

MC-IT Master of Information Technology

Year and Campus:	2013 - Parkville
CRICOS Code:	077475F
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Level:	Graduate/Postgraduate
Duration & Credit Points:	200 credit points taken over 24 months full time. This course is available as full or part time.
Coordinator:	Assoc Prof Timothy Baldwin Email: tbaldwin@unimelb.edu.au
Contact:	<p>Melbourne School of Engineering Ground Floor, Old Engineering (Building 173)</p> <p>Current students: Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au) Phone: 13MELB (13 6352) +61 3 9035 5511</p> <p>Prospective students: Email: eng-info@unimelb.edu.au (mailto:eng-info@unimelb.edu.au) Phone: +618344 6944</p>
Course Overview:	<p>The Master of Information Technology (MIT) is a 200-point program for those interested in a career in technical IT.</p> <p>The key aspects of the course are:</p> <ul style="list-style-type: none"> # Specialisations in key areas of Information Technology, namely: <ul style="list-style-type: none"> # Foundation studies in programming, algorithmics, databases and networking for students with minimal IT background, including exposure to the different areas of specialisation # Formal studies in project and change management, including risk management, quality assurance and testing. # Optional 25-point industry placement with local IT organisations as part of the course (available on a competitive basis) <p>A 25-point project, qualifying students to advance to a PhD</p>
Objectives:	<p>On completion of this course students should have:</p> <ul style="list-style-type: none"> # Expertise in a key area of information technology # Analytical skills and competencies in problem solving # A sound fundamental understanding of the principles and methods of information technology # Demonstrable competencies in the educational and professional standards of the professional institutions and boards with which the course is accredited # A broad knowledge base of information technology so as to facilitate effective communication with those involved in the IT industry # Have acquired the computational skills necessary to solve theoretical and practical problems for further professional development and for meeting future changes in IT # Verbal and written communication skills that enable them to make a meaningful contribution to changing face of the IT industry # Professional ethics and responsibility towards the IT profession and the broader community
Course Structure & Available Subjects:	Students must complete 200 points, made up of 50 points of Foundation subjects, 50 points of Specialisation Subjects and 100 points of Advanced Specialisation Subjects (both based on the specialisation the student is enrolled in).
Subject Options:	<p>Foundation</p> <p>50 points:</p>

Subject	Study Period Commencement:	Credit Points:
COMP90041 Programming and Software Development	Not offered 2013	12.50
COMP90038 Algorithms and Complexity	Not offered 2013	12.50
COMP90007 Internet Technologies	Not offered 2013	12.50
SINF90001 Database Systems & Information Modelling	Not offered 2013	12.50

Computing

Specialisation Subjects -Computing Specialisation

Students must take at least two of the following subjects:

Subject	Study Period Commencement:	Credit Points:
SWEN90002 Engineering for Internet Applications	Not offered 2013	12.50
COMP90049 Knowledge Technologies	Not offered 2013	12.50
COMP90015 Distributed Systems	Not offered 2013	12.50
COMP90048 Declarative Programming	Not offered 2013	12.50

AND

25 points from level-9 COMP, SWEN, INFO or ISYS.

Students may substitute 12.5 points with one of the following subjects

Subject	Study Period Commencement:	Credit Points:
COMP20004 Discrete Structures	Not offered 2013	12.50
SWEN30006 Software Modelling and Design	Not offered 2013	12.50
COMP30021 Theoretical Computer Science	Not offered 2013	12.50

Subject to the approval of the course coordinator, students may also take Computing-related subjects from other departments within the University.

Advanced Specialisation Subjects -Computing Specialisation:

37.5 points core

Subject	Study Period Commencement:	Credit Points:
ISYS90050 IT Project and Change Management	Not offered 2013	12.50
COMP90055 Computing Project	Not offered 2013	25

62.5 points elective

Students must take 62.5 points of level-9 COMP, SWEN, INFO or ISYS subjects. These subjects include:

Subject	Study Period Commencement:	Credit Points:
ISYS90080 IT Industry Placement	Not offered 2013	25
COMP90043 Cryptography and Security	Not offered 2013	12.50

COMP90050 Advanced Database Systems	Not offered 2013	12.50
COMP90042 Web Search and Text Analysis	Not offered 2013	12.50
COMP90045 Programming Language Implementation	Not offered 2013	12.50
COMP90053 Program Analysis and Transformation	Not offered 2013	12.50
COMP90054 Software Agents	Not offered 2013	12.50
COMP90051 Statistical and Evolutionary Learning	Not offered 2013	12.50
COMP90046 Constraint Programming	Not offered 2013	12.50

Students may also select the following subjects:

Subject	Study Period Commencement:	Credit Points:
SWEN40004 Modelling Complex Software Systems	Semester 1	12.50
MCEN90031 Applied High Performance Computing	Not offered 2013	12.50
COMP90056 Stream Computing and Applications	Not offered 2013	12.50

Subject to the approval of the course coordinator, students may also take Computing-related subjects from other departments within the University.

Distributed Computing

Specialisation Subjects -Distributed Computing Specialisation

12.5 points core

Subject	Study Period Commencement:	Credit Points:
COMP90015 Distributed Systems	Not offered 2013	12.50

Students must take 37.5 points from among the following subjects:

Subject	Study Period Commencement:	Credit Points:
COMP90049 Knowledge Technologies	Not offered 2013	12.50
COMP90048 Declarative Programming	Not offered 2013	12.50
COMP90043 Cryptography and Security	Not offered 2013	12.50
COMP90050 Advanced Database Systems	Not offered 2013	12.50
COMP90042 Web Search and Text Analysis	Not offered 2013	12.50
COMP90051 Statistical and Evolutionary Learning	Not offered 2013	12.50
COMP90053 Program Analysis and Transformation	Not offered 2013	12.50
COMP90046 Constraint Programming	Not offered 2013	12.50
ISYS90039 Innovation & Entrepreneurship in IT	Not offered 2013	12.50
COMP90045 Programming Language Implementation	Not offered 2013	12.50
COMP90054 Software Agents	Not offered 2013	12.50

Note:Subject to the approval of the course coordinator, students may also take Distributed Computing-related subjects from other departments within the University

Advanced Specialisation Subjects -Distributed Computing Specialisation

37.5 points core:

Subject	Study Period Commencement:	Credit Points:
ISYS90050 IT Project and Change Management	Not offered 2013	12.50
COMP90019 Distributed Computing Project	Semester 1	25

Students must take 62.5 points from among the following subjects:

Subject	Study Period Commencement:	Credit Points:
SWEN90002 Engineering for Internet Applications	Not offered 2013	12.50
COMP90024 Cluster and Cloud Computing	Semester 2	12.50
COMP90017 Sensor Networks and Applications	Not offered 2013	12.50
COMP90025 Parallel and Multicore Computing	Not offered 2013	12.50
MCEN90031 Applied High Performance Computing	Not offered 2013	12.50
ISYS90080 IT Industry Placement	Not offered 2013	25
COMP90018 Mobile Computing Systems Programming	Not offered 2013	12.50
COMP90020 Distributed Algorithms	Not offered 2013	12.50
COMP90056 Stream Computing and Applications	Not offered 2013	12.50

Note:Subject to the approval of the course coordinator, students may also take Distributed Computing-related subjects from other departments within the University.

Health Specialisation**Specialisation Subjects -Health Specialisation:**

50 points

Subject	Study Period Commencement:	Credit Points:
ISYS90069 eHealth & Biomedical Informatics Systems	July	12.50
ISYS90078 Health Data, Information and Knowledge	Not offered 2013	12.50
ISYS90076 IT Infrastructure for eHealth	Not offered 2013	12.50

AND

Students must take 12.5 points from among the following subjects:

Subject	Study Period Commencement:	Credit Points:
INFO30005 Web Information Technologies	Not offered 2013	12.50
SWEN90002 Engineering for Internet Applications	Not offered 2013	12.50
COMP90049 Knowledge Technologies	Not offered 2013	12.50
ISYS90026 Fundamentals of Information Systems	Not offered 2013	12.50
ISYS90036 Enterprise Systems	Not offered 2013	12.50

ISYS90039 Innovation & Entrepreneurship in IT	Not offered 2013	12.50
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Subject to the approval of the course coordinator, students may also take Health IT-related subjects from other departments within the University

Advanced Specialisation Subjects- Health Specialisation

62.5 points core

Subject	Study Period Commencement:	Credit Points:
ISYS90050 IT Project and Change Management	Not offered 2013	12.50
ISYS90069 eHealth & Biomedical Informatics Systems	July	12.50
ISYS90077 EHealth Applications and Solutions	Not offered 2013	12.50
ISYS90079 Health IT Project	Not offered 2013	25

Students must take 37.5 points from among the following subjects:

Subject	Study Period Commencement:	Credit Points:
ISYS90080 IT Industry Placement	Not offered 2013	25
SINF90004 Data Warehousing	Not offered 2013	12.50
ISYS90035 Knowledge Management Systems	Not offered 2013	12.50
COMP90018 Mobile Computing Systems Programming	Not offered 2013	12.50

Note: Subject to the approval of the course coordinator, students may also take Health IT-related subjects from other departments within the University

Spatial Specialisation

Specialisation Subjects -Spatial Specialisation

50 points

Subject	Study Period Commencement:	Credit Points:
GEOM90008 Foundations of Spatial Information	Not offered 2013	12.50
GEOM90015 Spatial Data Infrastructure	Not offered 2013	12.50
GEOM90018 Spatial Databases	Not offered 2013	12.50

In addition, students must complete 12.5 points, in the form of:

Subject	Study Period Commencement:	Credit Points:
GEOM90042 Spatial Information Programming	Not offered 2013	12.50

OR

one of the following subjects with the approval of the course coordinator:

SWEN90002 Engineering for Internet Applications (12.5 pts)

COMP90015 Distributed Systems (12.5 pts)

COMP90049 Knowledge Technologies (12.5 pts)

COMP90050 Advanced Database Systems (12.5 pts)

ISYS90039 Innovation & Entrepreneurship in IT (12.5 pts)

COMP90017 Sensor Networks and Applications (12.5 pts)

ISYS90026 Fundamentals of Information Systems (12.5 pts)
 SINF90004 Data Warehousing (12.5 pts)
 ISYS90035 Knowledge Management Systems (12.5 pts)
 SINF90002 Interaction Design and Usability (12.5 pts)
 ISYS90032 Emerging Technologies and Issues(12.5 pts)
 CVEN90048 Transport Systems (12.5 pts)
 ENEN90028 Monitoring Environmental Impacts (12.5 pts)
 ENEN90031 Quantitative Environmental Modelling (12.5 pts)
 ENEN90032 Environmental Analysis Tools (12.5 pts)
 CVEN90043 Sustainable Infrastructure Systems (12.5 pts)

Advanced Specialisation Subjects - Spatial Specialisation

62.5 points core

Subject	Study Period Commencement:	Credit Points:
ISYS90050 IT Project and Change Management	Not offered 2013	12.50
GEOM90006 Spatial Analysis	Not offered 2013	12.50
GEOM90043 Spatial IT Project	Not offered 2013	25
GEOM90007 Spatial Visualisation	Not offered 2013	12.50

In addition, students must complete 37.5 points from the following subjects:

Subject	Study Period Commencement:	Credit Points:
GEOM90040 Geomatics Problem Solving and Analysis	Not offered 2013	12.50
GEOM90033 Satellite Positioning Systems	Not offered 2013	12.50
GEOM90005 Remote Sensing	Not offered 2013	12.50
GEOM90016 Advanced Topics in GIScience	Not offered 2013	12.50
GEOM90017 Geomatics Internship	Winter Term	12.50
ISYS90080 IT Industry Placement	Not offered 2013	25

* Subject to the approval of the course coordinator, students may supplement this list with other advanced Spatial-related subjects from within the University

Note: Credit may not be obtained for both GEOM90017 and ISYS90080.

Entry Requirements:

Any undergraduate degree, with a final year grade average of at least an H3 (65), and at least one technical subject focussed on computer programming (taken at any year level).

Quotas may be applied and preference may be given to applicants with evidence of appropriate preparation or potential to undertake research. Entry is subject to the capacity of the department to provide adequate project supervision.

All students studying at the University of Melbourne must satisfy the University's English language entry requirements in accordance with Regulation 11.1.R3 Principles of Selection for Entry to Courses Academic Board Resolutions on Selection:

<http://www.futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements> (<http://www.futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements>)

For graduate students the University's English language entry requirements are set out at:

	<p>http://www.futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements/graduate-toefl-ielts (http://www.futurestudents.unimelb.edu.au/admissions/entry-requirements/language-requirements/graduate-toefl-ielts)</p>
<p>Core Participation Requirements:</p>	<p>The Master of Information Technology welcomes applications from students with disabilities. It is University and degree policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the degree. The Master of Information Technology requires all students to enrol in subjects where they will require: The ability to comprehend complex theory and technology-related information The ability to clearly and independently communicate a knowledge and application of theory, and technology principles and practices during assessment tasks The ability to actively and safely contribute in IT development and management activities Students must possess behavioural and social attributes that enable them to participate in a complex learning environment. Students are required to take responsibility for their own participation and learning. They also contribute to the learning of other students in collaborative learning environments, demonstrating interpersonal skills and an understanding of the needs of other students. Assessment may include the outcomes of tasks completed in collaboration with other students. There may be additional inherent academic requirements for some subjects, and these requirements are listed within the description of the requirements for each of these subjects. Students who feel their disability will impact on meeting this requirement are encouraged to discuss this matter with the relevant Subject Coordinator and the Disability Liaison Unit: http://www.services.unimelb.edu.au/disability/</p>
<p>Further Study:</p>	<p>Graduates may progress to a wide range of other graduate coursework degrees as well as research higher degree programs, including the Doctor of Philosophy.</p>
<p>Graduate Attributes:</p>	<p>Graduates have a specialisation in computing, distributed computing, health IT or spatial IT, as well as a solid foundation in programming, algorithms, complexity, network programming, and database systems, project management, and advanced information technology. Elective subjects are available in areas as diverse as bioinformatics, database systems, enterprise computing, geomatics, information systems, machine intelligence, programming languages, project and change management, security, and software engineering.</p>
<p>Generic Skills:</p>	<p>Graduates will:</p> <ul style="list-style-type: none"> # Have the ability to demonstrate advanced independent critical enquiry, analysis and reflection # Have a strong sense of intellectual integrity and the ethics of scholarship # Have in-depth knowledge of their specialist area # Reach a high level of achievement in writing, research or project activities, problem-solving and communication # Be critical and creative thinkers, with an aptitude for continued self-directed learning # Be able to examine critically, synthesise and evaluate knowledge across a broad range of disciplines # Have a set of flexible and transferable skills for different types of employment; and # Be able to initiate and implement constructive change in their communities, including professions and workplaces