THE UNIVERSITY OF IOWA

DEPARTMENT OF COMPUTER SCIENCE

GRADUATE STUDENT HANDBOOK

2017-2018

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Graduate Student Handbook

Introduction

Welcome to the Computer Science Department at The University of Iowa. This handbook contains general information, degree requirements, and departmental rules and regulations for students pursuing (or wishing to pursue) a graduate degree in our department. It is a supplement to the *Manual of Rules and Regulations of the Graduate College* and the *General Catalog*, published by The University of Iowa Registrar's Office. These documents as well as other, more general, information about The University of Iowa are available on the Web at https://uiowa.edu, the University's main website.

The information contained herein applies to students matriculating in Fall 2017. Students entering the graduate program prior to Fall 2017 are held to the degree requirements in force at the time of matriculation. For information about those requirements, please consult the previous versions of this handbook, available in the CS Department Office, 14 MacLean Hall.

For more information about the Computer Science Department, visit https://cs.uiowa.edu. We anticipate annual revisions of this handbook and welcome your comments, directed to cs-info@list.uiowa.edu.

Nondiscrimination Statement

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact the Director, Office of Equal Opportunity and Diversity, The University of Iowa, 202 Jessup Hall, Iowa City, IA, 52242-1316, 319-335-0705 (voice), 319-335-0697 (TDD), diversity@uiowa.edu.

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1. Admission

The University of Iowa Computer Science Department offers three graduate degree programs: a research-oriented Doctor of Philosophy (PhD) degree; a professionally oriented Master of Computer Science (MCS) degree, and a Master of Science (MS) degree, which is only granted to students working towards the PhD. A subtrack in software engineering is available within the MCS program; in addition, interdisciplinary studies programs at both masters and doctoral levels are available through the Graduate College.

1.1. Choice of Program

Candidates are advised to apply directly to the program best suited to their academic goal. Students interested in pursuing research or academic careers should apply to the PhD program, while those seeking additional preparation, beyond their undergraduate training, for industrial careers should apply to the MCS program.

Students applying to the PhD program need not have a master's degree prior to admission. PhD candidates may opt to receive an MS or MCS degree while working towards the PhD, although there is no requirement to do so. Students who hold a master's degree upon entering the PhD program may apply for transfer credit of their master's courses towards the PhD program requirements (see Section 3.2.7 of this handbook).

Students applying to the PhD program who are not selected for admission will automatically be considered for admission to the MCS program if they do not already hold a master's degree.

1.1.1 Joint Bachelor's/Master's Degree Programs

Qualified undergraduate students who plan to earn the MCS degree may apply for the joint Bachelor of Arts/MCS program or the joint Bachelor of Science/MCS program. The joint programs allow students to earn both degrees in five years. See "Combined Bachelors/MCS Program" on the Computer Science website: https://cs.uiowa.edu/undergraduate-programs/5-year-combined-bachelors-and-masters-degree.

1.2. Admission Criteria

- Application to The University of Iowa Graduate College. For application information, please visit the University of Iowa's Admissions website (https://grad.admissions.uiowa.edu/apply). **Please note:** The Computer Science Department's **deadline for submission of the graduate application and required documents is January 1** for fall admission. We do not accept applications for spring admission except in rare circumstances. The Director of Graduate Studies Professor Sriram Pemmaraju will determine on a case-by-case basis if a student is eligible to apply for spring admission.
- The completion of a four-year undergraduate degree (or its equivalent) from an accredited institution. (Students applying to the PhD program need not have a master's degree prior to admission. Those who do may apply for transfer credit of their master's courses towards the PhD program requirements; see Transfer Credits 3.2.7.)

- A minimum 3.00 undergraduate grade point average on a four-point scale. Graduate students in recent years had an average undergraduate GPA of 3.46 on a 4.00 scale.
- Applicants to the PhD program, international or domestic, are required to submit scores from the Graduate Record Examination (GRE) General Test. Applicants to the MCS program are strongly encouraged, but not required, to submit GRE General Test scores. The GRE General Test scores of PhD students admitted for fall 2016 averaged 156 Verbal, 164 Quantitative and 3.5 Analytic Writing. GRE General test scores of MCS students admitted in fall 2016 averaged 150 Verbal, 163 Quantitative and 3.0 Analytic Writing.

- The Graduate College requires a minimum TOEFL score of 81 for Internet-based testing or a minimum IELTS score of 7.0 (with no section score lower than 6.0) for international applicants whose native language is not English. However, students with TOEFL scores below 100 on Internet-based testing are generally not admitted to Computer Science graduate programs. Exceeding these scores does not guarantee admission, and average scores of students who are awarded financial aid are significantly higher. All students submitting IELTS scores must also take an on-campus English Proficiency Evaluation prior to registration.

- Undergraduate and graduate transcripts, showing strong performance in the following key areas:
    - Math foundations (calculus, discrete math, probability, numerical analysis, etc.);
    - Programming (C, C++, Java) and programming language foundations;
    - Data structures and algorithms;
    - Software and hardware systems

  In addition, we look for exposure to database programming and network programming.

- Three letters of recommendation and/or a recommendation form. Recommendations should be completed by persons who have direct knowledge of an applicant's intellectual ability, motivation to study computer science, preparation for graduate school, creativity in research, capacity to work independently, and, if an international student, ability to speak and write English.

- A statement of purpose indicating that the applicant understands the nature of the graduate program for which s/he is applying, and to perhaps express interest in a particular area of computer science. A statement of purpose is particularly important for PhD applicants as a way of showing their preparedness to quickly start research in a specific area of Computer Science.

- A curriculum vitae or résumé.

We regret that we are unable to evaluate any individual's probability of admission prior to formal application beyond the information already presented here.

1.2.1. CONDITIONAL ADMISSION

In exceptional circumstances, a student who does not meet the criteria for regular admission may be granted conditional admission. The Department will specify the conditions a student must meet to achieve regular status and will advise the student accordingly. The student must fulfill the conditions within two sessions of registration in the Graduate College, or face dismissal. Admission in this special category is reserved for cases where there are strong indications for success in the program, despite weaknesses in certain parts of the application.

1.3. Application Process

The candidate must file an application for admission online (available at The University of Iowa web site https://grad.admissions.uiowa.edu/. The candidate must also submit official transcripts, test scores and other supporting material (e.g., a statement of purpose) by the designated deadline for the session in which admission is requested. The University of Iowa application fee must be paid before the application is considered.

1.4. Application Deadlines

Those seeking admission for the fall semester must have their completed applications on file by January 1. For full consideration, all supplementary materials (transcripts, letters of recommendation and statement of purpose) should also be received by that date. We do not do summer admissions, but we do a very small number of spring admissions, under exceptional circumstances. Students interested in spring admission are required to receive permission to apply from the Director of Graduate Studies **and** must complete their application by October 15.

1.5. Early Admission

A student who is within 6 semester hours of having satisfied all the requirements for the bachelor's degree at The University of Iowa or any other accredited college may be granted early admission to the Graduate College. With early admission, the student may begin their graduate course work at the same time they are completing their last semester of undergraduate study.

1.6. Deferred Admission

Students admitted to either the PhD or MCS program may request a deferral of admission, one time only, for up to one year beyond the originally specified matriculation date. While such deferrals are automatically granted, students offered admission with financial support who defer their start date will not be guaranteed the same financial package the following year.

1.7. Readmission

Students who are admitted to a CS graduate program, but who then fail to register for a period of 12 months or more must complete an Application for Readmission to a Graduate Program (to resume study in the same graduate program), found at https://grad.admissions.uiowa.edu/apply/returning-graduate-students on the Admissions website. Acceptance is dependent upon departmental approval for the session in which readmission is desired. Consideration of the application for readmission will be governed by the departmental and Graduate College admissions standards in effect at the time of reapplication.

1.8. Reconsideration

Candidates not selected for admission may request reconsideration, one time only, for the following academic year without preparing a new application by contacting The University of Iowa Office of Admission and requesting a change in session, or by requesting that the CS Academic Services Coordinator initiate the change. Note that it is the candidate's responsibility to ensure that any updated information or documentation is provided before subsequent application deadlines.

1.9. Dual Degrees

Students in the doctoral program of another UI department may elect to pursue getting an MCS degree concurrent with their doctoral program. Students will need approval from their home department before requesting admission to the MCS program. Contact the CS Academic Services Coordinator for more information.

1.10. Change in Program

The Department recognizes that a student's goals may change once they begin graduate study. Any student contemplating such a change in status should discuss the issue with their advisor and the Director of Graduate Studies.

After consulting their faculty advisor, students opting to drop from the PhD to the MCS program may do so by filing an appropriate Graduate College Change of Status form with the Department Academic Services Coordinator. Such requests are almost always approved.

Students originally admitted to the MCS program may also request a change in status to enter the PhD program. Note, however, that since the PhD is the more selective of the two programs, a request to change from the MCS to the PhD program is not approved automatically, and will go through the same review process as external applicants to the PhD program. These applications are all considered together in the spring for the following fall admission. See sections 1.3 and 1.4 for more information on the application process.

2. Financial Support

The Department commits to provide financial support to full-time PhD students during their first four years in the PhD program, provided appropriate academic progress is maintained, expectations of assistantship are met, and English proficiency requirements for a teaching assistantship are met. This progress is measured by timely completion of qualifying, comprehensive, and final exams, research productivity, grades, and performance of assistantship duties. Beyond the first four years, students should expect to be supported by their PhD advisor as a Research Assistant (RA), or through fellowships or other non-departmental resources. The Department sometimes provides Teaching Assistant (TA) positions for students who are beyond their fourth year, especially in cases where the student received RA support or fellowships during one or more of the first four years of the program. Many MCS students also receive support as a TA.

Several other forms of financial support are available through the Graduate College and the University. These include graduate teaching assistantships, research assistantships, scholarships, Post-Comprehensive Research Awards, Summer Fellowships, Seashore-Ballard Fellowships, and, for exceptional entering students, Iowa Recruitment Fellowships (https://www.grad.uiowa.edu/university-of-iowa-graduate-college-fellowships). External fellowships, such as the NSF Graduate Fellowships, are also available and the Graduate College provides funding consultations (https://www.grad.uiowa.edu/professional-development/funding). Competition for these positions is quite keen.

A student must be formally admitted to the Graduate College before being tendered any form of graduate appointment. Scholars, fellows, and research and teaching assistants must be registered as students in good standing in order to hold such appointments. Appointments will be terminated when student status is terminated.

2.1. STIPENDS

During the academic year (i.e., fall and spring semesters), students appointed to an assistantship position are usually appointed to a 50% assistantship. Somewhat rarely, a student may be appointed to a 25% assistantship. In the Computer Science Department, 50% assistantship stipends cover the cost of living and schooling for our TAs and RAs. The University publishes reasonable cost estimates, for the College of Liberal Arts, on its web page at https://grad.admissions.uiowa.edu/graduate-programs-liberal-arts-sciences-costs.

Graduate assistants holding appointments of 25% or greater are assessed tuition at the resident rate. In addition, students holding at least a 25% appointment and enrolled for 9 or more semester hours of coursework will receive a full tuition scholarship. The tuition scholarship is prorated if the student is enrolled for fewer than 9 semester hours. The student will also receive a fee scholarship for 50% of the mandatory student fees assessed in the fall and spring semesters.

2.1.1. ENGLISH PROFICIENCY

All graduate students whose first language is not English are evaluated for verbal English proficiency upon matriculation into a Computer Science graduate program. The results of the ESPA and ELPT tests determine the kind of teaching that can be assigned – full responsibility, a discussion or lab section, or to grade papers – if a teaching assistantship is applied for.

If an A or B level of certification is not initially achieved, additional English language courses are recommended through the English as a Second Language (ESL) Programs Office. The College of Liberal Arts will pay for you to take the course TAPE:5300-Presentation skills one time only.

For PhD Students, who are guaranteed funding, the Computer Science Department will pay for one additional course only and expects you to have a minimum of a B rating by the end of your second semester.

For MCS students, who are not guaranteed funding, our department does not cover the expense of taking additional TA preparation courses, and you are responsible for these expenses.

2.1.2 Course Requirements on Responsible Code of Conduct

Funding agencies (e.g., NSF and NIH) require that graduate students and post-docs that they fund, receive training on responsible conduct of research. In response the Graduate College has asked departments to develop courses that provide this training.

The Department of Computer Science offers the course CS:5980-Topics in CS III-Computing Research Ethics. to satisfy this requirement. It is expected that all PhD students complete this course within their first two years. In addition, MCS students who work as RAs, must also complete this course as soon as possible after the start of their Research Assistantship.

2.1.3. Sexual Harassment Education

All students holding graduate assistantships for the first time must complete sexual harassment training. Renewal appointments will not be processed for anyone who has not completed the training. The CS Academic Services Coordinator will provide information on this and will assist in registering students for the relevant training.

Returning graduate assistants must take a refresher course in sexual harassment training every three calendar years from the date of the most recent training.

2.2. Assistantship Job Expectations, Performance Review and Work Load

Early in the semester, all RAs and TAs will receive written notification of their assistantship expectations and general guidelines as to the time needed to perform each task within their job description. Feedback from faculty supervisors and teaching evaluations will be used to conduct regular performance reviews. NOTE: Renewal of assistantships is subject to satisfactory performance of assistantship duties, ~~and~~ being in good standing as a student, and satisfying English proficiency requirements.

A quarter-time (25%) assistantship carries a responsibility for an average of 10 hours of work per week; a half-time (50%) assistantship means an average of 20 hours per week. Except in unusual circumstances and when prior approval has been obtained, appointments or combinations of appointments exceeding 50% are not permitted.

2.3. Teaching Assistantships

Teaching assistantships are the most common form of financial support, generally given to PhD students in the early years of their studies and some MCS students. Teaching assistantships serve two purposes: assistance in the instructional program of the University and the preparation of future teachers. However, even students not aiming to become teachers greatly benefit from the improved technical communication skills that usually result from a teaching assistantship. Further details regarding teaching assistantships are located within the Teaching Assistant Handbook included with this publication.

2.3.1. Application Process

All graduate students seeking financial support as a TA must formally apply for an award before the specified deadline. Notices describing how to apply for support will be sent to all graduate students in October for the spring semester and in March for the summer session and fall semester.

2.3.2. Attendance Policy for TAs

Start Date for TAs: The first day of the TA appointment is the third business day before classes begin. Unless pre-approved, failure to report by that time may result in loss of appointment or pay deduction.

End Date for TAs: The College views graduate TAs as professionals and expects them to fulfill their professional obligations before leaving. In the case of TAs, the last date of work is the date that final grades are due. The last date of work may be earlier with the permission of the faculty supervisor.

2.3.3. Absence Policy for TAs

TAs must report to their faculty supervisor if they will be absent from class or unable to perform their TA duties due to illness or family emergencies. The faculty supervisor and Director of Graduate Studies or the DEO must pre-approve absences for any other reasons or for absences of more than one week. The faculty supervisor alone cannot approve an absence in those cases. Schedules cannot be substituted or exchanged with other TAs without prior approval by the faculty supervisor and the Director of Graduate Studies or the DEO. TAs are not expected to make up for time missed on an hour-for-hour basis. Rather, they are expected to fulfill their job responsibilities in a timely and professional manner; for example, scheduling an extra class or holding additional office hours if necessary.

2.4. Research Assistantships

Research assistantships are awarded by faculty to qualified graduate students to participate in scholarly research. In awarding research assistantships, faculty members often give preference to PhD students and those who demonstrate strong potential for research. RA positions should be sought by contacting individual faculty members; the Department does not award RA positions directly.

2.4.1. Attendance Policy for RAs

Start Date for RAs: The first day of the RA appointment is the first day of classes.

End Date for RAs: The College views graduate RAs as professionals and expects them to fulfill their professional obligations before leaving. In the case of RAs, the last date of work is the last day of the semester (i.e., the end of Final Exams Week). The last date of work may be earlier with the permission of the faculty supervisor.

2.4.2. Absence Policy for RAs

All RA absences, except for illnesses or family emergencies, must be pre-approved by the faculty supervisor. The faculty supervisor and the Director of Graduate Studies or the DEO must pre-approve absences for other reasons or for absences of more than a week. RAs are not expected to make up for time missed on an hour-for-hour basis. Rather, they are expected to complete their work assignments in a timely and professional manner.

2.5. COGS

Specific terms and conditions of employment for graduate assistants are largely governed by the collective bargaining agreement between The University of Iowa and the United Electrical, Radio and Machine Workers of America union, Local 896, more commonly known as COGS (Campaign to Organize Graduate Students). The COGS contract may be viewed directly from the COGS website https://cogs.org.

3. Registration Requirements

Full-time students are normally expected to take at least 9 semester hours during the fall and spring semesters An exception would be for MCS students in their final term, who may register for less than 9 semester hours, as well as PhD students who have completed their comprehensive exam.

Occasionally, students holding assistantships and actively involved in research may be permitted to take as few as 6 semester hours. Such students must complete a "short hours" form, signed by their advisor, and filed with the Registrar's Office. Additional constraints apply to international students seeking reduced hours, who must complete both the "short hours" form and an online form offered by the International Student and Scholar Services (ISSS). Approval is typically granted only to post-comp PhD students.

Note that students awarded Graduate College funded fellowships, in the summer, must be registered for a summer session course. At the present time, summer TAs and RAs need not be registered for classes in a summer session if they were registered during the preceding academic year.

3.1. Full-time vs. Part-time Status

Students should be aware of consequences when dropping courses result in part-time status. Full-time status for graduate students is 9 semester hours or more; half-time status is 5-8 s.h.

- Visa status may be affected by anything less than full-time status for international students during the academic year. Forms must be submitted to ISSS at the beginning of each applicable semester. Use the form, Part-Time Authorization for Academic Reason, available on the ISSS website.
- If a student has been in the U.S. more than five years, they must be at least half time to be exempt from Social Security and Medicare paycheck deductions.
- Students must be at least half time for purposes of student loan deferment.

If applicable, the Registrar's "short-hours form" is available from the Academic Services Coordinator, or the Registrar's Service Center, 17 Calvin Hall.

4. The Doctor of Philosophy (PhD)

The PhD program emphasizes preparation for research, teaching, and scholarly endeavor in academic settings or private, industrial, or governmental laboratories. It requires completion of a minimum number of semester hours of coursework, satisfactory performance on the qualifying exam, comprehensive exam and the proposal, and the production and formal defense of a dissertation describing original research results. The requirements described here are in addition to the University-wide requirements for the PhD degree described in the *Manual of Rules and Regulations of the Graduate College*, Section XII.

4.1. Advising

Every graduate student must have a faculty advisor. For PhD students, the faculty advisor usually also serves as the research supervisor and thesis committee chair. Entering students may be tentatively assigned to a Computer Science faculty member whose research interests align with their own.

4.1.1. Advisor Selection

Each student should select a PhD advisor from among the Computer Science Department faculty. Note that CS faculty includes assistant, associate and full professors whose primary appointments are in CS, and faculty whose primary appointments are in other departments but who hold joint appointments with CS (this does not include adjuncts, visitors or lecturers). On the rare occasion when a student chooses a PhD advisor who is outside the Department, a co-advisor from the CS faculty must be designated.

Once a faculty member has agreed to serve as a student's advisor, a Change of Advisor form, if applicable, should be filed with the Academic Services Coordinator. The Department recognizes that an individual student's interests may change with time, and that this may result in a student changing advisors accordingly.

4.2. Course Requirements

The PhD requires completion of a minimum of 72 semester hours of coursework beyond the bachelor's degree.

4.2.1. Core Requirement

All PhD students are required to take both courses below for a total of 6 semester hours:

CS:5350 Design and Analysis of Algorithms
and either
CS:4330 Theory of Computation
or
CS:5340 Limits of Computation

4.2.2. Breadth Requirement

All PhD students are required to select a total of 3 courses (9 semester hours total), with at least one course selected from each of the following three categories:

Systems and Software:

CS:4640 Computer Security
CS:4980 Topics in Computer Science II (section approved by advisor)
CS:5610 High Performance Computer Architecture

Networks and Distributed Systems:

CS:4980 Topics in Computer Science II (section approved by advisor)
CS:5620 Distributed Systems and Algorithms
CS:5630 Cloud Computing Technology

Programming Languages and Compilers:

CS:4980 Topics in Computer Science II (section approved by advisor)
CS:5810 Formal Methods in Software Engineering
CS:5850 Programming Language Foundations
CS:5860 Lambda Calculus and its Applications

New courses or specific section offerings of CS:4980 may also satisfy a given area requirement. Check with the Director of Graduate Studies for approval.

4.2.3. Practice Requirement

All PhD students are required to take at least one course (3 semester hours) having significant practical or implementation-oriented content. With advisor approval, some examples would include:

CS:4400 Database Systems
CS:4420 Artificial Intelligence
CS:4440 Web Mining
CS:4470 Health Data Analytics
CS:4480 Knowledge Discovery
CS:4500 Research Methods in HCI
CS:4630 Mobile Computing
CS:4700 High Performance and Parallel Computing
CS:4720 Optimization Techniques
CS:5800 Fundamentals of Software Engineering
CS:5990 Individualized Research or Programming Projects

4.2.4. Colloquium Requirement

All PhD students must accumulate at least 4 semester hours of CS:6000, the Computer Science Department Colloquium Series. Students enrolled in CS:6000 are graded S/U. Students must attend at least 80% of scheduled talks to get a satisfactory score for the course. Please be aware that, occasionally, colloquia may occur on days and times other than when CS:6000 is normally scheduled.

4.2.5 Responsible Conduct of Research Requirement

The Department of Computer Science offers the course CS:5980-Topics in CS III-Computing Research Ethics every spring semester. It is required that all PhD students complete this course within their first two years.

4.2.6. Cognate Area Requirement

All PhD students are required to select, in consultation with their advisor, 3 courses, for a minimum of 9 semester hours constituting coherent coverage of an external cognate area. Reasonable choices include, but are not limited to, mathematics, statistics, management sciences, genetics, biology, or an engineering discipline.

4.2.7. Elective Courses

PhD students should fill the remaining required semester hours with a combination of thesis hours, directed readings, CS graduate courses, and non-CS graduate courses, all approved by their advisor. Note: CS:7990 Research for Dissertation may be taken only in the semesters following successful completion of the comprehensive exam.

4.2.8. Transfer Credits

Graduate Admissions and the Department will review graduate coursework already completed that may warrant transfer credit. Advising sessions will determine how those credits will affect the student's program requirements. Note: regardless of how many transfer credits are awarded, Graduate College residency requirements must always be satisfied. Also, transferred courses that are being used to satisfy program requirements must be less than 10 years old at the time of the comprehensive exam.

To have a program requirement waived on the basis of prior graduate coursework, or transfer credits to a University of Iowa degree, the student must submit a petition to the Director of Graduate Studies. The petition form is available at the end of this handbook (or online at https://cs.uiowa.edu/graduate-programs/forms), and completed forms should be filed with the Academic Services Coordinator.

4.3. Qualifying Exam Requirement

The purpose of the qualifying exam is to demonstrate the ability to read, analyze, synthesize, and communicate current research results.

4.3.1. Qualifying Exam Timetable

Qualifying exams are given twice a year, approximately mid-September and mid-February. PhD students should take the qualifying exam at the beginning of their second year. PhD Students should start interacting with their initial advisor as soon as possible – preferably early in the fall semester – to set up a plan for starting research that will lead to success in the qualifying exam. Students must pass the qualifying exam by the end of their second year.

4.3.2. Qualifying Exam Structure

A qualifying exam is based on a small number (3-5) of research articles selected in consultation with the student's advisor. The candidate prepares a 15-20 page synthesis/discussion of this material. It is okay for a paper co-authored by the student to be one of the research articles covered by the qualifying exam report, however such a paper, by itself, cannot serve as a qualifying exam report.

4.3.3. Qualifying Exam Panel

Each student attempting the qualifying exam is required to file a Request for PhD Qualifying Exam form and submit the qualifying exam report by Sept 1 (for the fall exam) or Feb 1 (for the spring exam). A panel of three faculty will be selected by the Department and a date and time will be assigned during the scheduled exam period for the candidate's 20-40 minute oral presentation The three-member faculty panel, along with the student's advisor acting in an advisory (non-voting) capacity, will decide the outcome of the exam by majority vote.

4.3.4. Qualifying Exam Failure

A student who fails the qualifying exam will be permitted to repeat the exam one additional time. PhD students who do not pass the qualifying exam by the second semester of the second year (regardless of the number of attempts undertaken) will be automatically dropped into the MCS program.

4.3.5. Master of Computer Science Degree (MCS) En Route to the PhD

Students may request that an MCS degree be granted when all course requirements for the MCS have been satisfied. If an MCS degree is to be awarded, please be aware of the appropriate deadlines (e.g., for submitting the Application for Degree and Plan of Study Summary Form). Note that students who opt for the MCS may not request an MS degree at the time of their comprehensive exam (see Section 4.4.2).

4.4. Comprehensive Exam Requirement

Please note that rules governing the comprehensive exam (unlike the qualifying exam) are mandated by the Graduate College and not the Department. Students should always refer to the *Manual of Rules of Regulations of the Graduate College* as the final authority in the case of any perceived inconsistencies.

The comprehensive exam will consist of a review of the literature and preliminary outline and investigation of a research problem that will be pursued for the PhD thesis. Students should plan to pass their comprehensive exam before the end of their third year and certainly by the end of their fourth year to remain in good standing.

4.4.1. Comprehensive Exam Structure

The structure and evaluation of the comprehensive exam follows the procedures outlined in the *Manual of Rules and Regulations of the Graduate College*, Section XII (K). With the help of the Academic Services Coordinator, the student should update their departmental Plan of Study and complete a Request/Report for Doctoral Comprehensive Exam form and a Doctoral Plan of Study Summary Sheet found on the Grad College website: https://www.grad.uiowa.edu/content/publications-and-forms-for-students. The Academic Services Coordinator will ensure that the appropriate paperwork is submitted to the Graduate College for approval. Students must be registered for classes at the time of their comprehensive exam.

The exam may be written, oral, or both, at the discretion of the student's committee. A typical student might prepare a 20-30 page survey/discussion (along the lines of the introduction and literature review from an eventual thesis) for distribution to their faculty committee, followed at least two weeks later by a brief 20-40 minute oral presentation, and a question/answer session.

The comprehensive exam committee, arranged by the student, requires a minimum of five faculty members, of which four must be UI tenure-track faculty. At least two of the faculty members are from the major department (defined as faculty members who hold any appointment in the major department or program), and are members of the University of Iowa tenure-track faculty. The committee must be approved by the Director of Graduate Studies and appointed by the Dean of the Graduate College.

4.4.2. Master's Degree (MS) at Comprehensive Exam

Students may request that the MS degree be granted at the time of the comprehensive exam by notifying the Academic Services Coordinator at the time the comprehensive exam paperwork is completed. The MS degree without thesis is awarded upon successful completion of the comprehensive exam but may, at the examination committee's discretion, be awarded even if the student does not pass the exam. Students may also choose to complete the thesis requirements and be awarded an MS with thesis degree. Note that students who opt to receive the MCS (see Section 4.3.5) may not receive the MS too. If an MS degree is to be awarded, please be aware of the appropriate deadlines (e.g., for submission of the Application for Degree and Plan of Study Summary Form).

4.4.3. Post-Comprehensive Exam Registration

After completion of the comprehensive exam, the student is required to maintain continuous registration (fall and spring semesters) through completion of the dissertation and graduation. Note that there are special rules for post-comprehensive exam registration, as students will typically not be enrolled in classes, but rather will be working exclusively on the thesis requirement (see Section XII [L] of the *Manual of Rules and Regulations of the Graduate College*).

Please note that post-comp registration must be for a minimum of 1 semester hour, typically in CS:7990-Research for Dissertation. For example, cooperative internships for 0 semester hours do not satisfy the registration requirement.

4.5. Academic Registration Requirement

Student registration should reflect accurately the amount and kind of work undertaken in the Graduate College. The Ph.D., D.M.A., and DNP are granted primarily on the basis of achievement, and engagement with one's discipline is an important part of achieving quality in a dissertation. The purpose of the registration requirement is to promote a high level of intellectual and scholarly activity at The University of Iowa. These requirements foster intensive, concentrated engagement with the faculty members and graduate students in a student's program.

All doctoral programs will contain a minimum of 72 semester hours of graduate work. Of those 72 semester hours, at least 39 must be earned while registered in The University of Iowa Graduate College, and after formal program admission. For example, the academic registration requirement cannot be fulfilled by coursework completed under the non-degree or non-departmental student classification or with transfer credit.

A student must be registered in the semester in which he/she earns his/her degree. For full details, see the *Manual of Rules and Regulations of the Graduate College*, Section XII (C).

4.6. Dissertation Requirement

The dissertation must describe original research performed by the PhD candidate and must be defended before a faculty committee. Please note that rules governing the final exam/dissertation defense (unlike the qualifying exam) are mandated by the Graduate College and not the Department. Students should always refer to the *Manual of Rules of Regulations of the Graduate College* as the final authority in the case of any perceived inconsistencies in determining all requirements that must be met.

4.6.1. Dissertation Committee and Proposal Defense

At least six months prior to the final exam, a student must form a dissertation committee and circulate a formal thesis proposal to the committee. The proposal should describe the research performed to date, ~~any~~ related work, and outline the expected thesis results. The student must, in essence, argue the originality and significance of the expected results to the committee in a manner consistent with their advisor's counsel (this may or may not include an oral presentation). Possible outcomes of a thesis proposal are (i) the committee finds the proposal satisfactory, or (ii) the committee suggests modifications and in a few weeks after the proposal the student and committee reach a consensus (via e-mail or face-to-face meetings) on a modified set of expected thesis results, or (iii) the committee asks the student to redo their proposal, likely with a fresh proposal document and oral presentation, giving the student enough time to address the committee's concerns.

Students should complete the departmental form, Request to Appoint a PhD Committee/Proposal Defense, when all members have agreed to serve on the committee and a tentative date has been set for the proposal defense. The committee, proposed by the candidate and his or her advisor, requires a minimum of five faculty members, of which four must be UI tenure-track faculty. At least two of the faculty members are from the major department (defined as faculty members who hold any appointment in the major department or program), and are members of the University of Iowa tenure-track faculty. The committee must be approved by the Director of Graduate Studies and appointed by the Dean of the Graduate College.

4.6.2. Dissertation Defense

The structure and evaluation of the final exam will follow the procedure outline in the *Manual of Rules and Regulations of the Graduate College*, Section XII (M) through XII (P). The final exam committee, which should be the same as the committee composed for the proposal defense, must be approved by the Director of Graduate Studies and appointed by the Dean of the Graduate College. With the help of the Academic Services Coordinator, students should complete a Request/Report for Final Examination: Advanced Degree, found on the Graduate College website: https://www.grad.uiowa.edu/content/publications-and-forms-for-students. Be aware that the appropriate paperwork, especially thesis deposits, must be filed with the Graduate College within the specified time constraints. Further details regarding submission and formatting requirements, for the thesis, is also found on the Graduate College website:

https://www.grad.uiowa.edu/theses-and-dissertations.

4.7. Academic Standing

Students must maintain a minimum 3.0 grade point average to remain in good standing with the Graduate College. Falling below that level will result in academic probation at the collegiate level. The Department requirements are more stringent -- PhD students must maintain a grade point average of 3.25. Furthermore, each PhD student must, at a minimum:

- demonstrate progress towards the degree usually measured by publications in conferences and journals;
- demonstrate capacity and aptitude for research as judged by the advisor and committee;
- pass the qualifying exam by the end of their second year; and
- pass the comprehensive exam by the end of their fourth year.

A student who does not meet these criteria will be placed on departmental academic probation.

A policy defining procedures to be followed in the dismissal of students from graduate programs has been approved by the Board of Regents, and are contained in the *Manual of Rules and Regulations of the Graduate College;* found on the web https://www.grad.uiowa.edu/manual-part-1-section-iv-academic-standing-probation-and-dismissal#1.4.E.

4.7.1. Academic Review

The faculty will meet each fall to review all aspects of each student's progress towards a degree, with student standing ultimately determined by the faculty. Typically, PhD students having less than a 3.25 GPA should demonstrate exceptional strength in other measures of achievement, or risk being placed on departmental probation. A letter, resulting from this academic review, will be forwarded to PhD students in the fall semester of each year and a reminder letter forwarded each spring semester.

4.7.2. Departmental Probation

A student placed on departmental probation shall be given a written explanation of the reasons for this action, along with a reasonable period of time (typically one year) within which the student shall take corrective action or be dismissed from the graduate program.

4.7.3. PhD Departmental Plan of Study Form

Each student is responsible for maintaining an up-to-date PhD Plan of Study document on file with the Academic Services Coordinator. The PhD Plan of Study is used to track student progress throughout the program, and should be updated each semester in collaboration with the student's advisor. It is also used to prepare the Graduate College's Plan of Study summary document when requesting permission to take the comprehensive examination.

4.8. Petitions

Students may submit petitions to the CS Academic Services Coordinator for deviations from the requirements outlined here. Petition forms are available at the end of this document or online at https://cs.uiowa.edu/graduate-programs/forms.

5. The Master of Computer Science (MCS)

The MCS is a non-research, course-based program for students who wish to enhance their careers with advanced knowledge of computer science. The requirements described here are in addition to the University-wide requirements for master's degrees described in the *Manual of Rules and Regulations of the Graduate College*, Section X.

5.1. Course Requirements

The MCS requires a minimum of 32 semester hours of coursework beyond the bachelor's degree. This includes 2 semester hours of CS:6000-Colloquium and 10 additional courses (3 or more semester hours each).

5.1.1. Foundations

All MCS students are required to take one of the following for a total of 3 semester hours:

- CS:4330 Theory of Computation
- CS:5340 Limits of Computation
- CS:5350 Design and Analysis of Algorithms

5.1.2. Systems Requirement

All MCS students are required to take one of the following courses for a total of 3 semester hours. New or alternative offerings may, from time to time, be designated as also satisfying this requirement.

- CS:5610 High Performance Computer Architecture
- CS:5620 Distributed Systems and Algorithms
- CS:5810 Formal Methods in Software Engineering
- CS:5850 Programming Language Foundations

5.1.3. Colloquium Requirement

All MCS students must accumulate at least 2 semester hours of CS:6000, the CS Department Colloquium Series. Students enrolled in CS:6000 are graded S/U. Students must attend at least 80% of scheduled talks to get a satisfactory score for the course. Please be aware that, occasionally, colloquia may occur on days and times other than when CS:6000 is normally scheduled.

5.1.4. Elective Courses

MCS students should fill the remaining semester hours with a combination of directed readings, CS graduate courses, and non-CS graduate courses approved by their advisor and subject to the following constraints:

- at least 6 courses (18 semester hours) of "didactic"[1] CS graduate-level courses;

[1] Any CS course numbered 4300 or higher, excluding CS: 5110, CS:5900, CS:6000, CS:6990, and CS:7990

- at most 1 CS graduate-level "readings" course (CS:5990or CS:6990); and
- at most 2 technical courses (approved by the advisor) that are not CS graduate-level courses. (Here CS graduate-level course refers to any CS course numbered 4300 or above.) Of these, at most one course may be one of the following 3000-level CS course: CS:3330 Algorithms, CS:3620 Operating Systems, CS:3640 Introduction to Networks and Their Applications, CS:3820 Programming Language Concepts, taken during the first year in the MCS program.

5.2. Software Engineering Subtrack

The Computer Science Department, with the Electrical and Computer Engineering Department, offers a subtrack in software engineering within the MCS program. Students completing CS:5800 Fundamentals of Software Engineering, CS:5810 Formal Methods in Software Engineering, CS:5820 Software Engineering Languages and Tools, and CS:5830 Software Engineering Project, receive a Software Engineering subtrack designation on their transcript. See the Academic Services Coordinator to file the appropriate paperwork when applying for the degree at graduation, if you were not originally accepted into this program.

5.3. Final Semester/Graduation

Besides the Application for Degree, MCS students must complete a Non-Doctoral Plan of Study Summary Sheet, found on the Graduate College website at https://www.grad.uiowa.edu/content/publications-and-forms-for-students with the help of the Academic Services Coordinator and filed by the appropriate deadline.

5.4. Academic Registration Requirement

The Graduate College has explicit residence requirements that must be satisfied in order to obtain the MCS. Of the minimum 32 semester hours required for the degree, at least 24 semester hours must be completed after admission to a UI graduate program. Various forms of extramural registration may qualify toward fulfillment of the aforementioned 24 semester hours residence requirement. See the *Manual of Rules and Regulations of the Graduate College*, Section X (D), and Section II (G).

5.5. Academic Standing

Students must maintain a minimum 2.75 grade point average to remain in good standing with the Graduate College. Falling below that level will result in academic probation at the collegiate level. The Department requirements are more stringent -- MCS students must maintain a grade point average of 3.00 and must demonstrate academic progress towards the degree. A student placed on departmental probation for failing to maintain a minimum cumulative GPA of 3.00 shall be given a written explanation of the reasons for this action, along with a reasonable time-period ~~of time~~ (typically one year) within which the student shall take corrective action or be dismissed from the graduate program. For details, see the *Manual of Rules and Regulations of the Graduate College.*

A policy defining procedures to be followed in the dismissal of students from graduate programs has been approved by the Board of Regents, and are contained in the *Manual of Rules and Regulations of the Graduate College;* found on the web https://www.grad.uiowa.edu/manual-part-1-section-iv-academic-standing-probation-and-dismissal#1.4.E.

5.5.1. MCS Plan of Study Form

Each student is responsible for maintaining an up-to-date MCS Plan of Study document on file with the Academic Services Coordinator. The MCS Plan of Study is used to track student progress throughout the program, and should be updated each semester in collaboration with the student's advisor. It is also used to complete the Graduate College's Plan of Study summary document when preparing for graduation.

5.6. Petitions

Students may submit petitions to the Director of Graduate Studies for deviations from the requirements outlined here. The petition form is available at the end of this document or online at https://cs.uiowa.edu/graduate-programs/forms.

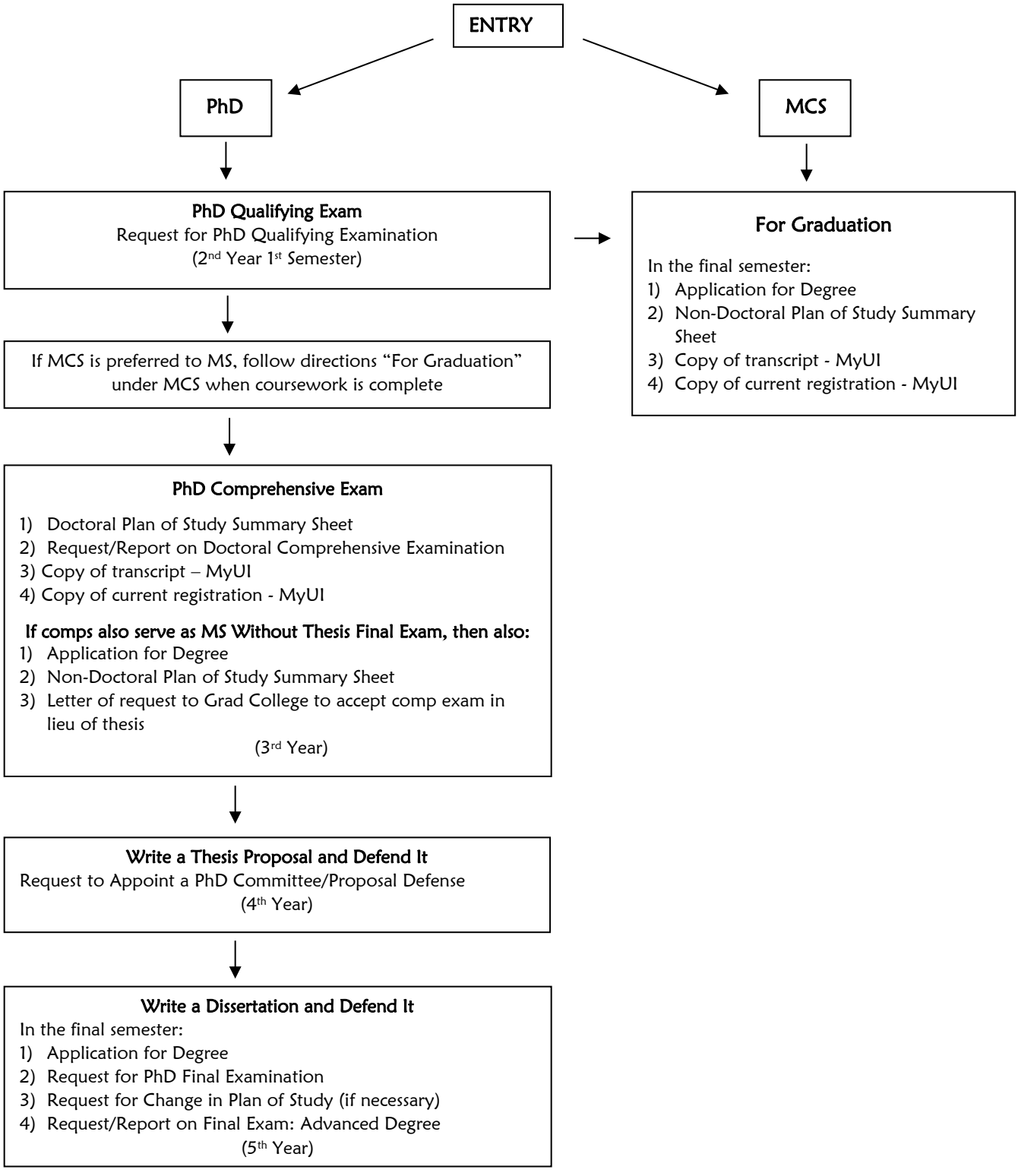
6. Academic Integrity

Work outside the classroom on assignments and programming projects plays a particularly important role in the learning process in computer science. It is essential that each student's work reflect his or her own effort. Our department treats cheating seriously. Instructors retain considerable latitude in the penalties they may invoke. For a first offense, an instructor can fail the student in the course. For a second offense, the Department can expel the student from the program. All offenses must be reported to the Department Chair. Students involved in research should understand that it is essential to give proper credit for other people's ideas and work when they present them in their own writing. The University's policy on ethics in research is included in Chapter 27.6 of the *Operations Manual* and should be thoughtfully considered by any student undertaking research, as well as Student Rights and Responsibilities included in the Student Academic Handbook (https://clas.uiowa.edu/students/handbook), published by the College of Liberal Arts and Sciences.

PAPERWORK FLOWCHART

FOR CS GRADUATE DEGREES

NOTE: Graduate College deadlines are earlier than expected: in February and March for May graduates, in June for August graduates and in September and October for December graduates.



PhD PLAN OF STUDY

Department of Computer Science

Name: _____ ID Number: _____

Date: _____ Advisor: _____

Research Area: _____

PhD Matriculation Date: ☐ Fall ☐ Spring ☐ Summer 20___

PhD Qualifying Exam: ☐ Passed ☐ Expected ☐ Fall ☐ Spring 20___

PhD Comprehensive Exam: ☐ Passed ☐ Expected ☐ Fall ☐ Spring ☐ Summer 20___

PhD Proposal Defense: ☐ Passed ☐ Expected ☐ Fall ☐ Spring ☐ Summer 20___

PhD Expected Completion Date: ☐ Fall ☐ Spring ☐ Summer 20___

Course	Term	Hours	Grade	Course Title and Description
CS:5350		3 sh		Design and Analysis of Algorithms
CS:4330 **or** CS:5340		3 sh		Theory of Computation **or** Limits of Computation
		3 sh		(Systems and Software requirement)
		3 sh		(Networks and Distributed Systems requirement)
		3 sh		(Programming Languages and Compilers requirement)
		3 sh		(Practice requirement)
		3 sh		(External Cognate)
		3 sh		(External Cognate)
		3 sh		(External Cognate)
CS:6000		1 sh		Colloquium
CS:6000		1 sh		Colloquium
CS:6000		1 sh		Colloquium
CS:6000		1 sh		Colloquium

List additional 41-44 credit hours planned or taken.

Course Number, Title and Description	Term	Hours	Grade

Notes:

_____ _____

Signature of Candidate Date Signature of Advisor Date

Revised 9/16/16

REQUEST FOR PhD QUALIFYING EXAMINATION

Department of Computer Science

Name: _____ ID Number: _____

Advisor: _____

Research Area: _____

PhD Matriculation Date: ☐ Fall ☐ Spring ☐ Summer 20___

PhD Expected Completion Date: ☐ Fall ☐ Spring ☐ Summer 20___

Requested Qualifying Exam Date: ☐ Fall ☐ Spring 20___

_____ _____

Signature of Candidate Date

_____ _____

Signature of Advisor Date

Please attach qualifying exam material for distribution to examination panel.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ **Do not write below this line** ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

Exam Date: _____ Result: ☐ Satisfactory ☐ Unsatisfactory

Examination Panel:

	Name	Rank	Signature
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
Advisor	_____	_____	_____

Recommendations:

REQUEST TO APPOINT A PhD COMMITTEE/PROPOSAL DEFENSE

Department of Computer Science

Name: _____ ID Number: _____

Advisor: _____

Tentative Dissertation Title: _____

_____

PhD Matriculation Date: ☐ Fall ☐ Spring ☐ Summer 20___

PhD Qualifying Exam Passed: ☐ Fall ☐ Spring 20___

PhD Comprehensive Exam Passed: ☐ Fall ☐ Spring ☐ Summer 20___

PhD Expected Proposal Defense Date: _____ ☐ Fall ☐ Spring ☐ Summer 20___

PhD Expected Completion Date: _____ ☐ Fall ☐ Spring ☐ Summer 20___

Dissertation Committee: (a minimum of five members is required)

Name	Department & Rank
Chair/Advisor:_____	_____
2.*_____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____

_____ _____

Signature of Candidate Date Signature of Advisor Date

* Designated CS co-advisor if advisor is not a CS faculty member

~ ~ ~ ~ ~ ~ ~ ~ ~ ~~ ~ ~ ~ ~ **Do not write below this line** ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

Proposal Defense Report

Proposal Defense Date: _____ Result: ☐ Satisfactory ☐ Unsatisfactory

_____

Signature of Advisor Date

MCS PLAN OF STUDY

Department of Computer Science

Name: _____ ID Number: _____

Date: _____ Advisor: _____

MCS Matriculation Date: ☐ Fall ☐ Spring ☐ Summer 20___

MCS Expected Completion Date: ☐ Fall ☐ Spring ☐ Summer 20___

Course	Term	Hours	Grade	Course Title & Description
		3 sh		(Foundations requirement)
		3 sh		(Systems requirement)
CS:6000		1 sh		Colloquium
CS:6000		1 sh		Colloquium

Notes:

_____ _____

Signature of Candidate Date Signature of Advisor Date

Revised 9/16/16

PETITION FOR PROGRAM REQUIREMENT EXCEPTION

Department of Computer Science

Students wishing an exception to a departmental program requirement should complete this form, obtain a supporting faculty member's signature, and submit it to the CS Department Secretary in 14 MLH.

Name: _____ ID Number: _____

Date: _____ Email: _____@uiowa.edu Phone: _____

Program: ☐ Undergraduate ☐ Graduate

Exception(s) Requested: _____

_____

_____

Justification: _____

_____

_____

_____

_____

Signature of supporting faculty and date: _____

Attach any supporting documentation (e.g., course syllabi, transcript or grade report, etc.); grad students may submit a current Plan of Study.

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ **Do not write below this line** ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~

Decision Date: _____ Outcome: ☐ Approved ☐ Rejected

Authorizing Signature: _____

cc: student file

Notes and/or Reason for Rejection:

GRADUATE ADVISOR CHANGE FORM

DEPARTMENT OF COMPUTER SCIENCE

Date:_____

Student Name:_____

Program: ☐ MCS ☐ PhD

Current Advisor: _____

New Advisor: _____

_____

Signature of New Advisor

REQUEST FOR SUBTRACK DESIGNATION ON TRANSCRIPT

_____ _____

Student's last name, First name Student number

MCS Computer Science

Degree Major

Software Engineering

Subtrack designation to be entered on transcript at graduation*

*The exact wording of the subtrack designation must have the prior approval of the Graduate College for entry on the transcripts of students with this major.

_____ _____

Student's signature Date

_____ _____

Adviser's signature Date

_____ _____

Department or program executive's signature Date

Please submit this signed request to the Graduate College office by the last day of classes in the session when you expect to receive your degree

_____ _____

Signature – Graduate College Date

DEPARTMENT OF COMPUTER SCIENCE

TEACHING ASSISTANT

HANDBOOK

2017-2018

INTRODUCTION

Teaching Assistants at The University of Iowa and in the Department of Computer Science play two roles: to help educate other students while also educating yourselves. It is our departmental philosophy that one of the best ways to learn a subject is to teach it. We hope that you discover students who help you explore different questions, arrive at new solutions, and develop interpersonal skills. We also hope that being a TA will help you throughout the rest of your life, particularly when searching for a career in the academic world.

You may expect conflict between the two roles as part of your teaching experience. It is like the conflict many faculty members experience between their teaching and their research. Balance and organization are important keys in dealing with this issue. It is best to develop a plan of action in which neither being a teacher nor being a student is slighted. Being professional and doing both roles with energy will keep your work at a higher level of quality and will help prevent your grades from suffering.

There are several publications that can serve as valuable resources. They include:

- The Handbook for Teaching Excellence, published by the Center for Teaching in the ITS Office of Teaching, Learning and Technology and available on the Web;
- The Department of Computer Science Graduate Handbook (including the TA Handbook), revised yearly and available on the Web; and
- The General Catalog, updated yearly and available on the Web.

The first two handbooks especially contain information that will be crucial to your teaching and are available online.

GENERAL EXPECTATIONS

Please note that your appointment as a TA begins three business days before the start of each semester. You are expected to be available to your faculty supervisor and to students from that point on. Unless pre-approved, failure to report by that time may result in loss of appointment or pay deduction.

The College views graduate TAs as professionals and expects them to fulfill their professional obligations before leaving/ending work for the semester. In the case of TAs, the last date of work is the date that final grades are due. The last date of work may be earlier with the permission of the faculty supervisor.

TAs must report to their faculty supervisor if they will be absent from class or unable to perform their TA duties due to illness or family emergencies. The faculty supervisor and Director of Graduate Studies or the DEO must pre-approve absences for any other reasons or for absences of more than one week. The faculty supervisor alone cannot approve an absence in those cases. Schedules cannot be substituted or exchanged with other TAs without prior approval by the faculty supervisor and the Director of Graduate Studies or the DEO. TAs are not expected to make up for time missed on an hour-for-hour basis. Rather, they are expected to fulfill their job responsibilities in a timely and professional manner; for example, scheduling an extra class or holding additional office hours if necessary.

Early in the semester, all RAs and TAs will receive written notification of their assistantship expectations and general guidelines as to the time needed to perform each task within their job description. However, the exact nature of a TA's job varies with the professor or instructor with whom you work. You are responsible for contacting your faculty supervisor and determining what is expected of you. Some possibilities include grading homework, grading exams, grading programming projects, creating homework problems or programming projects or exams, producing solution sets or sample programs, occasional lecturing, searching for materials on the Internet or in the library, holding office hours, or photocopying classroom materials. You

may also need to attend lectures, keep grades, or help maintain information as the course progresses for inclusion in a course report at the end of the semester.

We expect you to hold office hours and to let your students know well in advance if office hours must be cancelled. It is recommended that you email your students with alternative times, or to ask another qualified TA to cover for you.

TAs with 50% appointments who are handling discussion/lab sections are generally expected to schedule at least three office hours per week. Those with 25% appointments are generally expected to schedule at least two office hours per week.

Time/Job Expectations

As stated in the contract signed when you accepted this position, we expect half-time (50%) TAs to work *an average* of 20 hours per week, and to register for no more than 12 semester hours of class (or 6 hours during summer session). Quarter-time (25%) appointees are expected to work an average of 10 hours per week. International students must maintain full-time student status to safeguard visa requirements. Full-time is nine semester hours of coursework per semester (excluding the summer session).

TAs employed by the Department fall roughly into three categories – those with primary responsibility for a course (CS:3210); those who lead lab or discussion sections (CS:1020, CS:1110, CS:1210, CS:2110, CS:2230, and CS:2820); and those who are primarily graders or course coordinators. Each of these types carry different responsibilities. Feedback from faculty supervisors is solicited in the middle of the semester for new TAs and at the end of each semester for all TAs. These are used in conjunction with ACE online course evaluations to conduct annual performance evaluations for all TAs.

If any TA feels they are working efficiently, but being pressured to work more than is consistent with the level of their appointment, it should first be discussed with the supervising faculty member. If the issue is not resolved at that point, then it should be brought to the attention of Professor Sriram Pemmaraju, the Director of Graduate Studies.

Sick Leave Policy

If, due to illness or a family emergency, you are not able to perform your teaching responsibilities, please remember that the main objective is to avoid having class cancelled. The first step is to talk to your faculty supervisor. The best solution, when possible, is to arrange with another TA to perform your duties in your absence, with the expectation that you will return the favor and assist them with their teaching responsibilities some other time. If other arrangements to teach the class cannot be made and class must be cancelled, please make sure that either you or the faculty supervisor calls the Department Office (335-0713) so that a member of the office staff can put a sign on the classroom door. An email to your students is the minimum expected. As a TA, you are considered a professional employee and fulfilling your teaching duties is your professional responsibility. TAs may be absent due to illness for up to 6.75 days per semester without loss of pay.

If it becomes necessary to miss part of the semester due to reasons other than illness or family emergency, please contact either Professor Pemmaraju or Professor Alberto Segre, the Department Chair, for approval ***before*** any teaching responsibilities are left unfulfilled. An unapproved absence could result in loss of appointment or pay deduction.

General Do's and Don'ts:

Do's

- ✓ Treat everyone with respect and in the same manner you would like to be treated.
- ✓ If there are problem situations that you cannot handle, consult your faculty supervisor or Professor Pemmaraju.
- ✓ Report suspected violations of academic conduct rules -- cheating, plagiarism, etc. -– to your supervisor or to Professor Pemmaraju. This is **very** important.
- ✓ Always be available during office hours. Post these hours on your CS website, the course website, and/or include them in the course syllabus.
- ✓ Check your e-mail frequently and your mailbox weekly.
- ✓ If you have students with disabilities, consult with your faculty supervisor about appropriate accommodations.
- ✓ Respect the policies about ethical use of software; bring any reports of abuse to the attention of your faculty supervisor.
- ✓ Be familiar with the University's sexual harassment policies.

Don'ts

- ✓ Since grades are posted online in ICON, physically posting grades is seldom done anymore. If you do, do not display University ID numbers. The general policy is to assign a different identification number, and scramble the order from alphabetical. Pending grades (not yet moved to the student's permanent record) are available to students on MyUI as they are received by the Registrar's Office.
- ✓ Do not assign grades of I (incomplete) or S/U (satisfactory/ unsatisfactory) without prior approval from the course supervisor.
- ✓ If it becomes necessary to change the classroom location or the class time, please contact our Department Administrator, Catherine Till, who will make the arrangements.
- ✓ Do not assume you can change the time of the final examination as determined by the Registrar's Office. Changing the time requires approval at the collegiate level and a very strong justification. Final Exam dates will be determined early in the semester and distributed by Matthieu Biger, the Department's Administrative Services Coordinator, to faculty supervisors. Before announcing the time and date of a course's final exam, we recommend that you check the information with Matthieu.
- ✓ Do not consider the copier, fax machine, or office supplies as available for personal use.

Class Lists

- ➢ Class lists and attendance records are submitted on-line via MAUI. Depending on the class and the faculty supervisor, most TAs will verify attendance and save grades for their faculty supervisor to approve. Final grades are submitted by the course supervisor to the DEO for approval, and are then forwarded to the Registrar's Office.

- A special note regarding Attendance and Midterm class lists: TAs are often reluctant to report students who are consistently not attending class, or to report Ds and Fs on the Midterm class lists. Please note that these grades do not affect the student's permanent records. They do, however, generate warning letters to the students, giving them the opportunity to drop the class before the last drop deadline. The first attendance report is also important for another reason -- if a student is not attending class, it may affect their financial aid.

Where to Refer Students With Concerns

On the first day of classes, University policy requires the announcement that a student's concern regarding a TA's oral communication skills are to be addressed to the faculty supervisor, or to Professor Pemmaraju. Professor Pemmaraju can be reached in his office in 101F MacLean Hall, by phone at 353-2956, or by e-mail at sriram-pemmaraju@uiowa.edu. Please make it clear to the students that Professor Pemmaraju is available for concerns about the performance of a TA's teaching responsibilities, but that he is not an instructor for the course. Questions from students concerning particular problems or programs related to class course work should be directed toward you, as the TA, or the faculty supervisor.

If you are approached by a student with a disability requesting that accommodations be made for him or her, please arrange a meeting with both the student and your faculty supervisor to discuss in detail the particular accommodations that will be necessary. More information on accommodating students with disabilities is available on the Website of the Student Disability Services (SDS) office https://sds.studentlife.uiowa.edu/. Please ask Catherine if you need assistance.

Check Your Mail Often

Because we must sometimes get important information to you on short notice, we suggest you check your e-mail several times a day. The UI's central administration uses the University mail alias (firstname-lastname@uiowa.edu) for important email messages to faculty, staff and students. The Department uses that same email address for emails sent out to all CS students (e.g., job opportunities). If you do not use your Hawkmail account, please be sure to have email forwarded from your University mail alias to wherever you choose to read your email.

Offices and Office Supplies

The Department will provide TAs space to hold office hours and meet with students outside of office hours. This may be in the 301 computer lab, or in a shared office used exclusively for meeting with students. If not before, most office assignments are made during the week before the semester begins.

Office supplies such as pads and pens, AV markers, tape, staples, etc., can be found in the main office in 14 MacLean Hall. Please let Matthieu know when a particular supply is getting low so that more can be ordered.

Department Copier and Fax Machine

The Department copier is available for reproducing classroom materials. The copier is located in the main office, 14 MLH. Please contact any of the CS office staff for instructions on use of the copier the first time. *Because the copier is heavily relied upon, please do not hesitate to ask for assistance.* Many people are inconvenienced if the copier becomes inoperable due to inadvertent misuse. Appropriate copying material

includes syllabi, tests, and homework assignments related to the course for which you are a TA. You should use one of the nearby copying stores or one of the University Copy Centers for personal material.

> The office fax machine (319-335-3624) is available for use by grad students. If we receive any incoming faxes for you, Matthieu will notify you by email. If you need to send a fax, please ask any of the office staff for directions, at least the first time. Please restrict outgoing faxes to academic or professional business and not personal use.

Sexual Harassment Education Training

Teaching Assistants are required to receive training on the Sexual Harassment Policy and the Consensual Relationships Involving Students (CRIS) Policy. The College of Liberal Arts has organized training sessions and all students holding graduate assistantships for the first time must complete sexual harassment training as a condition of employment, and must re-train every three years. Renewal appointments will not be processed for anyone who has not completed the training. Sheryl Semler, the Academic Services Coordinator, coordinates this training and monitors compliance to this required training.

TEXTBOOKS

Desk copies of the textbooks selected for individual courses are provided to each TA by the Department, and is coordinated by Sheryl. Textbooks should be returned to Sheryl at the end of the semester.

TEACHING EVALUATIONS

First-time teaching assistants (those who have not taught at the University of Iowa previously) will have a preliminary assessment conducted by their Departmental supervisor within the first eight weeks of the semester in which they have assigned teaching duties. These evaluations forms will be shared with all new TAs.

In addition, TAs who lead discussion sections or who have sole responsibility for courses will be evaluated utilizing ACE (Assessing Classroom Environment) online forms in ICON. These evaluations gather feedback on the instructor's performance in the classroom. For lecture/discussion-format courses, evaluations are done for both the lecturer and the discussion leaders. We ask that it be announced in class a few days ahead of time and that time is allowed for students to complete their online evaluations in class. Online ACE evaluations are open during the last two weeks of the semester, prior to Final Exam Week. Once the course evaluation period has closed, reports are made available for instructor review. At any earlier point during the semester, a faculty member from the Department may elect to sit in on a classroom for evaluation purposes, particularly if it is a Teaching Assistant's first time in a classroom. Please be aware that the Department uses these evaluations in making rehiring decisions.

Sole Responsibility for Courses

As the Director of Graduate Studies, Professor Pemmaraju is the supervisor for CS:3210, the service course for non-majors, Programming With C++ and Programming With Java.

COURSE REPORTS:

A course report is required at the end of the semester from all instructors having sole responsibility for a course. These reports are used by other instructors preparing to teach those courses for the first time, as well as to certify that the appropriate material is being covered. Hard copies are required – Web addresses of where the material can be found will not be accepted.

Course reports may contain the following information:

- A syllabus, including the required text and chapters and/or sections covered;
- A list of other references used to present additional topics, or sources of examples;
- Copies of examinations;
- Major assignments, such as programming projects;
- Topic outline with indication of the number of classes spent on each topic; and
- Some feedback on the course, indicating changes you would make, weaknesses, timing problems, and those areas felt to be in the best shape.

SYLLABI:

The University and College require every organized course to have a syllabus. Syllabi may be handed out in class, included in a course packet, or posted at the course web site.

If you are responsible for producing a course's syllabus the following provides all of the required information: https://clas.uiowa.edu/faculty/required-syllabus.

Copyright Issues

Precautions need to be taken when preparing course materials with regard to copyrighted material. This is to prevent violating an author's or publisher's rights in copyrighted work. Unfortunately, clear guidelines are unavailable as to which materials need copyright permission and which fall under "fair use" without looking at each individual scenario. The Copyright Permission Service Division of the University Printing and Mailing Services provides a copyright permission service which serves as the liaison between instructors and publishers in obtaining permission to copy. The service makes necessary payments and keeps records on all course packets. Copyright questions may be directed to the Copyright Permission Service, 335-3410.

Incompletes and Grade Changes

If any student requests an incomplete (a grade of "I"), always discuss it with your faculty supervisor before granting it. If it is determined that an incomplete is appropriate, as the instructor, you must make arrangements for how the incomplete is to be satisfied, and a copy of those arrangements should be given to your supervisor.

TAs are not usually responsible for grade changes after final grades have been submitted. Grade changes are submitted electronically through MAUI.

Student Misconduct

Any incidents of cheating on homework assignments, projects or exams should be documented as much as possible and then reported to your faculty supervisor and/or Professor Pemmaraju.

The Department of Computer Science has adopted the definitions and disciplinary actions outlined by the College of Liberal Arts and Sciences in cases of student academic misconduct. Cheating cases have become more numerous within the past few years and in response, the College has designed a clear policy in dealing with this situation.

The following are examples of offenses again the Code of Academic Honesty in CLAS:

Cheating on Quizzes and Exams

- Using notes, books, calculators, phones, photos, computers, web sites, tweets, social media, or other aids during a quiz or an exam when not allowed by the instructor
- Talking during a quiz or exam when told by the instructor talking is not permitted
- Looking at another student's exam or quiz during the testing period
- Continuing to work on a quiz or exam after the instructor has notified students that time for the test has ended.
- Stealing, reproducing, circulating, or otherwise gaining access to a quiz, exam, or homework materials prior to the time authorized by an instructor
- Ignoring the guidelines specified by the instructor for an assignment or for a "take home" test and instead using materials or study aids that the instructor has forbidden

Plagiarism

- Using the words, sentences, arguments, rhetorical structures, and ideas of another without proper citation and acknowledgment
- Copying data, facts, graphs, computer programs, spreadsheets, images, photos, film/video, or other materials and using them without proper citation or acknowledgment
- Copying homework, quiz, or exam answers from an answer key, solution manual, textbook, web site, or other items from another student, thus presenting another's work as your own
- Failing to use quotation marks properly or when needed
- Failing to give a source for quoted materials
- Failing to paraphrase language completely
- Failing to give a source for paraphrases
- Failing to cite sources correctly and completely

Unauthorized Collaboration

- Receiving help with homework, reports, labs, paper, data collection, or other activities when not allowed by the instructor
- Accepting credit for a group project without doing your share of the work
- Helping others with their homework or other assignments when not allowed by the instructor

- Allowing others to view your answers or copy part of your homework, lab, quiz answers, exam answers, or other related work when not permitted to do so by the instructor
- A group doing another student's work on a group project, lab, presentation, report, or other activity while presenting the work as if done by the entire group equally

There are many other examples on the College website: https://clas.uiowa.edu/students/handbook/academic-fraud-honor-code.

CENTER FOR TEACHING

The Center For teaching staff members are available to work with any member of the University community who teaches. The initiative, however, must always come directly from the instructor. In general all members of the University community are eligible to use the Center. Requests from others will be considered on a case-by-case basis.

All services of the Center are provided at no cost and on a voluntary and confidential basis to members of the University community, and all Center consultations are confidential matters between the Center staff and the client/ instructor. In particular, the staff of the Center will not discuss any aspect of a particular consultation with those charged with the evaluation of teaching performance of the client. Instructors may waive the confidentiality of their consultations in writing.

The Center provides many services, including individual consultations. Center staff members consult with individual faculty and TAs on teaching issues of all kinds–from help with presentation skills to ideas for active learning or dealing with challenging students. Staff can assist teachers in thinking through curricular changes, syllabus revisions, student evaluations, or dilemmas over grading. If available resources prove inadequate, staff members will research the issue to locate ideas. Appointments can be made by telephone, e-mail, or by coming to the Center office. Individual consultations could also include classroom observation, videotaping, Course Assessment by Student Interview (CASI), and discussion mapping.

The Center for Teaching in the ITS Office of Teaching, Learning and Technology may be reached at: 2080 University Capitol Centre; phone: (319) 335-6048; fax: (319) 335-1423; on the Web at https://teach.its.uiowa.edu/organizations/center-teaching or by e-mail, teaching@uiowa.edu.

CENTER RESOURCES INCLUDE:

- Library: books, videos, etc.
- Monthly e-newsletter
- Handbook for Teaching Excellence
- Teaching ideas: short tip-sheets, occasional papers, and links to other materials
- Instructional support: several offices on our campus offer instructional assistance
- Electronic resources: links to web sites and user groups
- Teaching Goals Inventory: a self-assessment of instructional goals

APPOINTMENTS AND REAPPOINTMENTS

Appointments are made every semester. Re-appointment is not automatic and all positions must be applied for in March and October. Evaluations by both the supervising faculty member and the students play a role in the re-appointment process.

Students in the first two years of their CS program who were offered financial aid upon their admittance will be given highest priority for re-appointment. After that, priority goes to PhD students making good academic progress.

The Department will post TA openings for the spring semester by October 1, and by March 1 for summer and fall TA openings. TAs MUST RE-APPLY each semester, even those who are guaranteed continued support. The application process includes listing course preferences.

Re-appointments are contingent upon satisfactory performance of assigned duties, availability of openings, and satisfactory performance as a student. We will try to notify Teaching Assistants of their appointment for the succeeding semester in as timely a fashion as possible.

SUMMER SUPPORT

Because the Department offers only a few courses during the summer, the need for TAs for the summer session are dramatically less than during the academic year. We encourage students to pursue other options for summer support.

EMPLOYMENT ISSUES

If you have any questions about your employment as a graduate assistant, please contact Sheryl or Catherine in 14 MLH. Examples of inquiries might include stipend amounts and methods of disbursement, visa issues, COGS requirements, the re-appointment process, scholarship/fellowship awards -- and anything else you don't know who to ask.

TEACHING ASSISTANT AWARDS

COMPUTER SCIENCE TEACHING ASSISTANT AWARD

Over the summer break, the Department chooses a recipient of the CS Outstanding Teaching Assistant Award for the preceding academic year. Based on the individual's teaching activities and evaluations, comments from students in your classroom, and your overall academic merits, this honor carries a $250 award. This award is usually recognized at the annual Computer Science Scholarships and Awards Ceremony at the end of each fall semester.

THE UNIVERSITY OF IOWA OUTSTANDING TEACHING ASSISTANT AWARD

The University of Iowa's Council on Teaching honors Teaching Assistants who have demonstrated outstanding ability as teachers at The University of Iowa. The Council generally makes 30 awards of $1,000 each.

Teaching Assistants from all academic units may be nominated for these awards. Nominees must certify that they have had formal student contact during at least one of the previous three semesters. Nominations may be initiated by students, faculty, colleagues, departmental executive officers or deans. The nominations must follow the guidelines specified in the nomination packet. Information on the award will be announced and distributed during the spring semester.

IN CLOSING

We hope you enjoy your graduate teaching experience. If there is anything the staff can do to help, or if you have suggestions on improvement, please do not hesitate to contact one of us.