M.S. in Computer Science

The Master of Science in Computer Science prepares students to address challenges in developing algorithms and data structures as well as maintaining secure operations and cybersecurity policy. As part of the College of Engineering's Department of Electrical Engineering and Computer Science (EECS), this program is guided by our EECS Industry Advisory Board, ensuring curriculum and research activities are aligned with what's going on in the software industry.

The **Daytona Beach Campus** is home to the Cybersecurity Engineering Laboratory (CybEL), a Digital Systems Laboratory, a Software Development Laboratory and more. These labs provide students with hands-on experience in systems design for cybersecurity attacks and corresponding mitigations, as well as software development and programming. In this graduate Computer Science degree, students can select one of two areas of concentration: Computer Science or Cybersecurity Engineering. Students also have the option of choosing to pursue a thesis or a graduate research project.

Program-Level Student Learning Outcomes

Students will:

- Apply advanced topics in cybersecurity engineering and/or computer science.
- Apply fundamental computer science professional practices to analyze, design, and implement security-critical systems.
- Communicate effectively on issues pertaining to computer science and/or cybersecurity.

Daytona Beach Program Requirements

Core Requirements	9
Area of Concentration	9
Option	12
Total Credits	**30**

Core Requirements

CPSC 529	Computer Security	3
SFTW 530	Software Requirements Engineering	3
SYSE 505	System Safety and Certification	3
Total Credits		**9**

Area of Concentration

Computer Science

CPSC 555	Artificial Intelligence	3
CPSC 600	Advanced Algorithms	3
DSCI 615	Data Modeling	3
Total Credits		**9**

Cybersecurity Engineering

CPSC 527	System Exploitation and Penetration Testing	3
CPSC 532	Software Security Assessment	3
CPSC 538	Applied Cryptography	3
Total Credits		**9**

Option

Option I: Capstone

CPSC 690	Graduate Research Project	3
Electives (500-600 level)		9
Electives are any 500-600 level course in CESC, CPSC, SFTW, SYSE, or with approval from Program Coordinator courses from DSCI or HFCT.		
Total Credits		**12**

Option II: Thesis

CPSC 700	Graduate Thesis	6
Electives (500-600 level)		6
Electives are any 500-600 level course in CESC, CPSC, SFTW, SYSE, or with approval from Program Coordinator courses from DSCI or HFCT.		
Total Credits		**12**

Suggested Plans of Study

Computer Science - Capstone Option

Year One

Requirements	Credits
CPSC 555 - Artificial Intelligence	3
SFTW 530 - Software Requirements Engineering	3
CPSC 529 - Computer Security	3
Semester Hours	**9**

Requirements	Credits
SYSE 505 - System Safety and Certification	3
DSCI 615 - Data Modeling	3
CPSC 600 - Advanced Algorithms	3
Semester Hours	**9**

Total Credits

Total Hours for All Requirements: 18

Year Two

Requirements	Credits
Specified Elective*	3
Specified Elective*	3
Semester Hours	**6**

Requirements	Credits
Specified Elective*	3
CPSC 690 - Graduate Research Project	3
Semester Hours	**6**

Total Credits

Total Hours for All Requirements: 12

* Electives: Any course in CESC, CPSC, SFTW, SYSE, or with approval from Program Coordinator courses from DSCI or HFCT.

Computer Science - Thesis Option

Year One

Requirements	Credits
CPSC 555 - Artificial Intelligence	3
SFTW 530 - Software Requirements Engineering	3
CPSC 529 - Computer Security	3
Semester Hours	**9**

Requirements	Credits
SYSE 505 - System Safety and Certification	3
DSCI 615 - Data Modeling	3
CPSC 600 - Advanced Algorithms	3
Semester Hours	**9**

Total Credits

Total Hours for All Requirements: 18

Year Two

Requirements	Credits
CPSC 700 - Graduate Thesis	3
Specified Elective*	3
Semester Hours	**6**

Requirements	Credits
CPSC 700 - Graduate Thesis	3
Specified Elective*	3
Semester Hours	**6**

Total Credits

Total Hours for All Requirements: 12

* Electives: Any course in CESC, CPSC, SFTW, SYSE, or with approval from Program Coordinator courses from DSCI or HFCT.

Cybersecurity Engineering - Capstone Option

Year One

Requirements	Credits
CPSC 538 - Applied Cryptography	3
SFTW 530 - Software Requirements Engineering	3
CPSC 529 - Computer Security	3
Semester Hours	**9**

Requirements	Credits
SYSE 505 - System Safety and Certification	3
CPSC 527 - System Exploitation and Penetration Testing	3
CPSC 532 - Software Security Assessment	3
Semester Hours	**9**

Total Credits

Total Hours for All Requirements: 18

Year Two

Requirements	Credits
Specified Elective*	3
Specified Elective*	3
Semester Hours	**6**

Requirements	Credits
Specified Elective*	3
CPSC 690 - Graduate Research Project	3
Semester Hours	**6**

Total Credits

Total Hours for All Requirements: 12

* Electives: Any course in CESC, CPSC, SFTW, SYSE, or with approval from Program Coordinator courses from DSCI or HFCT.

Cybersecurity Engineering - Thesis Option

Year One

Requirements	Credits
CPSC 538 - Applied Cryptography	3
SFTW 530 - Software Requirements Engineering	3
CPSC 529 - Computer Security	3
Semester Hours	**9**

Requirements	Credits
SYSE 505 - System Safety and Certification	3
CPSC 527 - System Exploitation and Penetration Testing	3
CPSC 532 - Software Security Assessment	3
Semester Hours	**9**

Total Credits

Total Hours for All Requirements: 18

Year Two

Requirements	Credits
CPSC 700 - Graduate Thesis	3
Specified Elective*	3
Semester Hours	**6**

Requirements	Credits
CPSC 700 - Graduate Thesis	3
Specified Elective*	3
Semester Hours	**6**

Total Credits

Total Hours for All Requirements: 12

* Electives: Any course in CESC, CPSC, SFTW, SYSE, or with approval from Program Coordinator courses from DSCI or HFCT.