The Computer Science & Engineering Graduate Programs
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Overview of the Computer Science & Engineering Graduate Programs

The Computer Science & Engineering Department offers MS and Ph.D. degrees for full-time and part-time students. Our graduate population currently numbers approximately 125 students, with 82 Ph.D. and 43 MS students pursuing their degrees. Since 2000, the CSE department has graduated 73 PhD and 184 MS students, and since 1986, has graduated 115 Ph.D. and 343 MS students. Our faculty have a broad range of research interests including: distributed computing, algorithms, theory, security, cryptography, performance modeling, reliability, underwater and sensor networking, optimization, bioinformatics, biomedical informatics, data mining, databases, software engineering and reliability, computer architecture, computational geometry, digital media, artificial intelligence, etc.

The Applications Process

To be admitted to the MS program in Computer Science and Engineering at the University of Connecticut as a regular (i.e., non-provisional) student, the following basic requirements must be met: bachelor's degree; cumulative undergraduate record that is equivalent of at least a B average; and, General Test portion of the Graduate Record Exam (GRE). In addition, the applicant should possess the equivalent of an undergraduate CSE, CS, or CompE degree. Admission to the Ph.D. program in Computer Science and Engineering is normally open only to those students with an M.S. in CSE, CS, or CompE; a student with only a bachelor's degree will be considered if he/she has an outstanding/exceptional record. In both cases, the University requires TOEFL for international applicants. The admissions process is multiple phase. First, the CSE Graduate Program Committee reviews applications (around 200 per year) and identifies those that meet minimum standards (around 70-80 per year). Second, these applications are made available to CSE faculty for their review; a student must be accepted as an advisee by a CSE faculty member for admission. We accept approximately 25-30 new students each academic year.

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The Ph.D. Program

The Ph.D. program is designed to prepare a student for a career in teaching and research. As such, it requires a considerable amount of self-directed study and independent research. Only a limited number of students can be accepted into the program each year. Therefore, only those students

who have demonstrated the potential to carry out a demanding program at this level are admitted. The Ph.D. program is individually designed for each student. It requires very close cooperation between the student and his or her research advisor. Therefore, to continue beyond the first year of the Ph.D. program, a student must define his or her area of research and obtain a faculty advisor who will agree to supervise the dissertation research. Doctoral study must represent a minimum of two years full-time study beyond the M.S. and at least one year of fulltime study must be completed at the Storrs campus. A Ph.D. student (with an M.S. degree in Computer Science and/or Computer Engineering) will normally take eight graduate courses as part of the formal Plan of Study. The Ph.D. program requires that you successfully complete the following major milestones in CSE:

- **Ph.D. Breadth Requirement:** The Ph.D. Breadth Requirement is intended to show the student's expertise in three areas of computing: **Area I: Theory and Algorithms, Area II Systems (Networks, Distributed, Architecture, and Databases), and Area III Programming, Software, Applications.** To satisfy this requirement, a student must taje a course and each area and either: obtain three As (one course in each area) or two As and one A- (across all three areas).[1]
- **Ph.D. General Examination:** The Ph.D. General Examination is made up of two major parts, written and oral examinations. The written exam is administered by the student's advisory committee, after the completion of all coursework, and in consultation with appropriate CSE faculty.
- **Ph.D. Dissertation Proposal:** The Ph.D. dissertation must make a significant contribution to the computer science and engineering discipline. The selection of a dissertation topic in consultation with the advisor who supervises the research effort is the most critical part of the Ph.D. program. A general area of research is usually selected during the first year of Ph.D. study. After selection of a research area has been approved, an initial investigation of the relevant literature in the area is undertaken to establish necessary background information and to define the exact problem to be studied. The initial investigation of the relevant literature in the area will culminate in the preparation of a dissertation proposal. It is expected that the student will work closely with his or her major advisor while preparing the proposal. Acceptance of this proposal by the student's advisory committee must be obtained before the student begins the proposed research.
- **Ph.D. Dissertation and Defense:** The final draft of the Ph.D. dissertation must be presented to the advisory committee at least one month before the final copy is due in the graduate school. In writing the dissertation, it is imperative that the student works closely with his or her major advisor. Experience has shown that many revisions of the dissertation are needed before the final draft copy is ready for presentation to the advisory committee.
- **Ph.D. Publication Requirement:** All doctoral students are required to publish at least 3 articles in full-length refereed conference venues prior to completion.

Under normal conditions it is expected that any on-campus student will complete all the work for the Ph.D. within four years of study after finishing the MS program.

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[1] http://www.cse.uconn.edu/cms/images/stories/graduate/PhDBreadthAreasandCourses.pdf