

Artificial Intelligence MJD-ARIDM

Criterion D: Advanced ICT Units Addressing Complex Computing		
Unit Code & Title	Assessment Item	Complex Computing Criteria met
CITS3001 Advanced Algorithms	Assessment X Requires Advanced conditions XX	Prereq CITS2200+CITS1401
CITS3002 Computer Networks		Prereq CITS2002+CITS1401, Team practical project (40%): Has no obvious solution and requires conceptual thinking and innovative analysis to formulate suitable abstract models (2), and is a high-level problem possibly including many component parts or subproblems (8)
CITS3403 Agile Web Development	Build and deploy a data oriented web application (30%) Web application project has a high number of interdependent parts (8), and requires a deep level of knowledge (3)	Prereq CITS1401 (1402 recommended)
CITS3200 Professional Computing	Prereq (CITS2200 or CITS2402)+CITS1401 and 84 points, Team project: Involves external stakeholders (6) needs requirements identification (9) and the solution requires the use of in-depth computing, domain knowledge and an analytical approach (3) and comprises many component parts (8)	
CITS5017 Deep Learning	Practical projects (35%) hands on experience of advanced topics in Generative Adversarial Networks (GANs), variational autoencoders, deep reinforcement learning,	Prereqs CITS5508

Criterion D: Advanced ICT Units Addressing Complex Computing		
Unit Code & Title	Assessment Item	Complex Computing Criteria met
	policy gradient methods, and Adversarial Machine Learning (1,3,8)	
CITS5508 Machine learning	Requires students to research (2,3) and implement novel solutions (5,9), and validate the solution (4,8)	Prereqs CITS1401 (TBA and points or +1prog): Assessed laboratory exercises (40%) to build and train an ML system using a real-world dataset, selecting from a range of technologies

Computer Science Major MJD-CMPSC

Criterion D: Advanced ICT Units Addressing Complex Computing		
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CITS3001 Advanced Algorithms	Assessment X Requires Advanced conditions XX	Prereq CITS2200+CITS1401
CITS3002 Computer Networks		Prereq CITS2002+CITS1401, Team practical project (40%): Has no obvious solution and requires conceptual thinking and innovative analysis to formulate suitable abstract models (2), and is a high-level problem possibly including many component parts or subproblems (8)
CITS3403 Agile Web Development	Build and deploy a data oriented web application (30%) Web application project has a high number of interdependent parts (8), and requires a deep level of knowledge (3)	Prereq CITS1401 (1402 recommended)

Criterion D: Advanced ICT Units Addressing Complex Computing		
Unit Code & Title	Assessment Item	Complex Computing Criteria met
CITS3200 Professional Computing	Prereq (CITS2200 or CITS2402)+CITS1401 and 84 points, Team project: Involves external stakeholders (6) needs requirements identification (9) and the solution requires the use of in-depth computing, domain knowledge and an analytical approach (3) and comprises many component parts (8)	

Computing and Data Science MJD-CDSDM

Criterion D: Advanced ICT Units Addressing Complex Computing		
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CITS3001 Advanced Algorithms	Assessment X Requires Advanced conditions XX	Prereq CITS2200+CITS1401
CITS3002 Computer Networks		Prereq CITS2002+CITS1401, Team practical project (40%): Has no obvious solution and requires conceptual thinking and innovative analysis to formulate suitable abstract models (2), and is a high-level problem possibly including many component parts or subproblems (8)
CITS3403 Agile Web Development	Build and deploy a data oriented web application (30%) Web application project has a high number of interdependent parts (8), and requires a deep level of knowledge (3)	Prereq CITS1401 (1402 recommended)

Criterion D: Advanced ICT Units Addressing Complex Computing		
Unit Code & Title	Assessment Item	Complex Computing Criteria met
CITS3200 Professional Computing	Prereq (CITS2200 or CITS2402)+CITS1401 and 84 points, Team project: Involves external stakeholders (6) needs requirements identification (9) and the solution requires the use of in-depth computing, domain knowledge and an analytical approach (3) and comprises many component parts (8)	
CITS5504 Data Warehousing	(SFIA DBDS). The project requires in-depth of knowledge in data warehousing and data mining (3), has no obvious solution (2), need to make decisions on the right compromise between concept hierarchies and warehousing query efficiency (1)	Prereqs CITS1401+CITS1402: Project to build a data warehouse from real-world datasets, and carry out data mining activities including association rule mining, classification and clustering
CITS5503 Cloud Computing	Lab exercises (20%). Advanced assessment criteria TBA	Prereq CITS1401 (1402 recommended)
CITS5508 Machine learning	Requires students to research (2,3) and implement novel solutions (5,9), and validate the solution (4,8)	Prereqs CITS1401 (TBA and points or +1prog): Assessed laboratory exercises (40%) to build and train an ML system using a real-world dataset, selecting from a range of technologies

International Cybersecurity MJD-ICYDM

Criterion D: Advanced ICT Units Addressing Complex Computing		
Unit Code & Title	Assessment Item	Complex Computing Criteria met
CITS3001 Advanced Algorithms	Assessment X Requires Advanced conditions XX	Prereq CITS2200+CITS1401
CITS3002 Computer Networks		Prereq CITS2002+CITS1401, Team practical project (40%): Has no obvious solution and requires conceptual thinking and innovative analysis to formulate suitable abstract models (2), and is a high-level problem possibly including many component parts or subproblems (8)
CITS3403 Agile Web Development	Build and deploy a data oriented web application (30%) Web application project has a high number of interdependent parts (8), and requires a deep level of knowledge (3)	Prereq CITS1401 (1402 recommended)
CITS3200 Professional Computing	Prereq (CITS2200 or CITS2402)+CITS1401 and 84 points, Team project: Involves external stakeholders (6) needs requirements identification (9) and the solution requires the use of in-depth computing, domain knowledge and an analytical approach (3) and comprises many component parts (8)	
CITS5503 Cloud Computing	Lab exercises (20%). Advanced assessment criteria TBA	Prereq CITS1401 (1402 recommended)
CITS5501 Software Testing and Quality Assurance	Prereqs: (CITS20025 or CITS2005)+CITS1401: Software testing project (35%) Students assess a software system/project for threats to project quality (2, 5) and design comprehensive tests to mitigate threats at the unit, system and user level (1, 7)	

Criterion D: Advanced ICT Units Addressing Complex Computing		
Unit Code & Title	Assessment Item	Complex Computing Criteria met
CITS5507 High Performance Computing	Project (X% TBA) Design a parallel implementation of a complex algorithm using an appropriate framework (2,3,8) and formulate and implement HPC systems (3,4)	Prereqs 12 pts prog

Master of Data Science TBA

Criterion D: Advanced ICT Units Addressing Complex Computing		
Unit Code & Title	Assessment Item	Complex Computing Criteria met
CITS5504 Data Warehousing	(SFIA DBDS). The project requires in-depth of knowledge in data warehousing and data mining (3), has no obvious solution (2), need to make decisions on the right compromise between concept hierarchies and warehousing query efficiency (1)	Prereqs CITS1401+CITS1402: Project to build a data warehouse from real-world datasets, and carry out data mining activities including association rule mining, classification and clustering
CITS5508 Machine learning	Requires students to research (2,3) and implement novel solutions (5,9), and validate the solution (4,8)	Prereqs CITS1401 (TBA and points or +1prog): Assessed laboratory exercises (40%) to build and train an ML system using a real-world dataset, selecting from a range of technologies

Master of Information Technology (Applied Computing) (2025) 62510 SP-XXXX

Criterion D: Advanced ICT Units Addressing Complex Computing		
Unit Code & Title	Assessment Item	Complex Computing Criteria met
CITS5504 Data Warehousing	(SFIA DBDS). The project requires in-depth of knowledge in data warehousing and data mining (3), has no obvious solution (2), need to make decisions on the right compromise between concept hierarchies and warehousing query efficiency (1)	Prereqs CITS1401+CITS1402: Project to build a data warehouse from real-world datasets, and carry out data mining activities including association rule mining, classification and clustering
CITS5503 Cloud Computing	Lab exercises (20%). Advanced assessment criteria TBA	Prereq CITS1401 (1402 recommended)
CITS5505 Agile Web Development	Web application project has a high number of interdependent parts (8), and requires a deep level of knowledge (3)	Prereq CITS1401 (1402 recommended)
CITS5017 Deep Learning	Practical projects (35%) hands on experience of advanced topics in Generative Adversarial Networks (GANs), variational autoencoders, deep reinforcement learning, policy gradient methods, and Adversarial Machine Learning (1,3,8)	Prereqs CITS5508
CITS5206 IT Capstone Project	Prereq CITS5505 and 48 points level 4/5, The group project involves external stakeholders (6) and requirements identification (9) and the solution requires the use of in-depth computing, domain knowledge and an analytical approach (3) and comprises many component parts (8)	
CITS5501 Software Testing and Quality Assurance	Prereqs: (CITS20025 or CITS2005)+CITS1401: Software testing project (35%) Students assess a software system/project for threats to project quality (2, 5) and design comprehensive tests to mitigate threats at the unit, system and user level (1, 7)	
CITS5506 The Internet of Things	Group design and build project (40%) Students research, plan (2,3), design and implement (5,9) an IoT based application using distributed small devices in a ubiquitous computing environment	Prereqs CITS1401

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CITS5507 High Performance Computing	Project (X% TBA) Design a parallel implementation of a complex algorithm using an appropriate framework (2,3,8) and formulate and implement HPC systems (3,4)	Prereqs 12 pts prog
CITS5508 Machine learning	Requires students to research (2,3) and implement novel solutions (5,9), and validate the solution (4,8)	Prereqs CITS1401 (TBA and points or +1prog): Assessed laboratory exercises (40%) to build and train an ML system using a real-world dataset, selecting from a range of technologies

Master of Information Technology (Artificial Intelligence) (2025) 62510 SP-ARTIN

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CITS5505 Agile Web Development	Web application project has a high number of interdependent parts (8), and requires a deep level of knowledge (3)	Prereq CITS1401 (1402 recommended)
CITS5017 Deep Learning	Practical projects (35%) hands on experience of advanced topics in Generative Adversarial Networks (GANs), variational autoencoders, deep reinforcement learning, policy gradient methods, and Adversarial Machine Learning (1,3,8)	Prereqs CITS5508
CITS5206 IT Capstone Project	Prereq CITS5505 and 48 points level 4/5, The group project involves external stakeholders (6) and requirements identification (9) and the solution requires the use of in-depth computing, domain	

Criterion D: Advanced ICT Units Addressing Complex Computing		
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	knowledge and an analytical approach (3) and comprises many component parts (8)	
CITS5508 Machine learning	Requires students to research (2,3) and implement novel solutions (5,9), and validate the solution (4,8)	Prereqs CITS1401 (TBA and points or +1prog): Assessed laboratory exercises (40%) to build and train an ML system using a real-world dataset, selecting from a range of technologies

Master of Information Technology (Software Systems) (2025) 62510 SP-SOFSY

Criterion D: Advanced ICT Units Addressing Complex Computing		
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CITS5503 Cloud Computing	Lab exercises (20%). Advanced assessment criteria TBA	Prereq CITS1401 (1402 recommended)
CITS5505 Agile Web Development	Web application project has a high number of interdependent parts (8), and requires a deep level of knowledge (3)	Prereq CITS1401 (1402 recommended)
CITS5206 IT Capstone Project	Prereq CITS5505 and 48 points level 4/5, The group project involves external stakeholders (6) and requirements identification (9) and the solution requires the use of in-depth computing, domain knowledge and an analytical approach (3) and comprises many component parts (8)	

Criterion D: Advanced ICT Units Addressing Complex Computing		
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CITS5501 Software Testing and Quality Assurance	Prereqs: (CITS20025 or CITS2005)+CITS1401: Software testing project (35%) Students assess a software system/project for threats to project quality (2, 5) and design comprehensive tests to mitigate threats at the unit, system and user level (1, 7)	
CITS5506 The Internet of Things	Group design and build project (40%) Students research, plan (2,3), design and implement (5,9) an IoT based application using distributed small devices in a ubiquitous computing environment	Prereqs CITS1401
CITS5507 High Performance Computing	Project (X% TBA) Design a parallel implementation of a complex algorithm using an appropriate framework (2,3,8) and formulate and implement HPC systems (3,4)	Prereqs 12 pts prog

Quantum Computing MJD-QCOMP

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CITS3002 Computer Networks		Prereq CITS2002+CITS1401, Team practical project (40%): Has no obvious solution and requires conceptual thinking and innovative analysis to formulate suitable abstract models (2), and is a high-level problem possibly including many component parts or subproblems (8)

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CITS3200 Professional Computing	Prereq (CITS2200 or CITS2402)+CITS1401 and 84 points, Team project: Involves external stakeholders (6) needs requirements identification (9) and the solution requires the use of in-depth computing, domain knowledge and an analytical approach (3) and comprises many component parts (8)	
CITS5507 High Performance Computing	Project (X% TBA) Design a parallel implementation of a complex algorithm using an appropriate framework (2,3,8) and formulate and implement HPC systems (3,4)	Prereqs 12 pts prog
CITS5508 Machine learning	Requires students to research (2,3) and implement novel solutions (5,9), and validate the solution (4,8)	Prereqs CITS1401 (TBA and points or +1prog): Assessed laboratory exercises (40%) to build and train an ML system using a real-world dataset, selecting from a range of technologies