Computer Science

MASTER OF SCIENCE

NOVA SOUTHEASTERN
UNIVERSITY | **NSU** Florida

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

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.

Curriculum | Total Credits: 30

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)

Students select four of the six listed courses.

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.

Admissions

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