2018

Master of Science in Computer Science

Nova Southeastern University

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M.S. in Computer Science

The Computer Science program at the College of Engineering and Computing (CEC) is designed to give students a thorough knowledge of the field and to provide an enduring foundation for future professional growth. The program blends theory and practice into a learning experience that develops skills applicable to complex real-world problems.

Students take five core courses covering the theory of programming languages, the design and analysis of algorithms, operating systems, database management systems, and software engineering. Three or more courses are then taken in one of the following concentrations of the student’s choosing: software engineering, computer systems, data science, information assurance and cybersecurity, and real-world computing. Students taking the no concentration option will need to take five elective courses. For students taking a concentration option, remaining courses are electives drawn from computer science course offerings.

Admissions Requirements

- online application (apply.nova.edu)
- $50 application fee (nonrefundable)
- an earned bachelor’s degree with a GPA of at least 2.5 from a regionally accredited institution and with an appropriate major
- sealed official transcripts from all institutions attended
- a résumé

International students should visit cec.nova.edu/admissions for additional requirements.

Program Features

- 10 courses | 30 credit hours
- Concentrations include software engineering, data science, computer systems, information assurance and cybersecurity, and real-world computing.
- The security concentration is recognized by the U.S. National Security Agency and the Department of Homeland Security.
- Students receive quality instruction from CEC faculty members—all of whom hold Ph.D. degrees and are experts in their respective fields of research/application.

Program Formats

- Fort Lauderdale/Davie Campus
- Online

Program Highlights

- Full-time students can earn the degree in 12–14 months.
- Working professionals can earn the degree in 16–24 months.

Career Opportunities

- artificial intelligence engineer
- data scientist
- software engineer
- systems software developer
- user interface designer/developer

Learn More

cec.nova.edu
PREREQUISITE COURSES
Applicants who do not have adequate academic backgrounds may be required to take one or more of the following 500-level graduate courses during the first two terms of the program. (Courses are 3 credits each.)

- CISC 500 Java Programming Language
- CISC 501 Assembly Language and Architecture
- CISC 502 Mathematics in Computing
- CISC 503 Data Structures and Algorithms

The Master of Science in Computer Science has five concentration options, along with a no concentration option. Students must complete 30 credits. Core courses, concentrations, and electives are listed below. Students who opt to do a thesis will replace two of the elective courses with these credits. Plans for the thesis option must be made with and approved by the program office.

DEGREE PROGRAM COURSES

Core Courses (five courses, 3 credits each)
- CISC 610 Programming Languages
- CISC 615 Design and Analysis of Algorithms
- CISC 640 Operating Systems
- CISC 660 Database Management Systems
- CISC 680 Software Engineering

Software Engineering Concentration (three courses, 3 credits each)
- CISC 682 Software Requirements Engineering
- CISC 684 Software Testing and Verification
- CISC 683 Object-Oriented Design

OR
- CISC 685 Interaction Design

Computer Systems Concentration (three courses, 3 credits each)
- CISC 647 Computer Architecture
- CISC 650 Computer Networks
- CISC 665 Distributed Systems

Data Science Concentration (four courses, 3 credits each)
- CISC 662 Data Mining and Knowledge Discovery in Databases
- CISC 664 Information Retrieval and Web Search Engine Technology
- CISC 672 Data Visualization
- MMIS 671 Fundamentals of Analytics and Business Intelligence

Information Assurance and Cybersecurity Concentration (four courses, 3 credits each)
- ISEC 600 Secure Computer Systems
- ISEC 615 Fundamentals of Security Technologies
- ISEC 620 Applied Cryptography
- ISEC 640 Database Security
- ISEC 650 Computer and Network Forensics
- ISEC 660 Advanced Network Security

Real-World Computing Concentration (four courses, 3 credits each)
- CISC 665 Distributed Systems
- CISC 670 Artificial Intelligence
- CISC 681 Computer Graphics
- CISC 668 Mobile Application Development

No Concentration Option (five courses, 3 credits each)
Select a mix of courses from Concentrations and/or Electives.

Electives (3 credits each)
Any course in the concentrations aforementioned is also an elective course in the program. Additionally, any offerings of CISC 631—Theory of Computation or CISC 690—Special Topics in Computer Science, will count as electives.

This publication should not be viewed as a substitution for official program requirements and outcomes. A student is responsible for meeting the curriculum and program requirements in the Graduate Student Catalog that are in effect when the student enters the program.

Nova Southeastern University admits students of any race, color, sexual orientation, gender, gender identity, military service, veteran status, and national or ethnic origin. Nova Southeastern University is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate’s, baccalaureate, master’s, educational specialist, doctorate, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Nova Southeastern University.