

# Computer Science

## MASTER OF SCIENCE



### Program Features

- 12 courses | 36 credit hours
- Concentrations include theory, software engineering, data science, computer systems, security, 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 months.
- Working professionals can earn the degree in 16–24 months.
- Fall and winter terms are 16 weeks.
- The summer term is 14 weeks.

### Career Opportunities

- artificial intelligence engineer
- computer programmer
- data scientist
- object-oriented/GUI designer
- systems software developer

**Learn More**  
[cec.nova.edu](http://cec.nova.edu)

## M.S. in Computer Science

The Computer Science (CISC) 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 four core courses covering the theory of programming languages, the design and analysis of algorithms, operating systems, and software engineering. Three or more courses are then taken in one of the following six concentrations of the student's choosing: theory, software engineering, computer systems, data science, security, and real-world computing. Remaining courses are electives drawn from computer science course offerings.

### Admissions Requirements

- ✓ completed online application for admission ([apply.nova.edu](http://apply.nova.edu))
- ✓ nonrefundable, \$50 application fee
- ✓ conferred bachelor's degree with an appropriate major from a regionally accredited institution
- ✓ sealed official transcripts from all prior institutions
- ✓ overall undergraduate GPA of 2.5 or greater on a 4.0 scale (Applicant must have earned a GPA of at least 3.0 in his or her major.)
- ✓ résumé providing a short account of the applicant's academic background and professional experience

The college may require additional documentation to support the application. An applicant may submit standardized test scores or any additional documentation to strengthen his or her application.

International students should visit [cec.nova.edu/admissions/apply\\_masters](http://cec.nova.edu/admissions/apply_masters) for additional requirements.



# Computer Science

MASTER OF SCIENCE

**Curriculum** | Total Credits: 36

## 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.)

MSIT 500	Foundations of Systems
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 (CISC) has six concentration options as described following. Students who opt to do a thesis will replace two of the five elective courses with these credits. Plans for the thesis option must be made in conjunction with, and be approved by, the program office.

## DEGREE PROGRAM COURSES

### Core Courses (four courses; 3 credits each)

CISC 610	Programming Languages
CISC 615	Design and Analysis of Algorithms
CISC 640	Operating Systems
CISC 680	Software Engineering

### Theory Concentration (three courses; 3 credits each)

CISC 630	Compilers
CISC 631	Theory of Computation
ISEC 620	Applied Cryptography

### 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
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### Computer Systems Concentration (three courses; 3 credits each)

CISC 647	Computer Architecture
CISC 650	Computer Networks
CISC 665	Distributed Systems

### Data Science Concentration (three courses; 3 credits each)

Effective Winter 2017—Students select three of the five listed courses.

CISC 660	Database Management Systems
CISC 662	Data Mining and Knowledge Discovery in Databases
MMIS 671	Fundamentals of Analytics and Business Intelligence
CISC 664	Information Retrieval and Web Search Engine Technology
CISC 672	Data Visualization

### Security Concentration (three courses; 3 credits each)

*Students select three of the five listed courses.*

ISEC 600	Secure Computer Systems
ISEC 620	Applied Cryptography
ISEC 640	Database Security
ISEC 650	Computer and Network Forensics
ISEC 660	Advanced Network Security

### Real-World Computing Concentration (three courses; 3 credits each)

CISC 665	Distributed Systems
CISC 670	Artificial Intelligence
CISC 681	Computer Graphics

### Electives (five courses; 3 credits each)

Any course in the concentrations aforementioned is also an elective course in the program. Additionally, any offerings of 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, 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. 08-029-16\_01MCS

## Admissions

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