Master of Science

Computer Science with a Concentration in Information & Communications Technology (MS)

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ICT (Information and Communications Technology) is the infrastructure and components that enable contemporary business computing.#This MS program in Computer Science offers a unique combination of computer science technical knowledge and business IT skills that prepares graduate students for success in the business world of the 21st century. The program emphasizes cutting-edge ICT skills, which can provide a basis for job entry, career development and flexibility amid the rapid changes in Information Technology.

Admission

Entrance Requirements

Students entering the Master of Science program in computer science should meet the minimum university graduate admission requirements (https://www.odu.edu/admission/graduate (https://www.odu.edu/admission/graduate/)).

In addition, an applicant must have a strong background in computer science. Students who do not have a sufficient background in computer science may enter the graduate program as *provisional students* and make up for their deficiencies by taking appropriate courses.

Two letters of recommendation from faculty members of academic institutions are required in addition to all transcripts at the postsecondary level. For students whose native language is not English, either a TOEFL score of 550 (paper-based) and 79 (internet-based) or IELTS score of 6.5 is also required.

Curriculum Requirements

This concentration, offered jointly with the Department of Information Technology and Decision Sciences in the Strome College of Business, is appropriate for students with either a bachelor's degree in business administration with a major in information systems and a computer science minor or with a bachelor's degree in computer science with a business administration minor.

The departmental requirements for the Master of Science degree with concentration in Information and Communications Technology are described below. All requirements must be satisfied in addition to the University requirements outlined under the University Requirements for Graduate Degrees & Certificates section of this catalog.

This degree requires 31 credit hours, including 16 credits of core coursework. At the end of the program, the candidate is required to complete an exit examination that requires a comprehensive written report and an oral presentation.

Core Courses

CS 500	Foundations of Computing	3
or CS 600	Algorithms and Data Structures	
CS 550	Database Concepts	3
or CS 650	Advanced Databases	
CS 522	Introduction to Machine Learning	3
or CS 580	Introduction to Artificial Intelligence	
CS 620	Introduction to Data Science and Analytics	3
CS 665	Computer Architecture	3
CS 690	Colloquium	1
Total Credit Hours		**16**

Colloquium

In addition to taking CS 690 Colloquium, each student is required to attend at least 10 departmental colloquiums during their MS study.

Electives

For the remaining 15 credit hours, students must take 6 credit hours of electives from Computer Science and 9 credit hours from the following set of IT/BNAL electives.

CS Electives		**6**
IT/BNAL Electives		**9**
IT 651	Business Intelligence	
IT 652	Information and Communications Technology for Big Data	
BNAL 503	Data Visualization and Exploration	
BNAL 515	Advanced Business Analytics/Big Data Applications	
BNAL 721	Simulation Modeling for Business and Supply Chain Systems	
Total Credit Hours		**15**

Course Restrictions

No more than 12 credit hours of 500-level courses may count towards the degree requirements.

No more than 3 credit hours of CS 697 Independent Study in Computer Science may count towards the degree requirements.

Since internship is not a degree requirement, the courses CS 667, CS 668, and CS 669 *do not* count towards MS course requirements.

Although 800-level courses are primarily meant for PhD students, these courses may count as 700-level courses for the purposes of MS credit requirements.