

Graduate Student Manual

Department of Computer Science

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1 Mission/Philosophy

The mission of the Computer Science Department at Colorado State University is to provide the best possible undergraduate and graduate education in computer science, to conduct high quality research, and to disseminate knowledge through graduate education and outreach programs. Graduate students play many important roles in this mission. As students, they receive graduate education. As teaching assistants, they instruct and mentor undergraduates. As researchers, they create new knowledge to advance the field.

The purpose of this manual is to assist graduate students in succeeding in the department of computer science

at CSU. It covers many aspects of the graduate student process, including degree requirements, funding mechanisms, department expectations, and more. This manual may not answer all your questions; however, it should answer many of them, and provide links to online documents that may provide additional answers. For questions not answered by this manual, students should consult with the Director of Graduate Advising, The Graduate Program Director, or their research advisor (if they have one).

The program requirements listed here are over and beyond those described in the University's Graduate Bulletin, which specifies the minimum requirements for *all graduate degrees* at CSU.

2 Graduate Application

Students applying to a graduate program in the CS department need to be admitted both by the department and by the graduate school of the university. Therefore, the admission process has two steps: a departmental review (to be completed first), and a university application (to be completed if and when the department approves). The process for new graduate students, and in other departments at CSU is described on the department's grad application web site.¹ For students who are already in the department, the process is described in Sec. 7.2.

3 Core Requirements for all graduate degrees

We first list *core requirements* common to all the graduate programs in the department. All regular courses² used to satisfy (the core as well as other) degree requirements must use conventional grading (no S/U/audit grading options allowed).

3.1 Filing a Program of study before the end of the second semester

Students must file a *Program of Study* (form GS-6) with the graduate school by the end of the *second semester* in the program. This is one semester earlier than the graduate school deadline. The GS-6 is an official form and identifies three important elements of graduate study: the advisor, the committee and a tentative list of courses that the student plans to take.

Advisor and Committee The advisor is the chief mentor in a graduate student's education. This individual works closely with the student throughout the graduate career on all matters related to the degree program. Students select their advisor by mutual consent, as a mentor-mentee relationship develops through courses, department seminars, and 1-on-1 discussions.

Each student also has an individual graduate advisory committee, whose members are chosen by the student on the basis of their interests, experience with faculty members, and the advisor's suggestions.

The committee is individualized to each student, except for MCS and MS Plan B option 2 (Research Initiation) students, for whom, the faculty advisor and committee (if needed) is assigned by default.

Plan of coursework The GS-6 also lists all courses that the student plans to take. They must conform to the University and Department degree requirements. Transfer credits if approved (and up to the university limit for transfer credits), are also reported on the GS-6 form. The GS-6 form is started on the students RAMWeb account after consultations with the advisor.

¹ See <http://www.cs.colostate.edu/cstop/csprostudents/csgraduates/csgradapply.php>.

² The CSU catalog defines a regular course as one whose last two digits are strictly less than 82. In the CS department, the non-regular courses are independent or group study, graduate seminar, research seminar, internship, thesis and dissertation.

Deviations from the plan, if any occur during the course of study, are reported on the graduation application (GS-25) submitted in the graduation term. The modified plan must still satisfy all the degree requirements.

3.2 Six regular courses (24 credits) covering a breadth of CS

All students must take at least six regular graduate courses in the Computer Science department (4 credit hours each, total 24 credit hours). No more than two of them may be at the 400 level. No course *below* the 400 level may count towards the degree requirements.

To ensure adequate breadth of studies in multiple foundational areas, the above six courses must include at least three courses from the list below, with one course (4 credit hours each, for 12 total) from each of the following three groups:

Group I (AI & Theory):

- CS510 (Image Computation)
- CS520 (Analysis of Algorithms)
- CS522 (Foundations of Cyber-Physical Systems)
- CS540 (Artificial Intelligence)
- CS542 (Natural Language Processing)
- CS545 (Machine Learning)
- CS548 (Bioinformatics Algorithms)

Group II (Systems):

- CS530 (Fault Tolerant Computing)
- CS535 (Big Data)
- CS553 (Compilers for High-Performance Program Generation)
- CS555 (Distributed Systems)
- CS557 (Advanced Networking)
- CS560 (Foundations of Fine-Grain Parallelism)
- CS570 (Advanced Computer Architecture)
- CS575 (Parallel Processing)

Group III (Software Engineering & Information Assurance):

- CS514 (Software Product and Process Evaluation)
- CS515 (Software Maintenance and Evolution)
- CS517 (Software Specification and Design)
- CS518 (Distributed Software System Development)
- CS533 (Database Management Systems)
- CS556 (Computer Security)
- CS559: (Quantitative Security)
- CS567: (3D User Interfaces)

3.3 Exams and Thesis/Dissertation Defenses

The Ph.D. and the Plan A MS require students to defend a final thesis and/or dissertation, and some intermediate exams. These exams are all public and follow a common format. Moreover, the thesis/dissertation defense is both a formal examination, and an occasion to celebrate the culmination a student's graduate journey. These exams usually have the following format.

The student makes an oral presentation of the thesis and the main results. Members of the audience and committee members ask questions of the student. The public is asked to leave, and the committee privately asks questions to the student. The student is asked to leave and the committee deliberates and decides the

outcome of the defense.

At the conclusion of the thesis defense, the GS-24 (*Report of Final Examination*) is filled out, signed by the committee and given to the student:

Scheduling defenses and exams: All defenses and Ph.D. exams in the Computer Science department are open to the public, and therefore must be announced well in advance. This requires informing the Director of Graduate Advising staff at least two weeks in advance of the proposed defense. The final draft of the document must be provided to committee members at least two weeks in before the defense.

4 Masters Program Requirements

The department offers MS and the MCS (coursework) degrees. Students choose one of Plan A (thesis), Plan B (with two options: Project or Research Initiation). This section describes their requirements.

4.1 M.S. Plan A (thesis)

The MS Plan-A requires 37 credits beyond the bachelor's degree, and the preparation and defense of a thesis. It is a traditional research masters in computer science, which includes course work, research and a thesis. This degree is the preferred preparation for those who intend to go on to earn a Ph.D. Note that some of the requirements for this degree cannot be satisfied through online courses.

Additional Coursework In addition to the 24 credits of the core (see Sec. 3.2), the Plan-A masters requires the following 13 credits of additional coursework.

1. Two (2) credit hours of CS501 to be taken in the first two semesters (1 credit each).
2. Four (4) credits of CS793 (Research Seminar) taken for a letter grade (S/U/audit grading is not allowed) and supervised by the student's thesis advisor.
3. Three to seven (3-7) credit hours of CS699 (Thesis). If fewer than 7 credits are taken, the remainder may be satisfied, in consultation with the advisor, by another 500 level (or higher) course within or outside the department.

Thesis: The thesis is a written formal document which addresses, in an original fashion, some important concern of the discipline. It involves significant independent work, performed under the supervision of the advisor. Usually, the preliminary work begins during the CS793, and the defense is in the following semester. Although some theses lead to results publishable in peer reviewed venues, this is not a requirement.

4.2 M.S. Plan B (Project or Research Initiation)

The MS Plan-B requires 36 credits beyond the bachelor's degree, and either a research project (option 1) or exposure to research (option 2). Note that some of the requirements for this degree cannot be satisfied through online courses.

4.2.1 Option 1: Research Project

In addition to the 24 credits of the core (see Sec. 3.2) the Plan-B option 1 masters requires the following 12

³ For the complete list of the required forms, please follow the Graduate School guidelines.

credits of additional coursework.

1. One additional regular graduate course (4 credit hours) in the CS department (at the 500 or higher level)
2. Two (2) credit hours of CS501 to be taken in the first two semesters (1 credit each).
3. Six (6) credits of CSxx (Research Project) supervised by the student's project advisor.

Project and Final Exam The student must perform a research project under the supervision of a faculty advisor. The specific work for the project is determined by mutual discussion, and will involve tackling a problem deeper than in a regular course, typically over the course of two semesters. At the conclusion of the project, the results are publicly presented to department in the form of a poster. This poster session constitutes the final exam for the project.

4.2.2 Option 2: Research Initiation

This option requires no project, but more courses, and an initiation to research by (i) taking CS501 in the first semester, and (ii) developing active and ongoing awareness of department research. This happens through participation in activities like BMAC seminars, thesis and dissertation defenses, poster sessions for students in the project option and CS793, and public exams of Ph.D. and MS (Plan A) students. The final exam consists of critical audience participation in the project poster session in their final semester.

Specifically, in addition to the 24 credits of the core (see Section 3) the Research Initiation masters requires the following 12 credits of additional coursework.

1. Two additional regular graduate courses (8 credit hours total) in the CS department (at the 500 or higher level)
2. One (1) credit hour of CS501 to be taken in the first semester.
3. Three (3) flexible credits that may be satisfied through any (500 level or higher) course in the CS department, except internship (CS787).
4. Please contact the graduate advisor for the default advisor and committee information.

4.3 MCS

The Master of Computer Science degree is a non-thesis, non-research, professional masters consisting exclusively of course work. It is offered both on-campus and online. No exams or research projects, beyond those required in courses, are required, nor may any non-regular courses be counted towards the degree requirements. In addition to the core 24 credits (see Sec 3.1.2), three (3) additional regular CS courses at the 500 level or higher are required. The Graduate Program Director serves as the *de facto* advisor for all MCS students, no additional committee members are needed.

5 PhD Program Requirements

The program requirements listed here are over and beyond those described in the University's Graduate Bulletin, which serve as the minimum requirements for all graduate degrees at CSU. All regular courses used to satisfy the degree requirements must use conventional grading (no S/U/audit grading options allowed).

The PhD is a traditional research doctorate involving course work, original research and a dissertation. Students seeking the Ph.D. should be ready to perform original research in computer science upon entrance to the program.

Entrance Requirements: Students applying to the PhD program should have demonstrated research potential in a research area of one or more members of the CSU computer science faculty. Ways to demonstrate

research ability include undergraduate research projects, published or posted writings, volunteer positions especially related to STEM, leadership positions at school or work, published extensions of class projects, etc. Ph.D. admission is highly competitive; only the most highly qualified applicants are admitted to the program. We do not conditionally admit PhD students.

5.1 Core University requirements

The grad school specifies the following regulations for the Ph.D. program:

- Course work must include a minimum of 72 credit hours beyond the Bachelor of Science degree (includes thesis credits).
- A minimum of 32 credit hours must be earned at Colorado State University (includes thesis/dissertation credits) after formal admission. At least 62 must be earned at CSU for students entering without a masters degree.
- A Master of Science degree from an accredited college or University may be accepted for up to 30 credit hours.

5.2 Departmental Requirements

All Ph.D. students must satisfy the core requirements: finding an advisor, forming a committee and filing a Program of Study in the first two semesters, and completing 24 credits of regular courses satisfying the breadth requirement (see Sec 3). In addition, the Ph.D. requires the following additional coursework.

1. Exactly two (2) credit hours of CS501 (Research Initiation Seminar) to be taken during the first two semesters at CSU.
2. Three (3) credit hours (500 level or higher) outside of the CS department (courses cross listed with the CS department are not considered outside courses).
3. At least 8 credits of CS793, or 8 regular credit hours at the 600 level within the CS department (see restrictions below).

Restrictions:

- Courses that are cross-listed in the CS department cannot be counted toward requirement 2 (outside course).
- All out of department courses applied toward Departmental Requirements must be approved by the graduate committee. Students must petition for such waivers in writing.
- Grades of B or better can be used to satisfy Ph.D. requirements. Grades below B cannot be used to satisfy any of the requirements above.

Additional Requirements (milestones):

- **Research Exam:** Each Ph.D. student is required to take the written and oral Research Examination. This examination tests the student on critical thinking skills, background knowledge, and research synthesis (see below).
- **Preliminary Exam/Advancement to Candidacy/Proposal Defense:** Each Ph.D. student is required to take the oral Preliminary Examination (see below). This exam centers on, but is not limited to, the student's proposal for dissertation research. Passing this examination admits the student to Ph.D. candidacy.

- **Dissertation and Defense:** The final examination (see below) of a Ph.D. candidate is the defense of the dissertation and related subject areas. Regulations concerning the format and conduct of the final examination are contained in the Colorado State University Graduate Bulletin.

These exams are all open to the public and must follow the timely announcement described in [Sec.3](#)

5.3 Research Exam

The Research Examination is intended to be a strong predictor of success in Ph.D. research. The student will meet with his/her advisor to develop a topic and prepare an initial bibliography for the exam. The student will prepare a written report on the selected topic, including a critical review of related literature. The student will also have an oral exam, based on the written report.

A detailed description of the PhD Research Examination can be found on the [CS Department web](#) site (under the “Degrees” menu). Students prepared to take the Research Examination can find an MS Word version of the exam request form on the CS Department website. This form should be completed and returned to the department secretary. The form used by faculty to evaluate Research Exam performance is available is also available on the CS Department website.

A student who fails the research exam may take it a second time. The second try should come in the next semester (not including summer). A student who fails the research exam for the second time is dismissed from the department.

5.4 Preliminary Exam

Following successful completion of the Research Examination, each student will prepare a dissertation proposal and take the Preliminary Examination. Passing this examination admits the student to Ph.D. candidacy. The dissertation proposal should be prepared in close consultation with the student's advisor, and should be available to all committee members at least one week prior to the examination. It should reflect an extensive critical literature survey, and contain an accurate assessment of the state-of-the-art in the area of research, a precise statement of the problem to be solved, motivation for pursuing the research, and evidence to the effect that there is a good likelihood the problem is solvable with reasonable effort.

Successful completion of the Preliminary Examination results in agreement between the student and the committee as to what will constitute successful completion of the dissertation research. The committee may choose to reconvene the examination to allow the student to further research the problem, complete additional course work, or revise the dissertation proposal document.

Graduate School regulations governs the Preliminary Examination. The GS Form 16 is used to report the examination results to the Graduate School. Failure to successfully complete the examination on the second attempt mandates dismissal from the program.

5.5 Dissertation Defense

The dissertation defense must be held in accordance with the Graduate School deadlines. At least one month before the final examination, the advisor will inform the student and the committee members of the nature and scope of the examination. The student must notify the Department at least two weeks prior to the Defense to ensure that the Defense is publicly announced so that all interested faculty and graduate students may attend.

Candidates who fail their Defense of Dissertation may present themselves, with permission of the

committee, for one additional reexamination not earlier than two months, nor later than twelve months, after the date of the failure.

6 Special Courses

The department offers a number of non-regular (special courses).

6.1 CS793 (Research Seminar)

CS793 is a research seminar in which graduate students work one-on-one with faculty members to conduct research in specific areas of computer science. Students will conduct independent research on a topic chosen in consultation with the instructing faculty member, learning research methods and producing a peer-reviewed paper and research poster to be presented at a symposium at the end of the semester. Papers will be reviewed before presentation by at least two other individuals chosen in consultation with the student's instructor, and a panel of faculty will provide input on the research presented at the research symposium.

In each semester, the research groups participating in CS 793 are listed on the course website along with the faculty responsible in each case. Students enrolled in CS 793 must take responsibility for contacting one of these groups and then following the specific instructions offered. All Plan A MS and PhD students must take CS793 as part of their degree program (see Sections [4.1](#) and [5.1](#)).

6.2 CS501: (Research Initiation Seminar)

The Department of Computer Science, in cooperation with ISTeC (Information Science and Technology Center), offers the CS Colloquium series as a service to all who are interested in computer science. The colloquium series is also offered as a 1 credit class, CS501 (sometimes called BMAC, for historical reasons). All MS and PhD students must take CS501 as part of their degree program (see Sections [3.2](#) and [4.1](#)).

6.3 CS787 (Internship)

CS787 is a one-credit course commonly used in conjunction with international students seeking work experience in the US off-campus, under the Curricular Practical Training (CPT) Program. The conditions for obtaining CPT permission are strict (see <https://iss.colostate.edu/>). The most common way to fulfill CPT conditions is to enroll in a credit bearing course. The CPT process is initiated by the student who arranges with an employer to obtain a written offer of employment (describing the work that will be done). The student gets a CPT form from the International Student Scholar Services office (Laurel Hall), and has the form completed by her/his advisor. The Computer Science Department requires a form outlining the educational goals of the work experience. This can be obtained from the Faculty Advisor or the Graduate Program Director. Once completed, a student is given permission to add CS787.

CS787 may, under appropriate circumstances, be used by domestic students.

CS787 is not allowed to be included in the Program of Study for a Computer Science degree.

6.4 Continuous Registration (CR)

Continuous Registration is a special status for which graduate students may register in place of credit-bearing courses any semester they are attending Colorado State University, in order to remain admitted to and affiliated with the University. Continuous Registration gives the students access to the library, laboratory, campus computer services, etc. Continuous Registration does not bear credits. For more information, contact

7 Change of Program

Changing programs after enrollment at CSU is accomplished by completion of the Graduate School form GS-7, which is available on the Graduate School web site. The process is different for different program changes, please contact the department for assistance. The form is approved by the advisor(s) and the department chairs. For changes in the direction Ph.D. → MS (Plan A) → MS (Plan B) → MCS, the approval is automatic, other changes, as well as changes from outside the CS department require some scrutiny as described below. The case where a Ph.D. student “picks up” a masters along the way by switching to a masters program for one semester, and then changes back the next semester, is also automatically approved. A new GS-6 must be filed.

7.1 From another Graduate Department at CSU

Graduate students in other departments must complete the Department Application.⁵ They should make clear in their Statement of Purpose that they are applying from another graduate program within the University. As described in Sec. 7.2.1, applicants to the PhD program should have a faculty member willing to take them on as a PhD advisee, and recommendation one letter must be from the prospective PhD advisor.

7.2 Within the CS department

7.2.1 From any masters program to Ph.D.

The department is committed to funding with an assistantship, all Ph.D. students that make satisfactory and timely progress. Therefore, students wishing to change from a masters program (MCS, or MS) to Ph.D. will need to be approved by the Graduate Recruiting Committee (GRC). Such students should complete a Department Application through the CS Department web site. Any masters student wishing to change to the PhD program should have a commitment by a CS faculty member to serve as a PhD advisor. One of the letters of recommendation must be from the prospective PhD advisor.

7.2.2 Among the masters plans/options/degrees

- A change from MS to MCS is automatically approved, Non-regular courses taken prior to the change do not count towards, and the student must take 9 regular courses.
- A change from the Project option to the Research Initiation option is automatically approved. Up to 3 credits of CS6xx (Masters Project), if already taken, may count towards the flex credits.
- A change from Plan A to Plan B is automatically approved. CS 793, if already taken, may count towards the CS6xx (for the Project option) or the 3 flex credits (for the Research Initiation option).
- A change from Plan B or MCS to Plan A requires a petition to the GPC, and prior approval by the thesis advisor.
- A change from MCS to Plan B is automatically approved.

8 Petitions to waive requirements

Students may petition to have any of the requirements in Sections 4 and 5 waived for cause. They should be aware that some degree requirements are university requirements, for example the total number of credits and minimum GPA. Other requirements are department requirements, for example the course distribution

⁴ See [Graduate school CR policy](#)

⁵ See <http://www.cs.colostate.edu/cstop/csprostudents/csgraduates/csgradapply.php>.

requirements and the research exam. Students should check with their advisor and/or the graduate program director about any requirement they wish to waive, in order to learn the source of the requirement and how to petition to have it waived.

Petitions to waive university requirements must be made by the department (on behalf of the student) to the graduate school. The department reserves the right to refuse to file a petition on a student's behalf. In fact, it will only file a petition if it thinks the petition is both just and likely to be accepted. This determination is made by the graduate program director.

Petitions to waive department requirements should be made by a student to the graduate program director. The petition should specify how the student has fulfilled the requirement through other channels. Usually there is a specific form to fill out, depending on which requirement is being petitioned. Contact the graduate program director to get the appropriate form (if any) for the requirement being waived.

9 Satisfactory Academic Progress

9.1 Graduate School Expectations

The graduate school requires that degree seeking graduate students be continuously enrolled. This requirement may be met through continuous registration, see Section 6.4 above. In addition, the graduate school requires the following:

9.2 Maintaining good academic Standing

Graduate students must maintain a minimum GPA of 3.0 to remain in good standing. GPA calculations are made in three different ways, and all three must be at least 3.0 in order for a student to maintain good standing. The three GPA calculations are: 1) Overall graduate level GPA; 2) GPA of all courses taken after formal admission to the graduate program; 3) GPA of all courses listed on the Program of Study. Students must also be making normal progress in their degree programs to maintain good standing.

9.2.1 Academic Probation

If any graduate GPA (overall, after admission, and Program of Study) drops below a 3.0, a student is placed on academic probation. Students on academic probation have one semester (not counting summers) to raise the effected GPA to 3.0. If this does not happen, the student is dismissed from the Graduate Program.

9.2.2 Appeals Procedure

In certain circumstances, a student dismissed from the Graduate Program may be provided with one additional semester of probation if a petition is filed with the Graduate School by the Department of Computer Science. Students seeking such an appeal should discuss it with the Graduate Program Director. The conditions should be extenuating, and only the department can file such a petition.

9.2.3 Department Expectations

Evaluation and feedback on a student's progress are important to both the student and the department. Every fall semester, the entire faculty meets to evaluate the progress of each M.S. Plan A and Ph.D. student. Prior to this meeting, students should meet with their advisor to prepare a report describing the student's progress, including course work, research, teaching, and thesis/dissertation. This section describes satisfactory and timely progress for the purposes of this evaluation. Since Plan B and MCS students are not evaluated, the expectation of satisfactory progress for such students is simply that they complete all requirements for the degree by the end of their fourth semester. Assistantships are rarely awarded in the fifth semester.

A cumulative GPA that falls below 3.0 will place a student on probation. The cumulative GPA must be raised above a 3.0 by the end of the following semester to avoid dismissal from the University.

9.2.4 Expected Progress (Ph.D.)

A Ph.D. student is expected to be on the “standard track,” defined as satisfying the expectations described here. They include performing supervised research under the tutelage of a faculty advisor and “making good progress” towards the degree. For a student to be recognized as making good progress towards a degree, the student’s advisor must certify every year that the student is doing so. The advisor does this by completing a student progress report form in consultation with the student. In order to help the advisor complete this form, the student is strongly encouraged to document her/his progress during the past year with examples such as, submissions/publications of research work in the past year, helping advisor with peer-review, timely completion of course work and meeting other degree requirements. The department expects a Ph.D. student entering with a masters degree directly relevant to his/her area of research within Computer Science, to complete the Ph.D. in 4 years. Otherwise the expectation is to finish the degree in 5 years, as described below (deadlines for each of the milestones are given later).

1. The student submits a signed GS6 form to the graduate school before the end of their 2nd semester to officially declare an advisor and a plan of study. Note that this is one semester earlier than the graduate school requirement.
2. The student is actively working with her/his advisor and is continuing to make good progress as certified by the advisor.
3. The student completes all course work required for the Ph.D. in a timely manner.
4. The student passes the Research Examination in a timely manner.
5. The student passes the Preliminary Examination in a timely manner.
6. If a student is being supported on an assistantship (GTA, GSA, or GRA), the student performs the duties of that position with due diligence and satisfactorily. Performance of the student on this count will be determined by a departmental committee and will be based on student and/or supervisor evaluation as well as other material(s) as might be identified by the committee from time to time.
7. The student meets all graduate school requirements for the Ph.D. program, and is not on probation, academic or otherwise.

The interpretation of “timely manner” used above depends on the student’s status when entering the program.

For students entering with a relevant masters degree:

- Coursework (including the breadth requirement and except for 4 credits of CS 793): 1 year
- Research Exam: 2 years
- Preliminary Exam: 3 years

For students entering without a relevant masters degree:

- Coursework (except for 4 credits of CS 793): 2 years
- Research Exam: 3 years
- Preliminary Exam: 4 years

9.2.5 Expected Progress (MS, Plan A)

We expect all full time Plan A masters students to complete all the degree requirements in four semesters, possibly with a summer to write/defend the thesis. Such a student is expected to perform supervised research under the tutelage of a faculty advisor. Satisfactory progress includes the following elements.

- The student finds an advisor as early in the program as possible, but no later than end of the 2nd

semester. In consultation with the advisor, the student forms a committee, chooses a thesis topic, makes a plan of study, and submits a signed GS6 form to the graduate school, and has it approved.

- The student continues to work actively on the research topic in the 3rd and 4th semesters, complete the M.S. by the end of the fourth semester, including completing all required course work.
- The student meets all graduate school requirements for the M.S. program, including scholastic standards, and is not on probation, academic or otherwise.
- If the student has an assistantship, s/he performs assistantship duties in a satisfactory manner.

9.2.6 Expected Progress (Part-time)

Part-time Ph.D. students are evaluated during the annual evaluation, and should prepare the same progress report. It should mention that the student is part-time, and chalk out an appropriate timeline for progress. Since part time students are rarely funded on assistantships, their progress must simply satisfy the graduate school rules about timely progress.

9.3 Other Requirements

The department does not require a minimum number of credits per semester, so long as a student meets the expectations of progress described in Annual Evaluation, and meets the graduate school criteria described in Section 9.1. However, graduate students should be aware that other entities may impose additional requirements. In particular, international students should be aware that their visas may require them to take a minimum number of credits per semester. Students with questions about visas should talk directly to International Student and Scholar Services (ISSS) in the Office of International Programs. Similarly, students may be required to take a minimum number of credits in order to defer outstanding student loans. In this case, students should talk directly to the loan holder. Finally, students with external sources of funding should consult with their funding sources.

9.4 Finding/Changing an Advisor

Students seeking an MS or PhD advisor should be aware that the advisor-advisee relationship is bi-directional. Students and advisors agree to work with each other by mutual consent. No faculty member is compelled to advise any student, and neither is a student compelled to work with a faculty member. The department is also not obliged to find a research advisor for a student.

The student-advisor relationship becomes official when the student's GS6 form is approved by the graduate school. Students changing advisors must fill out a new GS6 and have it signed by their new and old advisor.

Students with assistantships should be aware that changing advisors may impact their funding. In particular, if a student is being funded as a GRA by their advisor, then switching advisors may end the assistantship. The new advisor might or might not hire the student as a GRA. The tie between funding and advisors is less strict for GTAs, but still exists. The department seeks to support students making progress toward a research degree. Changing advisors may or may not cause the department to reconsider hiring the student as a GTA in the next semester. Students who are considering changing advisors should consider the financial implications.

10 Department Evaluations and Their Implications

We now describe departmental student evaluation and potential repercussions of unsatisfactory evaluations.

10.1 Assistantships: Quality of Work

If a student is funded on a research assistantship, the advisor and/or PI of the grant funding them determines

if the work is satisfactory.

If a student is funded as a GTA, they are evaluated based on feedback from the instructor of the course and course evaluations from students. Other forms of signed student or faculty feedback may also be used. The graduate program director evaluates GTA performance with feedback from the undergraduate program director and the graduate program committee.

For students funded as a GSA, the department's head systems administrator evaluates GSA performance.

Assistantships are awarded to students on a semester-by-semester basis. In extreme cases, a student who does not fulfill their duties may have their contract terminated mid-semester, under the procedures outlined in the graduate bulletin. In less extreme cases, students who perform poorly may not be given new assistantships in following semesters. Satisfactory progress, including conformance to the department's and university's conduct, academic integrity and non-discrimination policies, will also be taken into account.

10.2 Annual Evaluation

The department faculty reviews the progress of all M.S. and Ph.D. graduate students. Students that are not making satisfactory progress are discussed. If the faculty believe a student to be deficient, they may ask the student's committee to consider certifying that the student is not making adequate progress. For a student who does not have an advisor, the graduate program director serves as the advisor. For students without a committee, the graduate program committee serves as their committee.

10.3 Dismissal Procedures

It is a role of a student's advisor and committee to certify that they are making adequate progress. If the committee is satisfied with a student's progress, no action is called for. If a committee is concerned that a student is not making progress, or if the faculty as a whole believe a student is deficient, then the student's committee will meet with the student, either in person or virtually, to discuss the student's progress. They may ask the student to describe their progress and planned progress in writing.

If, after meeting with the student, the committee still believes a student is not making adequate progress, they will notify the student in writing that they are not making adequate progress and what steps the student needs to take in order to demonstrate adequate progress. They will also ask the graduate school to put the student on probation. The student then has the remainder of that semester and one more semester (not including summer) to meet the written requirements of the committee. Students who fail to do so will be dismissed from the program.

10.4 Ethical and Professional Conduct

In addition to responsibilities enumerated here, students are expected to follow the Department's Academic Integrity Policy (http://www.cs.colostate.edu/cstop/csacademics/student_info.php#integ) and Colorado State University's Academic Integrity Policy (<http://www.conflictresolution.colostate.edu/academic-integrity>) and Student Conduct Code (<http://www.conflictresolution.colostate.edu/conduct-code>). The department further advocates rights and responsibilities of conduct for all its members: faculty, staff and students, in accordance with the intent of the Code of Ethics of the Association of Computing Machinery (<http://www.acm.org/about/code-of-ethics>). Please see details off the department web page at <http://www.cs.colostate.edu/cstop/csdepartment/CodeOfConduct.php>

10.5 Discrimination Statement

Colorado State University is committed to providing an environment that is free from discrimination and

harassment based on race, age, creed, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity or expression, or pregnancy.

Colorado State University is an equal opportunity/equal access/affirmative action employer fully committed to achieving a diverse workforce and complies with all Federal and Colorado State laws, regulations, and executive orders regarding non-discrimination and affirmative action.

10.6 Grievance Policies

Should a student's advisor and committee decide to recommend dismissal from the Ph.D., M.S. or M.C.S. program, the student will be notified in writing. The student will then have the opportunity to appeal this decision with their SAC and the Provost/Academic Vice President (see CRS 24-19-104) before a final decision is made and implemented. The student will be notified in writing of this final decision.

11 Assistantships

Many graduate students at CSU are funded as part time (20hrs/week) Graduate Assistants. Students are expected to take courses and do research towards their degrees during the rest of the time. GAs receive a monthly stipend and a tuition waiver also have their tuition paid for. This section describes the duties, responsibilities and selection process for these assistantships.

11.1 Graduate Teaching Assistants GTA

GTAs support the teaching mission of the department by helping with a class. Expectations of GTAs include being on campus, prepared to work the week before courses start and attending the CS department GTA orientation where other expectations will be discussed. GTAs are expected to work on average 20 hours a week and do tasks assigned by the instructor for which they are a teaching assistant. Tasks include preparing/grading assignments, attending lectures, preparing and giving recitations, and creating answer keys. Grading programming assignments will require students to have/acquire the ability to do some scripting.

11.2 Graduate Research Assistants (GRA)

A Graduate Research Assistantship is when a student is paid to contribute to the research and deliverables for a research grant or project managed by a Principal Investigator (often the student's advisor). Since research is one of the primary expectations of most graduate degrees, full time students funded as GRAs are also expected to spend additional time (beyond the 20 hours per week) taking and studying for courses, performing research and independent study to advance their own individual graduate education. PIs may have additional specific requirements, relevant to the specific grant (presentations to funding agencies, software releases, papers/presentations at conferences, mentoring and outreach activities, etc.)

11.3 GSA

The department's system administration group, hires Graduate System Administrators. If you have system administration experience and are interested in such a position, please contact Wayne Trzyna.

11.4 External Funding

If you have your own external funding, then your admission letter will reference that funding. If this external funding is in the form of a fellowship like the NSF or DoE graduate fellowships, or the Fulbright program, then your advisor may augment your monthly stipend with grant money so that it is on par with other students in the department. If for any reason you lose your external funding while you are a graduate student,

you may ask your advisor for GRA funding or ask to be placed in the GTA pool.

11.5 GTA Selection

GTA awards are competitive, and not all applicants are awarded one. Students admitted with an assistantship may expect to keep it provided they meet all department expectations for satisfactory and timely completion of their degree program (two years for MS students, and four/five for Ph.D., depending on their status on admission). In addition, the department may award semester-by-semester awards to meritorious students. GTA selection is made by the GTA Assignment Committee.

11.6 Residency Requirements

At CSU, those Graduate Assistants who can do so (US citizens and permanent residents) are expected to acquire, whenever possible, Colorado state residency by the end of their first year at CSU. Starting in the second year, the tuition waivers provided to such students will only pay at in-state tuition rates. The rules for residency are determined by the registrar's office.⁶ Student's should follow the petition process described there to become CO residents for the purpose of assessing tuition in their first year.⁷

12 Logistics

12.1 Registering for Classes

On campus students register for courses through the web-based campus registration system, RamWeb (ramweb.colostate.edu). Students must first have an Electronic Identity (EID) in order to use this system (eid.colostate.edu). Ramweb allows students to add, drop, and withdraw from classes before and during the semester (subject to published deadlines). Full time enrollment for graduate students is 9 semester hours minimum. Students should sign up for specific classes only after consultation with their advisors (either temporary or permanent).

Online students register for online classes through OnlinePlus (www.online.colostate.edu). This is a web-based system similar to purchasing items on the Internet.

Graduate students are responsible for knowing the add and drop deadlines for their courses. In general, a student may add a 16-week class through the first week of classes and drop a class through the Wednesday of the third week (with no trace of having enrolled in it left on the student's transcript). The withdrawal deadline by which a student may withdraw from a class leaving a W grade (on the transcript, but which does not affect GPA calculations) is the end of the 8th week of classes.

12.2 Student representation and governance (GSA)

Student representation and governance is meant to give graduate students a collective voice in how the department and more broadly the university are run. See the graduate school organizations web page for more information.

At the university level, the Graduate Student Council (GSC) advocates for CSU graduate and professional students within departments, the university, the state, and nationally. The GSC hosts social, networking and development programs at CSU to maintain a personal community for graduate and professional students during their tenure.

⁶ See <https://financialaid.colostate.edu/in-state-tuition-requirements>

⁷ See <https://financialaid.colostate.edu/petition-process-and-deadlines>

For students of color, the graduate school also offers the Comprehensive Academic- Related Program (CAP) for Graduate Students of Color. The goal is to implement a comprehensive academic framework providing professional development and additional opportunities for graduate students of color to address systematic issues that may impede their progress in their graduate programs.

12.3 Department committees

As specified in the department code, the CS department has both standing and ad-hoc committees. Many contain graduate student representatives. These representatives serve one-year appointments. When the students are organized into an active Graduate Student Association (GSA), the GSA will elect the student representatives. Otherwise, committees shall seek nominations from the graduate student body (usually by email) and select a representative from among the nominated students.

The standing committees that include a graduate student representative are the graduate program committee and the graduate recruiting committee. Note that the graduate representative on the graduate recruiting committee must be dismissed when specific applications are discussed, to maintain the privacy of applicants.