Retrieval (seminar)	12
INTE	2473	Search Engine Optimisation (seminar)	12

And

select Two (2) Courses from: Advanced and Related Electives

Subject area	Catalogue number	Title	Credit points
COSC	2407	Database Systems	12
COSC	2306	Search Technology (seminar)	12
ISYS	1078	Information Retrieval	12
INTE	2471	Frontiers of Information Retrieval (seminar)	12
INTE	2473	Search Engine Optimisation (seminar)	12
COSC	1283	Programming Techniques	12
COSC	1285	Algorithms and Analysis	12
COSC	2106	Document Markup Languages	12
COSC	2426	Web Programming	12

