APPLIED COMPUTER SCIENCE (MS)

Program of Study

The Master of Science in Applied Computer Science program requires students to complete 30 hours of computer science coursework and an exit course, CPSC 6000 Graduate Exit Examination. The students must select one of the following three concentrations:

1. Software Development
2. AI and Data Science
3. General

Software Development

Code	Title	Credit Hours
Area 1 Program Core		
CPSC 6109	Algorithms Analysis and Design	3
CPSC 6119	Object-Oriented Development	3
CYBR 6126	Introduction to Cybersecurity	3
CPSC 6185	Intelligent Systems	3
Area 1 Total		12
Area 2 Program Concentration		
CPSC 6127	Contemporary Issues in Database Management Systems	3
CPSC 6175	Web Engineering and Technologies	3
CPSC 6177	Software Design and Development	3
CPSC 6179	Software Project Planning and Management	3
Area 2 Total		12
Area 3: Program Electives		**6**
Select either of the following options:		
6 credits of 6000-level CPSC or CYBR courses (including an internship) [1]		
6 credits of Thesis (CPSC 6985, and CPSC 6986)		
Area 4: Graduate Exit Examination		
CPSC 6000	Graduate Exit Examination [2]	0
Total Credit Hours		**30**

[1] With the exception of CPSC 6105 Fundamental Principles of Computer Science, CPSC 6103 Computer Science Principles for Teachers, and CPSC 6106 Fundamentals of Computer Programming and Data Structures.

[2] Graduating students must successfully complete CPSC 6000 Graduate Exit Examination which will require the student to complete an exit survey, an exit interview, and a comprehensive exam.

AI and Data Science

Code	Title	Credit Hours
Area 1 Program Core		
CPSC 6109	Algorithms Analysis and Design	3
CPSC 6119	Object-Oriented Development	3
CYBR 6126	Introduction to Cybersecurity	3
CPSC 6185	Intelligent Systems	3
Area 1 Total		12
Area 2 Program Concentration		
CPSC 6114	Fundamentals of Machine Learning	3
CPSC 6121	Data Science and Big Data Analytics	3
CPSC 6124	Advanced Machine Learning	3
CPSC 6147	Data Visualization and Presentation	3
Area 2 Total		12
Area 3: Program Electives		
Select either of the following options:		6
6 credits of 6000-level CPSC or CYBR courses (including an internship)		
6 credits of Thesis (CPSC 6985, and CPSC 6986)		
Area 4: Graduate Exit Examination		
CPSC 6000	Graduate Exit Examination [2]	0
Total Credit Hours		**30**

[1] With the exception of CPSC 6105 Fundamental Principles of Computer Science, CPSC 6103 Computer Science Principles for Teachers, and CPSC 6106 Fundamentals of Computer Programming and Data Structures. Recommended elective: CPSC 6127 Contemporary Issues in Database Management Systems.

[2] Graduating students must successfully complete CPSC 6000 Graduate Exit Examination which will require the student to complete an exit survey, an exit interview, and a comprehensive exam.

General

Code	Title	Credit Hours
Area 1 Program Core		
CPSC 6109	Algorithms Analysis and Design	3
CPSC 6119	Object-Oriented Development	3
CYBR 6126	Introduction to Cybersecurity	3
CPSC 6185	Intelligent Systems	3
Area 1 Total		12
Area 2 Program Concentration		
CPSC 6125	Operating Systems Design and Implementation	3
CPSC 6127	Contemporary Issues in Database Management Systems	3
CPSC 6157	Network and Cloud Management	3
CPSC 6177	Software Design and Development	3
Area 2 Total		12
Area 3: Program Electives		**6**
Select either of the following options:		
6 credits of 6000-level CPSC or CYBR courses (including an internship) [1]		
6 credits of Thesis (CPSC 6985, and CPSC 6986)		
Area 4: Graduate Exit Examination		
CPSC 6000	Graduate Exit Examination [2]	0
Total Credit Hours		**30**

[1] With the exception of CPSC 6105 Fundamental Principles of Computer Science, CPSC 6103 Computer Science Principles for Teachers,

and CPSC 6106 Fundamentals of Computer Programming and Data Structures.

[2] Graduating students must successfully complete CPSC 6000 Graduate Exit Examination which will require the student to complete an exit survey, an exit interview, and a comprehensive exam.