Program Overview

The Master of Science in Computer Science is a 33-credit program created for students who wish to enhance their professional qualifications and stature through graduate study in computer science. Students who graduate from the program will acquire knowledge and develop problem-solving skills that prepare them for a variety of scientific and technical positions in the area of computer application development. The program blends a dynamic, responsive curriculum with a part-time, evening format convenient for working professionals.

Entrance Requirements

Application
Complete and submit the graduate school application available at www.hood.edu/graduate The $35 application fee will be waived for online applications.

Grade Point Average
A minimum 2.75 undergraduate GPA is required for admission to the graduate school and to the Master of Science in Computer Science program.

Requirements
Request one copy of official transcripts from each institution of higher education attended and a résumé of work experience. All documents should be sent directly to the graduate school.

An applicant to the graduate program in computer science is expected to have a strong background in computer science and mathematics.

Five foundation courses introduce the student to algorithms and programming, computer organization and design, advanced data structures and discrete mathematics. Students holding a baccalaureate degree in computer science will normally be exempted from all foundation courses. Other students may, upon review by the department, be exempted from some or all of the foundation courses. The program director determines the required foundation courses or exemptions based on a thorough evaluation of transcripts and other supporting documents. The objective is to ensure the student is well prepared and ready to succeed in the program.

About The Program

Degree Requirements
The Master of Science in Computer Science degree requires the completion of 33 credits beyond the prerequisite foundation courses, including 15 credits of core requirements and 18 credits of electives.

The core courses represent the general body of knowledge and skills that all students in the program are expected to master, covering algorithm analysis, principles of software engineering, artificial intelligence, operating systems and concepts of computer architecture or programming languages.
Elective courses are offered in networking, artificial intelligence, security, parallel and distributed computing, bioinformatics, robotics, databases and other emerging areas of computer science. Students may select an optional specialty track in artificial intelligence or networks and distributed computing, or may create an individualized program of study. As part of the required elective work, a student may, with permission of the department, choose to do a thesis, fieldwork project or software engineering project.

With careful selection of electives, students in the computer science program may concurrently complete, or make significant progress toward, the Certificate in Information Security.

Faculty advisers are available to work closely with each student in selecting the specialty tracks, elective courses and options that best suit the student’s goals.

Detailed program requirements, including the specific course requirements, and course descriptions are listed in the Hood College Catalog and in the program description at http://www.hood.edu/graduate

Faculty

Courses in the Master of Science in Computer Science program are taught by faculty of the computer science department at Hood College, as well as by part-time and adjunct faculty who are computer science professionals in government and private industry.

Elizabeth Chang, Ph.D.
Professor of Mathematics and Computer Science, Program Director of the M.S. in Management of Information Technology Program and Chair of the Department of Computer Science
(301) 696-3564
chang@hood.edu
Professor Chang specializes in website design and web programming.

George Dimitoglou, Ph.D.
Associate Professor of Computer Science
(301) 696-3980
dimitoglou@hood.edu
Professor Dimitoglou specializes in distributed systems, software engineering, operating systems and robotics.

Aijuan Dong, Ph.D.
Assistant Professor of Computer Science
(301) 696-3884
dong@hood.edu
Professor Dong specializes in database management systems, image and video processing and segmentation, annotation, access and data mining.

W. Randolph Ford, Ph.D.
Associate Professor of Computer Science
(301) 696-3735
ford@hood.edu
Professor Ford specializes in artificial intelligence fields including natural language processing, machine learning, pattern reduction algorithms, speech recognition, machine translation and data mining.

Gary Gillard
Professor of Information Technology
(301) 696-3970
gillard@hood.edu
Professor Gillard focuses on database systems and ethical and social issues associated with computing technology.

Xinlian Liu, Ph.D.
Associate Professor of Computer Science, Program Director of the M.S. in Computer Science program
(301) 696-3981
liu@hood.edu
Professor Liu focuses on research involving scientific visualization and grid computing.

William Pierce
Assistant Professor of Computer Science
(301) 696-3983
pierce@hood.edu
Professor Pierce focuses on digital electronics, microprocessors, computer operating systems and computer systems performance.

Ahmed Salem, Ph.D.
Assistant Professor of Computer Science and Information Technology
(301) 696-3731
salem@hood.edu
Professor Salem specializes in digital electronics, computer and network security, data communications and network architectures.

The Master of Science in Computer Science is one of several graduate-level offerings sponsored by the Department of Computer Science. The department also offers a Master of Science in Information Technology, Master of Science in Management of Information Technology and a Certificate in Information Security.