COMPUTER SCIENCE M.S.

All students must meet the Requirements for the Master’s Degree

OVERVIEW

The M.S. program in Computer Science offers thesis, project, and course work only options. Acceptance into thesis or project options is conditional upon the student finding an eligible advisor who agrees to supervise the thesis or project. Please see the Department of Computer Science website for current research interests of the department’s faculty.

SPECIFIC REQUIREMENTS

Requirements for Admission to Graduate Studies for the Degree of Master of Science

A bachelor’s degree in computer science or a related discipline, and satisfactory scores on the Graduate Record Examination general (aptitude) section are required for admission. Students should also demonstrate that they have taken the following courses or have equivalent knowledge:

- Two courses that treat systematic program development in a high-level language, for example:
  - CS 021 Computer Programming I
  - CS 110 Intermediate Programming
- One course in computer system organization, for example:
  - CS 121 Computer Organization
- One course in data structures, for example:
  - CS 124 Data Structures & Algorithms
- One course in computability and complexity, for example:
  - CS 125 Computability and Complexity
- Two courses in differential and integral calculus, for example:
  - MATH 021 Calculus I
  - MATH 022 Calculus II
- One course in linear algebra:
  - MATH 124 Linear Algebra
- One course in probability and statistics, for example:
  - STAT 143 Statistics for Engineering

Applicants who have strong academic records in a different discipline and lack one or more of these prerequisites may be accepted provisionally. Provisionally accepted students will be required to complete an approved program of remedial work within their first year of study.

Applicants whose native language is not English or whose formal education has been conducted in a language other than English must have a Test of English as a Second Language (TOEFL) score of 90 (Internet-based test) or above or an International English Language Testing System (IELTS) score of 6.5 or above. To be considered for financial assistantship from the university, applicants must have an iBT TOEFL score of 100 or an IELTS score of 7.0 or above.

Minimum Degree Requirements

Option A (Thesis)

Thirty credits, including a minimum of twenty-one credits of approved course work, and a minimum of six credits of thesis research (CS 391) 30

Option B (Project)

Thirty credits, including a minimum of twenty-four credits of approved course work, and a minimum of three credits of project research (CS 392) 30

Option C (Non-Thesis)

Thirty credits of approved course work 33

All Options

Students in all options must take, or have completed the equivalent of, the core sequence:

- CS 201 Operating Systems
- CS 224 Algorithm Design & Analysis
- CS 243 Theory of Computation

Pass a comprehensive exam covering material from the core sequence

Fulfill the credit requirement with approved graduate-level course work in computer science or related areas. (Only courses with grades of B- or above are counted towards course work requirements and students with two grades below B are eligible for dismissal.)

Comprehensive Examination

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Comprehensive Examination

Taking all required M.S. courses at UVM and receiving a grade of A- or better constitutes successfully completing the comprehensive examination.

M.S. students who either took one or more required courses at another institution, or who passed a course at UVM but with a grade between B+ and C-, must take an oral exam in this course area. In this event, the Graduate Committee will form an exam committee for this oral exam. Each student who needs to take comprehensive oral exams should arrange a schedule with the examiners and then inform the Graduate Committee of the exam date. It is strongly recommended that the examination is completed during the academic year, unless all examiners agree to give the exam on a date during the break.
Requirements for Advancement to Candidacy for the Degree of Master of Science

Passing of the comprehensive examination.