

COMP90024 Cluster and Grid Computing

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 3 hours per week; Non-contact time commitment: 84 hours Total Time Commitment: 120 hours.
Prerequisites:	Knowledge of operating systems and computer networks at undergraduate level, or solid experience in network computing.
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
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/
Coordinator:	Prof Rajkumar Buyya
Contact:	Professor Rajkumar Buyya email: rbuyya@unimelb.edu.au (mailto:adrianp@unimelb.edu.au)
Subject Overview:	Parallel systems: parallel paradigms, parallelisation, resource management and scheduling, message-passing and parameter parallel programming; Cluster computing: cluster architecture, programming with MPI; Grid computing: grids and grid technologies, programming models, data management, grid security, grid software and tools, and applications, including molecular modelling and brain activity analysis.
Objectives:	On completion of this subject students will: <ul style="list-style-type: none"> # Be able to understand emerging distributed technologies # Be able to design large-scale distributed systems # Be able to implement cluster and grid applications
Assessment:	A small research project including a report of not more than 5000 words (10%) Project work (expected to take about 36 hours) during semester (30%) And one written examination (not exceeding three hours) at the end of the semester (60%)
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees

Generic Skills:	On successful completion students should: <ul style="list-style-type: none"># Have improved skills in teamwork and presentation of results# Be able to undertake problem identification, formulation and solution# Have a capacity for independent critical thought, rational inquiry and self-directed learning; and# Have a profound respect for truth and intellectual integrity, and for the ethics of scholarship
Related Course(s):	Bachelor of Computer Science (Honours) Master of Engineering in Distributed Computing Master of Science (Computer Science) Master of Software Systems Engineering Postgraduate Certificate in Engineering
Related Majors/Minors/ Specialisations:	Computer Science Master of Engineering (Software)