781AA Master of Engineering in Distributed Computing

Year and Campus:	2010 - Parkville
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.
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Course Overview:	The MEDC addresses demand from the emerging information and communication technology (ICT) market with a knowledge emphasis on the use of industry standard and Internet-based distributed computing technologies in the development of networked enterprise systems and their applications. The key aspects of this Masters program are: # it has been designed to provide expertise for developing service-oriented, enterprise computing systems and applications that need to operate in wired/wireless network environments. These enterprise systems can scale from a single to multiple organisations # it promotes the utilisation of industry standard distributed computing technologies such as J2EE and .NET # about half of the course focuses on highly specialised distributed computing topics such as: distributed systems, cluster and grid computing, distributed algorithms, mobile systems programming, sensor networks and Web services # it includes a compulsory team-based project work that emphasises the design and development of distributed computing technologies and their application in e-Science and e-Business areas
Objectives:	-
Course Structure & Available Subjects:	subject listing for Group A, B, and C should follow ones listed at: **http://www.cs.mu.oz.au/courses/mbc/medc.html (http://www.cs.mu.oz.au/courses/mbc/medc.html)**
Subject Options:	Group A subjects (foundation studies) consists of subjects that bring students up-to-date with advanced computer science concepts, techniques and tools. Group B subjects offer advanced study in distributed computing technologies and its applications, and includes a number of new and existing subjects. MEDC students should study at least four subjects from subgroup B2 in addition to the compulsory subject from subgroup B1 (433-652). Group C subjects offer an opportunity for students to carry out a solid practice-oriented or research-oriented project in distributed computing. Selection of projects will be on an individual or team basis, depending on student background and availability of supervision. With permission from the Program Director, subjects in Group A and B may be substituted by other suitable studies. # Entry Level 1: 4 subjects from Group A, 10 subjects from Group B and 1 subject from Group C

- Entry Level 2: 10 subjects from Group B and 1 subject from Group C
- Entry Level 3: 6 subjects from Group B and 1 subject from Group C.

More information and Subject listing for Group A, B, and C can be found at: **http://www.cs.mu.oz.au/courses/mbc/medc.html (http://www.cs.mu.oz.au/courses/mbc/medc.html)**

GROUP A subjects

Subject	Study Period Commencement:	Credit Points:
433-351 Database Systems	Not offered 2010	
COMP90041 Programming and Software Development	Semester 1, Semester 2	12.50
COMP90038 Algorithms and Complexity	Semester 1, Semester 2	12.50
COMP90007 Internet Technologies	Semester 1, Semester 2	12.50
COMP30017 Operating Systems and Network Services	Semester 1	12.50

GROUP B subjects

B1: Core and Compulsory

Subject	Study Period Commencement:	Credit Points:
COMP90015 Distributed Systems	Semester 1, Semester 2	12.50

B2: Core and Recommended

Subject	Study Period Commencement:	Credit Points:
SWEN90002 Engineering for Internet Applications	Semester 1	12.50
433-654 Sensor Networks and Applications	Not offered 2010	12.50
COMP90020 Distributed Algorithms	Semester 2	12.50
COMP90024 Cluster and Grid Computing	Semester 1	12.50
433-682 Software Agents	Not offered 2010	
COMP90018 Mobile Computing Systems Programming	Semester 2	12.50

B3: Electives

Subject	Study Period Commencement:	Credit Points:
COMP90042 Web Search and Text Analysis	Semester 1	12.50
COMP90010 Web Technologies and Applications	Semester 1	12.50
433-630 Principles of Programming Languages	Not offered 2010	
433-631 Functional Programming	Not offered 2010	
433-633 Constraint Programming	Not offered 2010	
433-632 Logic Programming	Not offered 2010	
COMP90045 Programming Language Implementation	Semester 1	12.50
COMP90046 Constraint Programming	Semester 2	12.50
SWEN90003 IT Project Management	Semester 1	12.50

COMP90016 Computational Genomics	Semester 1	12.50
433-679 Evolutionary and Neural Computation	Not offered 2010	
433-682 Software Agents	Not offered 2010	
COMP90048 Declarative Programming	Semester 2	12.50
COMP90049 Knowledge Technologies	Semester 1	12.50
SWEN90009 Software Requirements Analysis	Semester 2	12.50

GROUP C subjects

Subject	Study Period Commencement:	Credit Points:
COMP90019 Distributed Computing Project	Semester 1, Semester 2	25

Entry Requirements:

The MEDC program offers three different entry levels which are determined by academic background and work experience in computing.

Entry Level 1 (200 points)

A three-year undergraduate degree in Science or Engineering including mathematics and at least one programming subject with a final year grade average of at least 65% and two years of relevant documented work experience
or
A four-year degree in Science or Engineering including mathematics and at least one programming subject with a final year grade average of at least 65%.

Entry Level 2 (150 points)

A three-year undergraduate degree in Computer Science, Computer Engineering, Software Engineering, Information Technology or related discipline with a final year average grade of at least 65% and at least two years of relevant documented work experience
or
A four-year undergraduate degree in Computer Science, Computer Engineering, Software Engineering, Information Technology or related discipline with a final year average grade of at least 65%.

Entry Level 3 (100 points)

A three-year undergraduate degree in Computer Science, Computer Engineering, Software Engineering, Information Technology or related discipline with a final year average grade of at least 65% and studies in parallel and distributed computing related subjects at an advanced level and two years of relevant documented work experience
or
A four-year undergraduate degree in Computer Science, Computer Engineering, Software Engineering, Information Technology or related discipline with a final year average grade of at least 65% and studies in parallel and distributed computing related subjects at an advanced undergraduate level.

English Language Requirements

- TOEFL (577 + TWE 4.5)
- IELTS (6.5 Written 6.0)

Students with less than 6.5 IELTS may gain admission with 6.0 and are required to undertake and pass an English language subject as an additional subject to the degree.

Core Participation Requirements:

For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/

Graduate Attributes:	The Melbourne School of Engineering has mapped the University of Melbourne graduate attributes with Engineers Australia graduate attributes and Melbourne School of Engineering graduate attributes.
Generic Skills:	-