

RICE UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE
Ph.D. PROGRAM REQUIREMENTS - Fall 2000

As part of the requirements for the Ph.D. degree, each student must pass specific course requirements and research during the first five semesters. In addition, each student must pass the Qualifying examinations as well as pass an oral thesis proposal and the thesis defense.

Teaching Requirements:

All Rice Ph.D. students will assist with the teaching of five courses during their time at Rice. In general, students will be teaching assistants during their first five semesters at Rice, but occasional exceptions can be arranged. The typical load is about 10 hours a week, averaged over the semester. Faculty will monitor a teaching assistant's work and progress.

The department considers a teaching assistantship a necessary component of Ph.D. education. A teaching assistantship is one of the best methods to acquire a variety of essential communication skills. It teaches how to design work, how to control someone's work, and how to communicate criticism in writing and orally.

At the beginning of each semester, the graduate chairman will request a "TA wish list" from teaching faculty and a "course wish list" from those graduate students who have not yet served for five semesters. The chairman will make a strong effort to compute a "best match".

Students have the right to appeal course assignments and course loads. For example, a student may appeal an inappropriate course assignment, e.g., an assignment to TA the same course for the fourth time. Similarly, a student should request a change if the teaching load consistently exceeds 10 hours per week averaged over the semester. Students should consult with the graduate chairman in such cases.

Faculty will monitor the TA's work and progress. If a teaching assistant's performance is less than satisfactory, a faculty member may appeal to the graduate chairman. After consulting with the teaching assistant, the graduate chairman may deny credit for the assignment.

No teaching assistant will be assigned to Comp 100.

Course Requirements:

To maintain good standing in the Ph.D. program, a student must complete

1. At least four courses with a minimum CGPA of B+ by the end of the second semester (see eligible courses listed below).
2. A Comp 590 project by the end of the third semester.
3. At least eight courses satisfying the breadth requirements described below with a minimum CGPA of B+ by the end of the fifth semester.
4. A master's thesis by the end of the fifth semester

A student who enters the Ph.D. program with a thesis-based Master's degree would be exempt from rule #4 with the approval of the graduate committee. At the discretion of the graduate committee, rule 3 could be relaxed for a student who enters with either a thesis or a course-based Master's degree. In this case the precise requirements would be determined as soon as the student has an advisor.

Eligible Courses

The set of eligible courses consists of a few 300-level courses, but mainly 400- and 500-level courses. They are divided into three super-areas and students must complete at least two courses in each super-area. At least two of these courses must come from different sub-areas; a student must cover at least six of the sub-areas.

Super-area 1:	A/I Robotics	Algorithms	Graphics
	Comp 440	Comp 482	Comp 360
	Comp 450	Comp 582	Comp 461
	Comp 540		Comp 561
Super-area 2:	Automata	Languages	Logic
	Comp 481	Comp 311	Comp 409
		Comp 411	
		Comp 511	
Super-area 3:	Architecture	Compilers	Systems
	Comp 320	Comp 412	Comp 421
	Comp/Elec 425	Comp 512	Comp 430
	Comp/Elec 525	Comp 515	Comp 520
			Comp 529

As courses are created, changed, or retired, the graduate committee in consultation with the faculty will add/drop them from this list.

The graduate committee will review the course schedules (including adds/drops) of students until their fifth semester.

Comp 590 Project

The Comp 590 project must produce a written report, the precise nature of which is up to the advisor, by the end of the third semester. A student's grade on the Comp 590 project counts toward their GPA.

Master's Thesis

The master's thesis should be thought of as a (research) paper that has been formatted to meet the thesis style guidelines. It should have been published or judged publishable by the thesis committee. The extent to which the student is expected to add content to the paper, e.g., additional discussion of related work, is up to the thesis committee. This is due by the end of the fifth semester.

Evaluation

The graduate committee will check each student's compliance with the rules at the end of his/her second, third, and fifth semesters. Failure to meet the rules at the second, third, and fifth semester will disqualify the student from continuing toward the Ph.D. The student may still qualify for the M.S. degree.

Financial Support

Students are normally supported by fellowships during their first academic year; thereafter, students are expected to have an advisor (a faculty member) who will support him/her.

Qualifying Examination

The Qualifying Examination (C-exam) is intended to assess a student's depth of knowledge in a specific field of Computer Science in order to certify readiness for thesis research. The C-exam is offered in a number of general subject areas, each with an associated syllabus. The exam is oral and covers the 400 and 500 level courses in the area and the general contents of the syllabus. The courses and the syllabus are not to be viewed as a clear limit on what a student is required to know, but rather as a general indication of expected knowledge.

The C-exam will be administered by a committee of three faculty members appointed by

the Graduate Committee. The scheduling of the qualifying exam is at the discretion of the appropriate exam committee; committees may schedule upon demand or may designate a specific time period in which the exam will be administered. Students wishing to take a particular exam need to be aware of the scheduling policy and should consult with a committee member well in advance of the exam date. The qualifying exam requirement should be satisfied within seven semesters after starting the Ph.D. program. Any student not passing the exam within this period will be dismissed from the Ph.D. program at the end of the eighth semester. A student may petition for an extension, but petitions will be approved only in extraordinary circumstances.

The subject areas covered by the C-exam will evolve with sufficient demand and resources. Students with interests not accommodated by current areas are advised to consult with the Chair of the Graduate Committee.

Upon successful completion of course requirements, the Comp 590 project, the master's thesis, and the Qualifying examinations and with the consent of their full committee, the student will be admitted to Ph.D. candidacy.

Thesis Proposal

The thesis proposal consists of a presentation of the student's proposed research to the thesis committee and interested faculty. A successful proposal to the committee will be followed by a public presentation of the proposal. The presentation should be accessible to a general departmental audience and yet be detailed enough to demonstrate both an appropriate grasp of the problem addressed and the plan of research to be pursued.

At least three weeks prior to the desired proposal date, the student must submit a written copy of the thesis proposal to the Chair of the Graduate Committee. The proposal will be reviewed by the faculty to determine whether an oral proposal would be appropriate at this time. Upon faculty approval, the oral proposal will be scheduled and administered by the student's thesis committee.

Upon successful completion of the thesis proposal, the student will be awarded the Master of Science degree and admitted to candidacy for the Ph.D. degree.

Ph.D. Candidacy

Students must petition for Ph.D. candidacy by the end of their seventh semester.

Thesis Defense

The student will give an oral defense of his thesis in accordance with departmental and

university regulations. Upon successful completion of the defense and other departmental and university requirements, the student will be awarded the Ph.D. degree.

Progress Reports

Periodically, the faculty will meet to evaluate the progress of each student in the Ph.D. program. The evaluation will be based in part upon

- progress in the Comp 590 project and the research project.
- progress in passing the Qualifying Examinations;
- progress in thesis research;
- performance in courses, taking into account the student's background and the nature of the courses taken;
- contributions to research projects (if applicable);
- teaching assistant responsibilities (if applicable);
- departmental service (if applicable), such as committee assignments or instructional responsibilities.

After a student has been admitted to candidacy, there will be no evaluation by the full faculty of the student's progress on a regular basis.

Each student will be notified in writing of the faculty's perception of overall progress. In cases where progress is felt to be below par, the faculty will recommend corrective action and/or designate a faculty member with whom the student can confer. If a student receives a negative report, the faculty may indicate that financial support is in jeopardy.

Financial support after the initial period specified in the acceptance letter is always contingent *both* on acceptable progress towards a Ph.D. *and* sufficient involvement in a research project. Such financial support is provided by research grants of individual faculty members who make the final decision on whom to support as a research assistant.

Petition Process

A petition will consist of a written document by the student requesting the exception and stating the reasons for the request. Any member of the CS faculty or research staff may submit supporting memos. Petitions will be decided by a secret ballot. To be accepted, a

petition must receive a majority vote of the Computer Science tenure-track faculty (including Faculty Fellows), excluding members of the student's committee, if applicable. The Graduate Committee Chair will respond in writing to all petitions.