### **COMPUTER SCIENCE (M.S.)**

### Thematic Clusters Software thematic cluster courses

Courses in this group have the CSSO attribute.

Course	Title	Credits
CISC 5030	Internet and Web Programming	3
CISC 5040	JavaScript	3
CISC 5350	Financial Programming	3
CISC 5410	Mobile Device Programming	3
CISC 5520	Programming Languages	3
CISC 5850	The Social Network	3
CISC 6100	Software Engineering	3
CISC 6300	Computational Finance	3
CISC 6350	Advanced Financial Programming	3
CISC 6352	Advanced Computational Finance	3
CISC 6375	Object Software Design	3
CISC 6400	Robotics and Animation	3
CISC 6795	Java Programming	3
CISC 6875	Parallel Computations	3
CISC 6890	Advanced Computer Algorithms	3

## Networks and Systems thematic cluster courses

Courses in this group have the CSNS attribute.

Course	Title	Credits
CISC 5030	Internet and Web Programming	3
CISC 5410	Mobile Device Programming	3
CISC 5550	Cloud Computing	3
CISC 5597	Distributed Systems	3
CISC 5640	Nosql Database Systems	3
CISC 5725	Network Administration	3
CISC 5728	Security of e-Systems and Networks	3
CISC 6630	Wireless Security	3
CISC 6680	Intrusion Detection and Network Forensics	3
CISC 6725	Computer Networks	3
CISC 6735	Wireless Networks	3
CISC 6750	IOT Forensics and Security	3
CISC 6880	Blockchain Technology	3
CISC 6935	Advanced Distributed Systems	3

# Artificial Intelligence thematic cluster courses

Courses in this group have the CSAI attribute.

Course	Title	Credits
CISC 5109	Big Data Analytics	3
CISC 5700	Cognitive Computing	3
CISC 5800	Machine Learning	3

CISC 5900	Information Fusion	3
CISC 6000	Deep Learning	3
CISC 6210	Natural Language Processing	3
CISC 6400	Robotics and Animation	3
CISC 6525	Artificial Intelligence	3
CISC 6550	Systems Neuroscience	3

#### Data Analytics thematic cluster courses

Courses in this group have the CSDA attribute.

Course	Title	Credits
CISC 5109	Big Data Analytics	3
CISC 5352	Machine Learning in Finance	3
CISC 5450	Mathematics for Data Science	3
CISC 5640	Nosql Database Systems	3
CISC 5700	Cognitive Computing	3
CISC 5790	Data Mining	3
CISC 5800	Machine Learning	3
CISC 5850	The Social Network	3
CISC 5900	Information Fusion	3
CISC 5950	Big Data Computing	3
CISC 6000	Deep Learning	3
CISC 6500	Bioinformatics	3
CISC 6550	Systems Neuroscience	3
CISC 6625	Educational Data Mining and Learning Analytics	3
CISC 6700	Medical Informatics	3
CISC 6745	Data Visualization	3

#### Cybersecurity thematic cluster courses

Courses in this group have the CSCY attribute.

Course	Title	Credits
CISC 5009	Network Essentials	3
CISC 5650	Cybersecurity Essentials	3
CISC 5660	Data Science for Cybersecurity	3
CISC 5725	Network Administration	3
CISC 5728	Security of e-Systems and Networks	3
CISC 5750	Information Security and Ethics	3
CISC 5770	Intelligence in Cybersecurity	3
CISC 6070	Red Teaming	3
CISC 6600	Cloud Computing Security	3
CISC 6630	Wireless Security	3
CISC 6640	Privacy and Security in Big Data	3
CISC 6650	Forensic Computing	3
CISC 6660	Applied Cryptography	3
CISC 6670	Artificial Intelligence for Cybersecurity	3
CISC 6680	Intrusion Detection and Network Forensics	3
CISC 6690	Cybersecurity in Business	3
CISC 6750	IOT Forensics and Security	3
CISC 6800	Malware Analytics and Software Security	3
CISC 6920	Incident Response and Risk Management	3
CISC 7050	Penetration Testing	3