Computing and Software Systems

Year and Campus:	2016
Coordinator:	Dr Timothy Miller
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Overview:	The Computing and Software Systems major will focus on providing students with considerable technical expertise in computer science and software engineering, including exposure to a variety of programming paradigms, an understanding of the systematic processes underpinning the software development lifecycle, and an appreciation of advanced topics in computing. Graduates from the Computing and Software Systems major who complete specified course plans will be eligible to receive ACS accreditation. This major will be a natural pathway to the Master of Engineering(Software) and the Master of Science (Computer Science). Graduates with a management orientation will also consider the Master of Information Systems (MIS).
Learning Outcomes:	*Computing and Software Systems Major Graduates should demonstrate (based* on the Seoul Accord for computing): # Problem Analysis: Apply fundamental principles of mathematics, programming, and algorithms to identify and solve complex computing problems; # Knowledge for Solving Computing Problems: Knowledge of computing fundamentals, algorithms, mathematics, and science to abstract and conceptualise computational models within a range of domains; # Design/Development of Solutions: Design and evaluate solutions/systems for complex computing problems against a specified set of needs; # Tools: Create, select, or adapt modern computing tools and techniques to solve complex computing problems, and understand their limitations; # Individual and Team Work: Work effectively as an individual as part of a larger team in multi-disciplinary settings; # Communication: Communicate clearly and effectively both within and outside the computing community about complex computing activities using written and oral communication; # Computing Professionalism and Society: Understand, assess and describe the role of computing systems within society, and how computing systems impact health, safety, legal, and cultural issues; # Ethics: Understand and comply with the relevant ethics, responsibilities, and norms of professional computing practice; # Life-long Learning: Recognise the need to continually develop and improve the above attributes as a computing professional.
Structure & Available Subjects:	Completion of 50 points of study at Level 3. Students who commenced the Bachelor of Science prior to 2015 can complete the Computing and Software Systems major with a different subject combination. These students should refer to the B-SCI Handbook entry of the year they entered the degree.
Subject Options:	All four of:

Subject	Study Period Commencement:	Credit Points:
SWEN30006 Software Modelling and Design	Semester 1, Semester 2	12.50
COMP30023 Computer Systems	Semester 1	12.50
COMP30022 IT Project	Semester 2	12.50
COMP30026 Models of Computation	Semester 2	12.50

Related Course(s):	Bachelor of Science