MIT Distributed Computing Specialisation

Year and Campus:	2016
Coordinator:	Associate Professor Egemen Tanin
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Overview:	The Master of Information Technology (MIT) **Distributed Computing** is a **200-point, 150-point and 100-point program** for those interested in a career in technical IT. The key aspects of the course are: # Specialisations in key areas of Information Technology, namely **Distributed Computing**: a focus on the use of industry standard and Internet-based distributed computing technologies in the development of networked enterprise systems and their applications # 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) # A 25-point project, qualifying students to advance to a PhD.
Learning Outcomes:	On completion of this course students should have: # 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
Structure & Available Subjects:	**200-point program.** 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). **200-point program, 200 credit points taken over 24 months full time. This course is available as full or part time.** **150-point program.** Students must complete 150 points, made up of 50 points of Specialisation Subjects and 100 points of Advanced Specialisation Subjects (both based on the specialisation the student is enrolled in). **150-point program, 150 credit points taken over 18 months full time. This course is available as full or part time.** **100-point program.** Students must complete 100 points of Advanced Specialisation Subjects. **100-point program, 100 credit points taken over 12 months full time. This course is available as full or part time.**
Subject Options:	**Foundation**

50 points:

Subject	Study Period Commencement:	Credit Points:
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
INFO90002 Database Systems & Information Modelling	Semester 1, Semester 2	12.50

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Specialisation Subjects - Distributed Computing

12.5 points core

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

Students must take 37.5 points from among the following subjects:

Subject	Study Period Commencement:	Credit Points:
COMP90049 Knowledge Technologies	Semester 1, Semester 2	12.50
COMP90048 Declarative Programming	Semester 2	12.50
COMP90043 Cryptography and Security	Semester 2	12.50
COMP90042 Web Search and Text Analysis	Semester 1	12.50
COMP90051 Statistical Machine Learning	Semester 2	12.50
COMP90053 Program Analysis and Transformation	Not offered 2016	12.50
ISYS90039 Innovation & Entrepreneurship in IT	Not offered 2016	12.50
COMP90045 Programming Language Implementation	Not offered 2016	12.50
COMP90046 Constraint Programming	Not offered 2016	12.5

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	June, Semester 1, Semester 2	12.50
COMP90019 Distributed Computing Project	Semester 1, Semester 2	25

62.5 points elective

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

Subject	Study Period Commencement:	Credit Points:

	ISYS90080 IT Industry Placement	Summer Term, Semester 1, Semester 2	25
	COMP90050 Advanced Database Systems	Semester 1	12.50
	COMP90018 Mobile Computing Systems Programming	Semester 2	12.50
	COMP90017 Sensor Networks and Applications	Not offered 2016	12.50
	ISYS90082 Industry Based IT Experience Project	Summer Term, Semester 1, Semester 2	12.50
	SWEN90002 Engineering for Internet Applications	Not offered 2016	12.50
	COMP90024 Cluster and Cloud Computing	Semester 1	12.50
	COMP90025 Parallel and Multicore Computing	Semester 2	12.50
	MCEN90031 Applied High Performance Computing	Semester 2	12.50
	COMP90020 Distributed Algorithms	Semester 1	12.50
	COMP90057 Advanced Theoretical Computer Science	Semester 2	12.5
	COMP90054 AI Planning for Autonomy	Semester 2	12.5
Notes:	Prior to 2015 INFO90002 Database Systems & Information Modelling was known as SINF90001 Database Systems & Information Modelling. Credit cannot be obtained for both subjects.		
Related Course(s):	Master of Information Technology		