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, database, security, and real-world computing. Remaining courses are electives drawn from computer science course offerings.

Notably, the security concentration is recognized by the United States National Security Agency and the Department of Homeland Security.

Program Faculty Member

Peixiang Liu obtained his Ph.D. in 2007 from Imperial College London. His research interests include computer networks, routing protocol, QoS routing, database systems, genetic algorithms, machine learning, and performance evaluation.

Liu previously served as a software engineer at the New Sanhui Software Company in China and co-designed a geographical information database engine. “Research is exciting, since it explores the unknown world and increases the stock of human knowledge.”

Program Alumnus

As a senior software engineer at Citrix Systems, Jacob Maynard (M.S. Computer Science, 2011) is establishing the future of mobile workplaces by delivering and maintaining software that allows employees to work from anywhere using any device.

Maynard credits his ability to successfully balance full-time work, school, and family to the flexible program format at CEC. Since earning his M.S. degree in Computer Science, he has received two promotions. “My application to be a senior software engineer was contingent on completing my degree.”

Learn More

cec.nova.edu
Computer Science
MASTER OF SCIENCE

Curriculum 2015–2016 | Total Credits: 36

**PREREQUISITE COURSES**
Appslicants 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
- CISC 685 Interaction Design

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

**Database Concentration** (three courses; 3 credits each)
- CISC 660 Database Management Systems
- CISC 652 Data Mining and Knowledge Discovery in Databases
- CISC 665 Distributed Systems

**Security Concentration** (three courses; 3 credits each)
- 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** (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.

Admissions
3301 College Avenue
Fort Lauderdale, Florida 33314-7796
cec.nova.edu/admissions
(954) 262-2005 • 800-986-2247, ext. 22005
cecinfo@nova.edu