

**DEPARTMENT OF COMPUTER SCIENCE**  
**GRADUATE STUDENT HANDBOOK**

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## **WELCOME STATEMENT**

Congratulations on having been admitted to the graduate program in computer science! Whether you are here to get a Masters degree or a PhD degree, we look forward to helping you obtain the skills needed to succeed in our exciting field. In the beginning, you are likely to have questions about how to do various things and where to get help. This document serves as a quick reference guide. You will find brief descriptions of expectations and requirements as well as pointers to people and websites that can help you further. Please note that this is work in progress. Thus, you may not find answers to all your questions. If so, then we encourage you provide us feedback that will help us make the document better. Thanks in advance for your help in this matter and good luck with your studies.

## **INTRODUCTION**

Graduate students are expected to be aware of and satisfy all regulations governing their work and study at the university. Please refer to the Graduate Catalog, to *Hilltopics*, to the on-line CS resources (<http://www.cs.utk.edu>) and to the publications on graduate student appeals and on graduate student assistantships available in the Graduate Student Services Office.

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## **GENERAL DUTIES AND RESPONSIBILITIES OF FACULTY AND ALL GRADUATE STUDENTS**

It is the student's responsibility to meet the requirements of the department and the university. This handout should be used in conjunction with the Graduate Catalog.

## **ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE**

The department's graduate admission requirements, in addition to those imposed on all students by the Graduate School, are as follows:

1. An applicant must have successfully completed two semesters of college mathematics (e.g., linear algebra, differential equations, probability) and the equivalent of CS 360 and CS 380. Also, an applicant must know a procedural programming language (preferably C).
2. An applicant must have taken the Graduate Record Examination (GRE). This may be waived if the applicant has either (1) a graduate degree in another discipline from a recognized university and substantial coursework in CS, or (2) substantial and relevant work experience in CS. Lack of GRE scores will normally preclude regular admission. Each applicant is evaluated on the basis of grade point average, coursework, and cumulative (verbal + quantitative + analytical) GRE score. In addition, the Graduate School requires a minimum TOEFL score of 550 for foreign students; the department expects a score of 630 or higher.
3. An applicant must have three letters of recommendation sent directly to the department from individuals capable of assessing the student's potential for advanced work in computer science. The department reserves the right to contact these individuals or other knowledgeable people if additional information is deemed necessary.

Upon admission to the CS graduate program, a student must complete missing background course requirements, if any, by taking courses for undergraduate credit.

### **Special Admission Category**

Non-degree status is generally used for applicants whose backgrounds are satisfactory in most but not all respects. An applicant given non-degree status will be advised, on request, of the conditions to be met to change to regular admission status.

## **FINANCIAL SUPPORT**

The department offers 3 types of assistantships.

- [Research Assistantship](#)
- [Teaching Assistantship](#)
- [System & Network Administrators](#)

See <http://www.cs.utk.edu/graduate/prospective> for application form and additional information.

## **REGISTRATION AND ADVISING**

Registration and advising information as well as important deadlines for graduation can be found at the Graduate School's website: <http://gradstudies.utk.edu>.

## **DEGREE REQUIREMENTS SPECIFIC TO COMPUTER SCIENCE**

### **MS Degree Requirements**

For the Master of Science (MS) degree, 30 semester hours of graduate credit are required, 24 of which must be 500-level or above. CS 530, CS 560 and either CS 580 or CS 581 are required. The department offers three MS options: Non-thesis Exam, Thesis and Project in Lieu of Thesis (PILOT). A student is considered a non-thesis student unless an advisor agrees specifically to a thesis or PILOT topic and informs the department. Regardless of which option is chosen, the student must file an Admission to Candidacy form that lists courses and grades that are to be considered for the degree *prior* to the semester in which graduation is desired.

#### Non-thesis Option:

The MS Non-thesis Exam, which is equivalent to the written part of the PhD Comprehensive Exam, is over the material covered in the required courses, CS 530, 560 and either CS 580 or CS 581. However, the student will only have to pass two out of the three areas in order to pass the exam. The student may identify an instructor from each of the core courses who taught the course in the past two years. To the extent possible, the exam will be tailored to match the material covered by these instructors. The Graduate School requires a student not registered for regular courses during the semester of the examination and graduation either to register for 502 (Non-thesis Graduate Completion) or to pay an examination fee. The Office of Graduate Admissions and Records has details.

#### Thesis Option:

The student must reach agreement on a thesis topic with a faculty advisor and must take 6 hours of CS 500 Thesis which may count in the 24-hour requirement at the 500-level. The student must defend the thesis before a committee of three or more faculty members, at least two of whom (including the chair) must be CS faculty.

#### PILOT Option:

The student must reach agreement on a project topic with a faculty advisor. Some forms the problem may take include:

1. A comprehensive, integrative paper, such as a literature survey or critical analysis of some topic.
2. A project as a result of which the student produces a well-documented program.

3. A project in which the student uses simulation tools in an empirical investigation of some topic.

The PILOT student must present the work before a committee of three or more faculty members, at least two of whom (including the chair) must be CS faculty.

## **PhD Degree Requirements**

Original research reported in a dissertation of high quality is emphasized. The minimum hour requirements are 24 hours of the course CS 600 Doctoral Research and Dissertation and 24 hours of graduate courses beyond the equivalent of a Master of Science degree (i.e., beyond 30 graduate credit hours) graded A--F. CS 530, CS 560, and either CS 580 or CS 581 are required for the degree. At least six hours of 600-level graded courses must be taken in computer science at UTK. The student's advisor and committee will establish the specific course requirements.

Each PhD committee must have at least four members, three of which (including the chair) must be CS faculty members (regular or adjunct). One member must be on the faculty of a different academic unit.

The CS Department is essentially as flexible in its requirements for the PhD degree as the Graduate School allows. A typical PhD student follows these steps:

1. The student begins coursework. The emphasis should be on preparing for and taking the required core courses. The student also takes special topics courses in preparation for the research component of the degree.
2. At some point, the student reaches an agreement with a member of the CS faculty to serve as the advisor. The advisor must be approved to direct a dissertation. The PhD Committee is formed with the advisor as chair.
3. Having completed the core courses, the student takes the written part of the PhD Comprehensive Exam (see below). The student then begins to take CS600.
4. The student makes an oral presentation to his/her committee that includes an overview of the proposed dissertation research and a plan for its completion. This oral presentation and the earlier written exam together constitute the PhD Comprehensive Exam required by the Graduate School.
5. The student files the Admission to Candidacy form that lists courses and grades that are to be considered for the degree, then completes all course work, carries out the research, and writes the dissertation.
6. The student defends the dissertation and files it with Graduate Student Services.

## ***EXAMINATIONS***

**MS Non-thesis:** The student must take the written part of the PhD Comprehensive Exam.

**MS Thesis:** The student must defend the thesis before a committee of three or more faculty members, at least two of whom must be CS faculty.

**MS PILOT:** The student must defend the work before a committee of three or more faculty members, at least two of whom must be CS faculty.

**PhD Comprehensive Exam:** The must take a departmental written examination as well as a subsequent oral examination conducted by the student's committee.

Written part of PhD Comprehensive Exam: The exam is a test of breadth for MS and PhD students. The exam lasts three hours and covers the three core courses that the student has taken. PhD students must answer nine questions, three from each core course. There will be at least four questions available from each core course, with each question intended to take at the most fifteen minutes. MS students pass the exam if they pass any two areas.

The exam may be taken at most twice. Two failed attempts imply termination from the program. Sign-up dates are announced well in advance. Only PhD students may sign up for the PhD exam. Likewise, only MS students may sign up for the MS exam. Students with provisional or non-degree status may not sign up for either exam. Students signing up for the exam must have taken the core courses that they request to be examined on. Students for whom the core courses have been waived are exempt from this rule. The exam is closed book. Calculators or other aids are not permitted. At the PhD student's request, the exam will be counted as an MS non-thesis exam for purposes of meeting the requirements for a master's degree. Note that in this case, the PhD student must file for a change of status from PhD to MS and then back again due to University rules.

**Exam Dates:** The written PhD Comprehensive Exam is usually scheduled for the first Monday following Labor Day. An MS Thesis or a PhD Dissertation defense is scheduled according to guidelines set forth each semester by the Graduate School.

## ***STANDARDS, PROBLEMS, AND APPEALS***

### **Academic Termination**

The Graduate Catalog contains a statement of the university's policy for involuntary termination of a graduate student's enrollment in a graduate program. The Graduate School has information about appeal procedures. The CS department specifies that a student will not be allowed to continue in its graduate program if any of the following occur:

1. The student cheats or engages in any other act of dishonesty with respect to the university community. In particular, for computer programs assigned as individual projects, this includes getting or giving help as well as copying or modifying all or part of another person's program.
2. The student's cumulative graduate GPA falls below 3.0 for two consecutive semesters, excluding the summer semester if no courses are taken.
3. The student earns two or more grades below C in courses taken for graduate credit.
4. The student receives a grade of D or F in any of the three core courses. Note that graduate students who receive such a grade in 580 or 581 may take the other and remain in good standing.

The department will issue a warning letter when the GPA first falls below 3.0 as soon as we find out. However, this letter may go out several weeks after the end of the semester. Although termination letters likewise are sent out as soon as possible, this also could be weeks into a new semester. The student is responsible for knowing if or when the rules have been broken and what the consequences are.

### **Information Concerning Appeals and Student Conduct**

If a student feels unjustly treated by an instructor and has been unable to resolve the problem, the student is referred to the Department Head who will attempt to confirm that both parties to the issue agree on the facts.

If the Department Head cannot resolve the problem, the matter will be referred to the Graduate Committee. The committee's recommendation will be transmitted to the student. If the student is not satisfied, the matter can be taken to the Dean of the College and to the Dean of the Graduate School. Information about appeals is available from The Graduate School. Only the instructor of record may change a grade; however, the Department Head and the Graduate Committee may offer suggestions to the instructor concerning a grading problem. In instances where a faculty member is no longer on campus, the Head may take appropriate action to change a course grade if necessary.

### **Assistantship Termination**

Expectations and grounds for termination are outlined in the appointment letter.