

Computer Science Supplement to The University of Colorado, Boulder Graduate Student Handbook

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1 Introduction

This handbook should answer your questions about the rules of the department. This information is also available on our website at <https://www.colorado.edu/cs/current-students/graduates/>. In case you have questions or are unclear about the rules it is best to talk to your Graduate Advisor or a member of the Graduate Committee.

Graduate Advisor

My name is Rajshree Shrestha and I am the Computer Science Graduate Advisor. My e-mail address is Rajshree.shrestha@colorado.edu, phone 2-6361, office ECOT 721. My office hours are Monday through Friday from 8:00 am – 4:30 pm. I oversee most aspects of department operation that will affect your stay here. I typically see students between 9 am – 12 pm and 1 pm – 3 pm, Tuesday through Friday.

2 Facilities

2.1 Card Access

Access to all computing labs is controlled by card readers. Students use their BuffOne card to gain access to the labs. Access authorization is typically given for the lab in which you are assigned desk space, the Computer Science Educational Lab (CSEL) which is ECCS 128, and conference rooms ECCS 1B06, ECOT 831/832. To gain access to your research lab have your faculty advisor send an e-mail to the front office administrator granting permissions. Then take your BuffOne card to her so she can give you access to your lab. Other secured doors in the Engineering Center use your BuffOne card also, and access must be arranged through whoever is in charge of that door. In particular, the entrance on the west side of the building (same side as the revolving doors and lobby) has a BuffOne card reader, which is useful if you need to get in when the building is locked. To get your Buff card activated for this entrance, here's what you have to do:

1. Photocopy your Buff Card
2. Write your name, department name, and advisor's name on the copy
3. Take the copy to the Dean's office (all the way across the lobby from the coffee shop) and ask one of the receptionists to give you access to the Engineering entrances. Keys to labs are not usually assigned to graduate students. If you feel that there is a reason an exception should be made in your case send email to the Graduate Advisor.

2.2 Computing Facilities

There are three different accounts that you might need. First, you'll need a university-wide IdentiKey account. You should have already received your IdentiKey username from the university. The IdentiKey account gets you into MyCuInfo, the CU student web portals where you can register for classes, check and pay your tuition bill, see your transcript, etc. In addition, the IdentiKey account is the one you will use when logging onto computing resources outside the department, such as the computer labs on the 2nd floor of the Engineering Center and the library, even the couple of computers in the gym. The university's Office of Information Technology (OIT) is in charge of the general University computing resources, and therefore administers the IdentiKey accounts. If you still need to activate your account or want further information on IdentiKey, see <http://oit.colorado.edu/identikey>.

Second, you may want a department-specific account in order to access department resources (basically, so you can use the computer on your desk). All Ph.D. students definitely want this kind of account, but Masters Students will want this kind of account only if they are doing research for a professor. Generally, this type of account is administered by OIT but must first be approved within the department. However, if you are in the systems research group then you are privy to a network independent of OIT. To get a

research account, just ask your advisor. If you are one of the many graduate students not in the systems research group, your professor may sponsor you for OIT Basic Service or CornerStone service, two different levels of OIT computing support.

Third, you may want a Computer Science Educational Lab (CSEL) account. CSEL is mainly for undergraduates, but can fill in the gaps between OIT and your professor's and/or your personal resources. You may want a CSEL account if one of your courses uses the resource (for instance, if you are expected to use MATLAB, which is installed in CSEL), or if you are a M.S. student who does not do research for a professor but needs computing resources here at school (especially computers with some specialized software packages installed such as MATLAB, LAPACK, etc). To receive an account for those machines please go to <http://csel.cs.colorado.edu>.

Now we'll cover email. Every CU student gets a CU email account. Your username here is unique university-wide. Usually the address is `firstname.lastname@colorado.edu`. You can access your email using your student portal.

2.3 Office and Desk Space

New Ph.D. students will have desk space assigned to them by their advisor. Where you are placed is typically dependent on who your advisor is and in what general area your research interests lie. For more information about the Computer Science Educational Labs and the research labs see Section 6.8, Grad Student Labs.

3 Graduation Requirements

The general requirements for obtaining a degree from the University of Colorado are listed in the University Catalog and in the Computer Science Supplement to the Catalog. Specific details for Computer Science will be given here.

3.1 Master's Degree

The department of Computer Science offers two types of Master's degree.

1. MS in CS – Master's in Computer Science degree has two options. One is Thesis and second is the non-thesis option. Under Thesis option, students have to complete 24 credits of coursework and complete from a minimum of 4 to a maximum of 6 credits of MS Thesis credits and have to write a Thesis. Under the second option, Non-Thesis option, students have to complete 30 credits of coursework accordingly their MS plan of study. Details of the course plan is listed below.
2. MS in CS with Data Science & Engineering sub-plan – Master's in Computer Science with Data Engineering and Science sub-plan is a new degree option offered as of Fall 2016. Under this option, students will have to fulfill their MS requirement and the DSE requirement as well. Details of course plan is listed below.

3.1.1 Advisors

When you were first accepted you were assigned an advisor. You should have your advisor sign a "Plan of Study" form as described below. You may change advisors at any time. Send an email to the GRADUATE ADVISOR to do this. Your advisor is here to help you graduate. Feel free to see your advisor any time you have questions, problems, or need some help in any matter. You should take the initiative to make an appointment with your advisor at least once a semester, preferably just before pre-

registration, to go over what classes and/or exams you are planning to take, review your progress, and make any necessary changes to your Plan of Study.

3.1.2 The Plan of Study

This form lists the courses you plan to take to complete your degree. Breadth courses are specifically required to obtain a Master's degree in computer science. They must include 5000 level courses in at least four of the nine Computer Science areas to meet the Breadth Requirement (see Section 3.1.8, Masters Breadth). The courses listed on your Plan of Study are up to you and your advisor subject to the general requirements of the Graduate School. Students who are admitted conditionally must take the specific courses listed on their letter of acceptance. Your Plan of Study may be changed at any time with the approval of your advisor. It exists to protect both you and the Department. It ensures that you follow a course of study the Department deems worthy of a Master's degree. It also protects you from arbitrary changes in requirements by the Department. As long as you follow a signed Plan of Study and maintain a GPA of 3.0 or better, you will get your degree. Your Plan of Study should be completed within three weeks of your first day of classes.

3.1.3 Taking Classes

Students in the Computer Science M.S. or Ph.D. programs should enroll in all their CS courses as a Boulder campus student. The graduate committee has approved the proposal to allow MS student to enroll in up to 3 courses (9 credits) of coursework via Be Boulder Anywhere (BBA) that will count towards the MS degree. A student in the Ph.D. program with a legitimate reason for enrolling as a BBA student can petition the Graduate Committee for permission to do so. An example of a legitimate reason is working at an industrial site equipped with a TV classroom that receives the BBA broadcasts.

3.1.4 Masters Transfer Courses

You may transfer up to nine semester hours of courses from another university or from within CU (taken as a non-degree student). If you are transferring these courses from another college, a Request for Transfer of Credit form needs to be filled out after completing at SIX credits of graduate level course work with a grade of B or better and a minimum GPA of 3.25. This form will need to be signed by your advisor and the Graduate Director of the Department and then will be forwarded to the Graduate School for approval.

Courses taken within CU system, which you want transferred should be listed in the appropriate area on the Masters Application-for-Candidacy form (see Section 3.1.12, Masters Admission to Candidacy). Once this form has been signed by your advisor and the Graduate Director of the Department, the credits for these courses are automatically transferred. Courses that were taken more than five years ago will have to be validated.

3.1.5 Masters Pass/Fail Courses

No graduate courses may be taken for Pass/Fail credit. This includes graduate courses which are transferred into the program. You can take courses for No Credit but they will not count towards your degree.

3.1.6(a) Masters in CS without sub-plan_Option I Vs Option II

As part of your Plan of Study you must decide whether or not to do a Master's Thesis (known as Option I.) Option I requires you to take 24—26 credit hours in course work plus 4-6 credit hours of thesis to accumulate a total of 30 credit hours. You must also successfully defend your thesis and upload your thesis electronically to <http://www.etsadmin.com/colorado>.

Otherwise, you will need to take 30 credit hours of coursework to meet your degree requirements (known as Option II.) In both plans you will still need to fulfill the breadth requirement of passing four out of nine major CS area courses with a grade of B or better (not B-.)

If you want to do a thesis you must find a faculty member willing to be your advisor for that research. The Department's faculty is large enough that you can usually find someone willing to sponsor you and help select a topic appropriate for a Master's thesis in nearly every field of Computer Science. Your thesis advisor becomes your regular advisor as well. Otherwise, you will be required to take at least 30 credit hours of qualified courses in Computer Science or cross-listed with Computer Science including any approved non-CS 4000-level courses. You will need to maintain an overall GPA of 3.0, including having a grade of B or better (not B-) in courses in four different areas of Computer Science. For both plans you must complete your degree within four years of your entrance to the program.

3.1.6(b) Masters in CS with DSE sub-plan

The department requires a candidate to complete an approved plan of study consisting of at least 30 semester hours. At least 24 of these 30 hours must be in Computer Science courses at the 5000 level or above. (Any course that is cross-listed by Computer Science is considered to be a Computer Science course, regardless of the department in which the student actually registers.)

Up to 6 hours may be taken in courses at the 4000 level or above in other departments (CSCI 4000 level courses cannot be counted towards a Master's degree), provided that those courses have "significant Computer Science content" and are taught by a member of the graduate faculty. The student must file a petition to allow these credit hours to be counted toward the degree. This petition must explicitly verify the above requirements and must be approved by the student's advisor and the Graduate Director of the Computer Science department.

Up to 9 credits of coursework can be taken via Be Boulder Anywhere, which offers distance learning for graduate-level courses in an accessible, online format. Students will not be allowed to petition the graduate committee to take additional courses via Be Boulder Anywhere. Coursework will be verified on the Candidacy Application for Advanced Degree during the semester the student intends to graduate to ensure that only 9 credits of Be Boulder Anywhere coursework are counted toward the MS degree.

Breadth Requirement: Computer Science Courses are listed in nine areas of research: artificial intelligence, computational biology, human-centered computing, numerical & scientific computing, programming languages, Software Engineering, Database systems, systems & networking and theory of computing. All students must earn a B or better (not a B-) in at least one 5000-level course (not 6000 or higher) in four of these nine areas.

Data Science & Engineering sub-plan:

In addition to completing the Breadth requirement mentioned above, students enrolled in DSE sub plan must fulfill the following course requirements:

- one core course in Data Science (DS)
- one core course in Data Engineering (DE)
- two other courses in either DS or DE

Students have to get a grade of at least a B or better in the ALL DS and/or DE courses to fulfill the requirement. Courses of interest to the student, to be chosen in collaboration with the student's faculty advisor and included in the MS Plan of Study. Course list for Data Science and Data Engineering is available at the website at <http://www.colorado.edu/cs/graduates/master-science-computer-science-data-science-engineering-dse-sub-plan>.

Students under this degree plan CANNOT choose the Thesis option.

3.1.7 Courses External to the Department

You may count two three-hour 4000-level and up courses from another department toward your degree provided:

1. They are not Computer Science.
2. They are not cross-listed with Computer Science.
3. They have significant Computer Science content.
4. The instructor is a member of the Graduate School faculty.
5. The student successfully petitions the graduate committee.

For example, you may want to take a senior-level math course in logic. Take note! Students in the past have been caught when their instructor was not a member of the Graduate School faculty! Tenure-track professors are almost always Graduate School faculty. Graduate Part-Time Instructors (GPTI) are almost never Graduate School faculty. For other instructors it is a toss-up. Check with the instructor at the beginning of the semester to make sure. Remember, you only have to worry about this for 4000-level courses; almost all 5000-level courses or above are taught by Graduate School faculty.

3.1.8 The Breadth Requirement

One major requirement for your degree is that you must receive a grade of B or better (not B-) in four graduate courses at the 5000-level, each one in a different area of Computer Science. The intent of this requirement is that you take the introductory graduate course in at least four areas. Master of Engineering (ME) students are required to take courses in three of the nine different areas to fulfill the breadth requirement. If you already have such a course at another school you can substitute a higher level graduate course in that area, but you need to get written approval from your advisor and give this to the graduate advisor for your file. No transfer credits will count towards the breadth requirement unless you take an upper level course in the same area here at CU-Boulder. The nine areas considered are artificial intelligence, computational biology, human-centered computing, numerical & scientific computing, programming languages, Software Engineering, Database systems, systems & networking and theory of computing.

Please check the CS website for breadth courses per area. The purpose of this requirement is to assure the breadth of your knowledge in Computer Science. This requirement must be met by both MS/CS Plan I and Plan II students as well as, MS/CS_DSE students.

3.1.9 The Master's Thesis Defense

(Only for Option I students under CS/MS degree.) You must select three faculty members to serve as your examining committee and fill out an Examination Report form. Your advisor is automatically one of these and is the committee chair. The other two members may be any Graduate faculty members who will agree to serve. This is the committee before whom you defend your thesis. The members of this committee must be approved by the Department and by the Graduate School. Submit the Examination Report Form at least 2 weeks prior to your defense so that the GRADUATE ADVISOR can get the

graduate school approval of your committee. It is considered good form to give copies of your thesis to the members of your committee at least two weeks prior to the exam. At least two members of the committee must approve of the oral thesis defense for you to pass successfully. It must be passed with a grade of B- or better. If you fail this defense you may retake it once in a later semester, or you may switch to Plan II at this point. You must upload your thesis electronically to <http://www.etsadmin.com/colorado>. Information on requirements for your MS Thesis can be found on the graduate school website at <http://www.colorado.edu/GraduateSchool/academics/index.html>. You must be registered during the semester in which you do your defense. If you don't need to take any other courses that semester and you have taken all your possible thesis credit hours you may register as a Masters Candidate-for-Degree (see Section 3.1.14, Masters Candidate) The time between semesters (between the day of commencement in one semester and the first day of classes in the next semester) can be considered part of the preceding or part of the following semester. Summer is considered a separate semester for the purpose of defending a thesis.

3.1.10 The Written Comprehensive Examination

(Only for Plan II students.) There is no longer a requirement to take the written comprehensive exam. This change occurred at the beginning of the fall 2011 semester.

3.1.11 Notification of Status

If there is a possibility that you will graduate, or defend a thesis during a given semester please notify the graduate advisor at the beginning of the semester. This does not commit you to completing your degree that semester.

3.1.12 Application for Admission to Candidacy Form

In order to graduate, you must file an Application-for-Candidacy form the semester you intend to graduate. Once you have filed one of these forms you don't have to do so again, although you will need to submit any changes to courses listed on your Application-for-Candidacy. This form is available on the CS website at <http://www.colorado.edu/GraduateSchool/academics/docs/candap.pdf> or on the Graduate School website, <http://www.colorado.edu/GraduateSchool/>. The filing deadlines are listed in the University Catalog and posted on the graduate bulletin board.

3.1.13 Applying for Graduation

In order to graduate, you must log into your myCUInfo portal and click on the student tab. Then you must select the 'Apply for Graduation' link in the middle of the page. Follow the instructions to apply for the semester you plan to graduate. If you do not graduate in the semester you plan to, then you will have to go to your myCUInfo and apply for the next semester you plan to graduate. The application deadlines are listed in the University Catalog and posted on the graduate bulletin board. You must do this at the beginning of the semester in which you plan to graduate.

3.1.14 Masters Candidate-for-Degree

If you are a Option I student and have completed your course work, including six hours of thesis credit, but have not yet defended your thesis you can sign up for one credit hour of CSCI 6940, Masters Candidate-for-Degree. You must be formally registered the semester you defend your thesis. You will need a controlled enrollment number available from the graduate advisor to register for CSCI 6940.

3.1.15 Masters Final Paperwork

All students should keep the graduate advisor apprised of when they expect to take their final exam. Option I students should provide the graduate advisor with the title of their thesis, the names of the members of the thesis committee, and the date of the defense. This must be done at least 2 weeks before

the defense. Plan II students should notify the graduate advisor early in the semester that they intend to graduate.

3.1.16 Masters Grades

Except for a thesis defense (which must have a grade of B- or better) and the four courses used for the breadth requirement (which must have a grade of B or better) a grade of C in a course is sufficient to credit that course toward a Master's degree. Remember that your overall GPA cannot fall below 3.0.

3.1.17 Masters Sufficient Progress

All students should note that the Department is given the authority to drop any student who fails to make sufficient progress toward a degree. The definition of sufficient progress is left to the Department. The Computer Science Department will take no action under this authority without first informing you of what you must do to resume adequate progress and giving you a fair amount of time to satisfy those requirements. The best way to avoid problems is to maintain regular contact with your faculty advisor and your graduate advisor. If you decide not to take any courses in a particular semester you must apply for the Time Off Program (TOP) to ensure you will be able to register for the next semester. See the Registrar's office for more details on the Time Off Program. Failure to register or sign up for the Time Off Program will result in your being dropped from the program. i.e., you would have to reapply and be accepted again to resume your studies.

3.2 Doctoral Degree

3.2.1 Doctoral Preliminary Examination

The Ph.D. Preliminary Exam fulfills the Graduate School requirement for a Preliminary Exam. The Exam consists of an Area Exam requirement plus a Course requirement.

3.2.1.1 Course Requirement

The doctoral degree includes breadth courses and depth courses. Depth courses should be closely related to the student's research interests and should be intellectually distinct from breadth courses. Breadth courses should cover a range of Computer Science topics outside the student's research interests.

Breadth Requirement (15 credit hours)

Five 5000-level (not 6000 or 7000) Computer Science (CSCI) courses must be taken, according to the following requirements:

1. All five courses must have a grade B or better.
2. All five courses must be taken within the first five semesters.
3. All five courses must be listed on the Plan of Study.

CSCI 6000. Introduction to the Computer Science PhD Program CSCI 6000 is a required course for all new PhD students and must be taken in the first semester of joining the program.

Depth Requirement (15 credit hours)

Fifteen credit hours of graduate level courses, from any department, organized in support of the student's chosen research focus and according to the following requirements:

1. All courses must be listed on the Plan of Study.
2. All courses must have a grade of B or better.

*****IMPORTANT NOTE: If you plan to get a MS diploma while in the Doctoral program, you must fulfill the MS Degree requirements – see section 3.2.2 as well as MS requirements, section 3.1.8.**

3.2.1.2 Area Examination Requirement

The purpose of the Area Examination is to ensure that the student has sufficient depth to begin research in a selected area. Thus the exam tests knowledge of the general area of computer science that contains the research topic, deeper specialized knowledge of the specific research area that the student will be working in, and intellectual sophistication needed to conduct research in the area. The area examination contrasts with the comprehensive exam, which is devoted to a focused research theme. It complements the course work requirement of the preliminary exam, which is meant to build breadth in CS in general and general knowledge of the student's research area.

Selecting an Examination

Each student is given an advisor on entry to the Ph.D. program. During the first semester of Ph.D. studies, the student must file a PhD Plan of Study, approved by the advisor. The plan specifies the courses and the Area Exam.

1. The plan may be amended as many times as necessary, but the advisor's approval is required on all versions of the plan.
2. The Area Exam must be passed by the end of the 3rd academic year in order to be making adequate progress. It will normally be taken during the 2nd academic year.
3. Because the Area Exam and coursework selections are related to competencies in a specific subject area, students with an academic advisor outside their area of interest should attempt to find a faculty member qualified to advise on the coursework and Area Exam components of the plan of study. The academic advisor signing the plan of study need not be a student's Ph.D. research advisor, but should be in a related area in order to make the transition easier.
4. A student may switch academic advisors with the approval of the new advisor. The new advisor will approve a revised Preliminary Exam Plan. A student changing areas who has already completed an Area Exam will not be required to take another. Instead the student will be required to make up any deficiencies as determined by the new advisor.
5. A student is allowed at most two attempts total to pass the Area Exam.

Examination Scope and Scheduling

1. Any three graduate faculty members can offer an Area Examination. Faculty outside the CS department may serve on the committee as members; however the chair of the committee must be a CS faculty member.
2. All Area Examinations are open to all students in the department, but each student's advisor must approve of the Area Exam chosen by the student through the Preliminary Exam Plan. Most Area Examinations will be offered once per year, in the same month every year.
3. Exams that are being offered for the first time will be announced at some point during the preceding academic year. As much information about the exam as possible will be made available when a new exam is announced.
4. The list of all Area Exams for the academic year will be finalized at the start of the Fall Semester, and posted on the departmental website. The GRADUATE ADVISOR must be notified of each Area Exam by the Exam Committee. An exam that is not on the list at the start of the academic year (or was not announced before the previous summer recess) cannot be offered that year. The date the exam will be offered, as well as its format, are at the sole discretion of the committee offering the exam.
5. The format of the examination and the materials upon which the Area Examination will be based (courses, papers, and/or textbooks) will be posted at the exam website at least three months in advance of the exam. Exams will often differ slightly from the posting, but broad changes in the exam will be posted

a year in advance. It is recommended that as much material as possible be available to students, e.g. previous exams.

6. Faculty will attempt to maintain consistency in the exams. Exams in different areas should be at similar levels of difficulty. The material tested by the exam is roughly the equivalent of 2 graduate courses minimum and 3 graduate courses maximum, although the exam need not be based on any specific courses.

7. An exam must be offered again, within a year, if a student wishes to retake it to earn a passing grade.

3.2.2 Getting a Master's Degree During the Doctoral Program

Many doctoral students enter the program directly from an undergraduate program and do not have a Master's degree. During the course of a normal doctoral program you are required to take at least 30 credit hours of courses (not counting any Master's Thesis hours) so if you have met the Masters Breadth Requirement you will fulfill the requirements for a Masters. In this case you only have to file an Application-for-Candidacy Form and a 'Degree Plan Approval form' as well as log into your myCUInfo, click on the Student tab and click on 'Apply for Graduation' at the beginning of the semester to obtain your Master's degree even though you are not formally in the Master's program. It is to your benefit to consider doing this so that if you have to leave the doctoral program for financial or personal reasons you will have something to show for your efforts.

3.2.3 Finding an Advisor

You must to find an advisor to sponsor your thesis research within one year after passing your preliminary exams. It need not be the advisor assigned to you when you first entered the program.

3.2.4 Doctoral Comprehensive Examination

In the CS Department, the University requirement of a Doctoral Comprehensive Examination consists solely of an oral defense of a thesis proposal (Proposal Defense.) Ideally, this should be taken within two years of passing your preliminary exams.

3.2.4.1 Dissertation Credit Before the Proposal Defense

There are limits on the amount of dissertation credit taken before you pass your Proposal Defense which may be counted toward your degree. Currently, this includes ten dissertation credit hours taken the semester during which you do your Proposal Defense and a maximum of ten dissertation credit hours taken in preceding semesters. In other words, you can use only up to ten hours of dissertation credit taken prior to the semester in which you defend your proposal, but you do not have to have taken ten hours of dissertation credit before then. Further, you can count up to ten dissertation credit hours taken during the semester that you do your proposal defense, but you do not have to be taking ten hours of dissertation that semester.

3.2.4.2 Admission to Candidacy Form

Early in the semester you plan to do your Proposal Defense, you must file an Admission-to-Candidacy form available on the CS website forms page at <http://www.colorado.edu/GraduateSchool/academics/docs/candap.pdf> . The GRADUATE ADVISOR will file your Admission-to-Candidacy form with the Graduate School after you have successfully defended your proposal. The Graduate School deems you a Candidate as of the day of your proposal defense (status changes take affect the next semester), regardless of when they receive the Admission-to-Candidacy form.

3.2.4.3 Committee for Your Proposal Defense

You and your advisor must select at least five faculty members to serve as your examining committee for your Proposal Defense. Your advisor is automatically one of these and is the committee chair. The other

members may be any Graduate faculty who will agree to serve. There does not have to be a non-CS member on the committee for your Proposal Defense. Rules for your final Dissertation Defense committee are a bit different, so you might as well assemble your committee only once.

3.2.4.4 Examination Report Approval Form

You must submit the [Doctoral Exam Form](#) along with names of your Committee members as well as the time and date of your dissertation proposal for approval at least two weeks before the exam to the GRADUATE ADVISOR. For each non-CS member on your committee, submit his/her CV to the GRADUATE ADVISOR as far ahead of time as possible so that s/he can do the paperwork to give them the right status to be on your committee.

3.2.4.5 Copies of Written Proposal

You should give a copy of your written Dissertation Proposal to the members of your committee. It is considered good form to give copies of your proposal to the members of your committee at least two weeks prior to the exam.

3.2.4.6 The Actual Proposal Defense

The committee decides on the basis of the oral examination whether you have sufficient background knowledge for your dissertation, and whether your dissertation plans are reasonable. Four of the five members, including your advisor, must agree to pass you. If the committee feels your knowledge is satisfactory, but your dissertation plans are not they will indicate that you have passed the Proposal Defense, but you will be required to prepare and defend a revised proposal. This second (or subsequent) Proposal Defense is not considered a Doctoral Comprehensive Examination. In effect, the thesis proposal is a contract between you and your committee. By accepting it, they implicitly state that if you successfully perform the work proposed (measured by passing the final examination) they will grant you a Ph.D.

3.2.5 Dissertation Hours

Once you have passed your Proposal Defense you must sign up for at least five and not more than ten hours of doctoral dissertation hours each semester (not including the summer).

3.2.6 Admission to Candidacy

Once you have submitted your application for candidacy (passed your Proposal Defense, fulfilled the Ph.D. exam requirement) and the graduate school has approved your application you will be admitted to Candidacy. This will put you into the highest pay bracket for TA's and RA's in the department, and will also entitle you to pay "D" rate fees, which are much lower than full fees. However, this also means that you don't get the privileges associated with them, e.g. use of the student recreation center and cheap football tickets. If you would prefer to be a full fee paying student in order to take advantage of these services you must go to the Bursar's Office in Regent Hall each semester and ask them to change this and issue you a new student ID sticker. Those students employed by the department also have the option of obtaining a recreation center pass at the staff rate. To do this, you need to ask the person who handles your appointment in the department (see Section 4.8, Administrative Issues) for a copy of your PAF form that proves that you are employed by the department. You can then take this form to the recreation center to buy a pass.

3.2.7 Final Examination (Dissertation Defense)

The last requirement for graduation is the Final Examination; an oral defense of your dissertation. This may be done at any time after you have the required number of course credits (30) and the required number of dissertation credits (30). You must pass the defense within six years of entrance into the Ph.D.

program. Extensions of up to one year can be made, however, by the student and advisor petitioning the Graduate School. This petition has to be submitted each semester for which an extension is desired.

3.2.7.1 Ph.D. Defense Announcement

At least two weeks prior to your defense, you must email the GRADUATE ADVISOR with the title and abstract of your dissertation, the names of the members of your committee, and the scheduled date, time, and location of the defense. The GRADUATE ADVISOR will announce the defense to the CS faculty and PhD students.

3.2.7.2 Graduate School Clearance

The Graduate School requires numerous forms so be sure keep in touch with the GRADUATE ADVISOR to learn what the requirements are for graduating. The graduate school will send you a letter notifying you that you've been admitted into Candidacy.

3.2.7.3 Dissertation Committee

For your thesis defense your committee must again consist of at least five members and your advisor remains the chair. However, the other members do not have to be the same as those attending your Proposal Defense. At least three members of this committee must be Boulder campus resident faculty, and one member must be from outside the Computer Science Department. Note that this means the member(s) can be from outside the University, such as an area company, but the person must have a Ph.D. The committee members must be approved by the Chair of the Department and by the Dean of the Graduate School and must have either regular or special graduate faculty status. The Chair's policy normally requires that at least three of the faculty members be tenure track faculty in the Computer Science Department. For each non-CS member on your committee, submit his/her CV to the GRADUATE ADVISOR as far ahead of time as possible so that s/he can do the paperwork to give them the right status to be on your committee.

3.2.8 Actual Dissertation Defense

More than one dissenting vote on your defense by members of the committee means that you have failed your defense. Upon the recommendation of the examining committee a doctoral student who fails the final examination may retake the examination. A student in the program may not take more than two Final Examinations.

3.2.8.1 Copies of Dissertation

It is considered good form to give copies of your thesis to the members of your committee at least two weeks prior to the exam. One copy of your thesis must be uploaded electronically to <http://etdadmin.com/colorado>. The Graduate School has strict requirements for the format of the thesis. These requirements can be found on the graduate school website at <http://www.colorado.edu/GraduateSchool/academics/index.html>.

3.2.8.2 Ph.D. Final Paperwork

Doctoral candidate must fill out the Doctoral Examination form and submit it to the GRADUATE ADVISOR at least two weeks before the final defense. This form will go to the graduate school for approval of your committee and will then be sent back to the GRADUATE ADVISOR. The GRADUATE ADVISOR will hold onto the paperwork and you will pick it up from the GRADUATE ADVISOR on the day of your defense. Along with the Exam form, you will pick up a final grade card that needs to be signed by the chair of your committee. After your defense, bring the Exam form (with all

signatures), the final grade card, and your signature page to the GRADUATE ADVISOR. The GRADUATE ADVISOR will forward this along to the graduate school.

3.2.9 Ph.D. Grades

Unlike the Master's degree, you may not count any course in which you received a grade of C or lower toward your doctoral degree. Excepting Master's Thesis hours, any other course taken at this University toward a Master's degree that meets the requirements for doctoral credit may be counted.

3.2.10 Ph.D. Pass/Fail Courses

No graduate courses may be taken for Pass/Fail credit. This includes graduate courses which are transferred into the program. You can take courses for No Credit.

3.2.11 Ph.D. Transfer Courses

You may transfer up to 21 semester hours of qualified courses from another university or from the ACCESS program, with the approval of your advisor, the Graduate Director of the Department, and the Graduate School. If you are transferring these courses from another college, a Request for Transfer of Credit form needs to be filled out. After one full semester here, please fill out the Transfer of Credit form which can be found on the CS website at <http://www.colorado.edu/GraduateSchool/academics/docs/transferecredit.pdf>. This form will need to be signed by your advisor and the Graduate Director of the Department and then forwarded for approval by the Graduate School.

3.2.12 Ph.D. Sufficient Progress

All students should note that the Department is given the authority to drop any student who fails to make sufficient progress toward a degree. The definition of sufficient progress is left to the Department so it is wise to notify the Department through the GRADUATE ADVISOR if you will not be taking any courses or thesis credits during a semester. If you decide not to take any courses in a particular semester it is mandatory that you

Apply for the Time Off Program (TOP) to ensure you will be able to register for the next semester. See the Registrar's website at <http://registrar.colorado.edu/students/timeoffprogram.html> for more details on the Time Off Program. Failure to register or sign up for the Time Off Program will result in your being dropped from the program. i.e., you would have to reapply and be accepted again to resume your studies. The Computer Science Department will take no action under this authority without first informing you of what you must do to resume sufficient progress and giving you a fair amount of time to satisfy those requirements. The best way to avoid problems is to maintain regular contact with your advisor and the GRADUATE ADVISOR.

4 Assistantships

4.1 Standard Assistantship Offer

When incoming doctoral students are given assistantships the department will ordinarily promise to provide the student with some form of assistantship for one to three years following admission, barring financial exigency of the department, provided the student performs the duties of the assistantship competently and makes adequate academic progress. Competent performance will be determined by the department using relevant indicators such as opinions of supervising faculty and (for teaching assistants) opinions of students. Adequate academic progress is defined as follows.

4.2 Students in Their First Three Years

Students having such a promise of aid, and in their first three years, will be considered as not making adequate academic progress for the purpose of determining continued support if they fail to satisfy any university or department requirements for academic progress. Failure to satisfy requirements occurs if:

1. Their grade point average falls below 3.0,
2. They are not full time students, or
3. They fail the preliminary exam as a whole

4.3 Students Past Their First Three Years

The department will try to support doctoral students admitted with aid who are in need of support and making good academic progress if funds are available. In general, the department will give priority to assistantship requests from doctoral students over other students. In general the department provides teaching assistantships only to students who the faculty judge as making good academic progress. Students will not be considered as making good progress for the purposes of continued support if:

1. They are not full time students,
2. They have not found a dissertation advisor by the end of their third year, or have been without an advisor for more than a year,
3. They have not passed the comprehensive exam by the end of their ninth semester
4. They have been in the doctoral program for more than six years.

Other factors the department will consider in awarding assistantships are the advisor's assessment of the student's work, the student's grades, the advisor's need for doctoral students, and the student's teaching ability and knowledge of relevant subjects.

4.4 Types of Assistantships

Assistantships may take the form of Research Assistantships (RA's), Teaching Assistantships (TA's), or Instructorships (GPTI's). Research Assistantships will awarded by the decision of the faculty member administering the grant. The department may require a student to act as a GPTI instead of a TA, but this will usually be done no more than once during the student's career unless the student desires an instructorship. For most students Teaching Assistantships are available only during the academic year.

4.5 Annual Review

Each Fall the department will conduct a review of all doctoral students to assess their academic progress.

4.6 Pay Levels

There are three different pay levels for TA's and RA's. Level one (the lowest) is for beginning graduate students. Level two is for those with a Masters degree in Computer Science or those who have completed thirty or more credit hours of graduate work. Level three is for Graduate School approved doctoral candidates (having passed the comprehensive exam.)

The GPTI (instructorship) pay scale is constant.

4.7 Administrative Issues

The GRADUATE ADVISOR is responsible for appointing all TA's. If you are a research assistant, your appointment is handled by the research grant assistant assigned to the grant from which you are funded. If you do not know who this is you can ask Stephanie Morris (email 'scmorris'.) The staff member who appoints you is the person you should go to regarding administrative problems.

4.8 Grading Positions

There are usually grading positions available each semester. Professors looking for a grader for their course will usually send out an e-mail notification. If you are interested in grading for a particular course see the professor teaching that course.

5 Graduate Student Representatives

The CS Department values the ideas and opinions of its students. Graduate students elected by their peers sit as full, voting members on the Departmental administrative committees. As a group, these student committee representatives form the CS Graduate Student Advisory Council. If you have suggestions, questions, or problems within the Department or without, your CS student representatives are a good place to turn. They must know your problems and views before they can help you and the graduate student population as a whole.

5.1 Elections and Eligibility

The student representatives are nominated during an all-graduate-student meeting in April and serve a one-year term. Attendance at this meeting is strongly encouraged for all graduate students. Voting will occur over a one week period. Ballots are sent out via email to your CS account from your Executive Committee representative. Simply reply to the email and fill out the ballot. In general, to be qualified to be a student representative you must be a graduate student in Computer Science in good standing during the term of office. If you are planning to receive a degree and leave the Department before the term is up, please do not run for a student representative position.

5.2 Executive Committee Representative

The Executive Committee is the primary decision-making body of the Department. The student member of this committee is considered to be the senior student representative. This committee usually meets once a week and is concerned with all Department issues: budget, space, promotions, etc. The Executive Committee also reviews applications from prospective new faculty members. The student representative sits on both the Executive Committee and the Search Committee with one full vote. This position provides an excellent opportunity to see how an academic Department is really run. Sometimes the representative is required to poll graduate student opinion and is usually in charge of taking prospective new faculty members out to lunch with a group of graduate students. This representative must be a doctoral student who has passed the prelims.

5.3 University UGGS Representative

This student is the Department representative to the University-wide United Government of Graduate Students (UGGS.) UGGS meets to discuss and take action relevant to graduate student concerns. UGGS meets regularly on campus during the academic year. The position provides an opportunity to see graduate student issues on a broader basis and to better understand how the University works. This elected representative must be willing and able to attend the meetings every other week as the Department will be awarded \$100.00 (to be spent on graduate students) at the end of the year for good attendance. Occasional substitution is allowed. We have obtained dictionaries and copying supplies for use by graduate students with funds received in the past from the UGGS.

5.4 Graduate Committee Representatives

Two representatives sit on the Graduate Committee which incorporates the former Graduate Admissions, Graduate Exams, and Graduate Curriculum Committees. Members are chosen with different qualifications to provide a better cross-section of the graduate student body:

1. A senior Ph.D. student who is post-Comprehensive exam

2. A Ph.D. student that is pre-Comprehensive exam

This committee reviews all applications for admission to the Masters and Doctoral programs in Computer Science. All problems regarding any proposed changes to both the Master's program and the Ph.D. program are handled by this Graduate Committee. It is also responsible for defining course content, considering new course offerings, evaluating transfer credit, and petitions for the graduate degree programs.

5.5 Undergraduate Committee Representative

The Undergraduate Committee is similar to the Graduate Committee, but is related to the Computer Science Undergraduate program. It includes consideration of undergraduate curriculum and activities. It is preferred that the graduate student representative be someone with Computer Science undergraduate experience and interest in an undergraduate Computer Science Department.

5.6 Computing Committee Representative

This committee is responsible for setting policy for administration of the Department's basic computing services and educational labs. It also adjusts services and fees as required to balance the budget, resolves conflicts related to computer operations, and generally oversees computer system administration activity.

5.7 Social Committee Representatives

This is an ad-hoc committee of graduate students (and occasionally faculty) with the responsibility of organizing department social functions. There is traditionally an early Fall Picnic, a late Spring Picnic, and a Holiday Party; however, the committee is not limited to this schedule. Some of these functions are financially supported by the Department.

5.8 Women in CS Committee Representative

CUWIC organizes a variety of events for women in computing (or those interested in supporting women and diversity within the CSCI department). These events range from breakfasts to cupcake socials to discussion panels, and happen 3-4 times a semester.

6 Miscellaneous Administrative Matters

6.1 Grievance Procedures

If you have a problem with a faculty member, first try to work it out with that person. If you are unable to come to a mutually agreeable solution you should then see the student member of the Executive Committee. S/he can advise you as to what to do next. If you are not the only person with a complaint it probably should be brought up at an Executive Committee meeting. If you are still unable to resolve the problem the Department Chair will help you work it out. If you have a problem with a certain policy – i.e., you have special circumstances, you think you have good reasons for a rule to be bent or waived in your case, there is no precedent for your situation – you may submit your case formally to the Graduate Committee in the form of a petition. Petitions are for special circumstances, not to get yourself out of trouble caused by your past policy oversight or lack of planning. The Graduate Committee considers each petition carefully, and the committee members are faculty and students who take the integrity of the department seriously; they do not bend or waive the rules easily. Petitions should be submitted to the GRADUATE ADVISOR or the chair of the Graduate Committee.

6.2 Independent Study

If you would like to do some work in an area where the Department does not offer a formal course, or go more in-depth into a field without necessarily writing a thesis, you may take up to seven hours of

graduate-level independent study. You must find a faculty member to sponsor you for your independent study. It doesn't have to be your advisor. The form that an independent study may take is up to you and your faculty sponsor. It may consist of a programming project, reading papers from the computing literature, writing a term paper on some topic, participating in a research group or almost any other type of study. However, the work to be done must be specified in an Independent Study Form (like a contract) available on the forms page of the CS website at

http://www.colorado.edu/engineering/sites/default/files/Independent_Study.pdf. When this form has been completed, signed by you and the professor, and returned to the GRADUATE ADVISOR, s/he will provide you with the necessary enrollment information.

6.3 Restricted Enrollment

In order to register or pre-register for any type of thesis credit or for any candidate-for-degree you must contact the GRADUATE ADVISOR to notify him/her that you want to sign up for a controlled enrollment course. You must provide the number of credit hours you wish to take and your faculty advisor so that you can be enrolled in the proper section.

6.4 Resident Status and Procedures

If you are an out-of-state graduate student you may want to apply for in-state status for your second year. This requires you do many things before and during your first year. You must apply for the change; the University will not automatically switch your status. The procedure to apply for in-state status is described in the UCB Graduate Student Handbook and at URL:

http://registrar.colorado.edu/students/tuition_classification.html

In order to qualify for in-state status you will have to meet requirements set by the State of Colorado. Some of these requirements mean that you have to take steps when you first move to the state. It is best if they are started before the first day of classes your first semester here (note that your application for residency may not be accepted if you start this procedure later than the first day of classes.) These include obtaining a Colorado State Driver's License, registering to vote in Colorado, and filing Colorado State Taxes as a resident. You must complete all of the above steps. In addition, you should keep rent receipts. The actual application should be submitted in the spring of your first year because it takes a while to get it approved. You should note that if you are a TA, RA, GPTI, or working for the Department in a job that pays your tuition, you are REQUIRED to apply for in-state status as soon as possible. The Department is not obligated to pay out-of-state tuition after your first year. Foreign students cannot become Colorado state residents unless they are already qualified permanent residents of the United States.

6.5 Fall Orientation

Each fall, an introduction meeting is held for new students. In addition, the CS department organizes an ice cream social which is held to acquaint students, both new and old, with the department staff, faculty, other students, and their interests. You should be there.

6.6 Graduate Student Bulletin Board and Mailboxes

There is a graduate student bulletin board on the 7th floor of the Engineering building. There is also a bulletin board which has job offers, financial aid, conference announcements, and other information. Mailboxes for all CS PhD students are also on the 7th floor near the restrooms. There are other bulletin boards on the 7th floor. The boards by the elevator usually provide the descriptions of courses to be offered in the next semester. Talks for a given day on campus, as well as upcoming talks, are posted outside ECOT 726. A schedule for the current and upcoming semester and conference announcements is outside ECOT 717 and near the elevators. A listing of the current faculty, their office numbers and office hours, is posted near the elevators.

6.7 Copy Machine

Graduate students who are TAs are entitled to use to the department copy machine in the main CS office. The main office administrator will assign an access number to you. Use of the copy machine is for teaching purposes only, and you are not expected to use all of the copies assigned to you each month. It is strictly prohibited to give your copier number to anyone else. You should not copy books or any other material that violates copyright laws.

6.8 Grad Student Labs

All Ph.D. students should have a desk in a grad student lab. Your advisor assigns you a desk in his/her lab. All labs should be equipped with white boards. If pens or erasers need to be replaced, please let main office administrator know and s/he will organize the replacement.

6.9 Computer Science Colloquia

During the semester, the Department invites speakers to give talks on new research areas in computer science. Also, candidates for faculty positions usually give a colloquium on their current research as part of their interview. These are generally held on a regular basis one afternoon a week (usually Thursdays), but may be scheduled at other times as well. Announcements are posted in the vicinity of the Department office at least a week beforehand, and announcements are made via email. You should attend. These colloquia always cover a wide range of topics. There will almost certainly be a couple in an area in which you are interested, and as a graduate student in computer science you should also be concerned with the state of research being done in other areas and at other universities or in industry. The breadth of topics discussed may help your research. It may also give you some familiarity with people and projects when you are finished here and need to find employment.

6.10 Other Forums for Talks

There are a few less formal venues for hearing talks about ongoing research in the department. The Social Committee organizes the Graduate Student Colloquium. This is normally held on Tuesday afternoons at 3:30. You are encouraged to attend these gatherings and to give talks of your own. Watch for email announcements to the 'cs-phd@lists.colorado.edu', 'cs-ms@lists.colorado.edu' lists for more details. Research groups may also have additional forums for their members.

Appendix A People

This appendix contains a link to the faculty and staff page of the Computer Science website. You can navigate to this page by clicking on Our People from the home page. The website is:
<https://www.colorado.edu/cs/our-people>

Appendix B Places

This appendix contains a link to the Maps/Floorplans page on the Computer Science website. Here you will find information about places you might need to find.

Faculty/Research Group Laboratories:

<https://www.colorado.edu/cs/about/directions/>

Appendix C Faculty Interests

This appendix contains a link to the faculty research groups so you can see the faculty and their research interests.

<https://www.colorado.edu/cs/research/>

Appendix D: Master's Degree Deadlines

For deadline information, please visit the graduate school website:

http://www.colorado.edu/GraduateSchool/academics/master_graduation_packet_thesis.html

Appendix E: Doctoral Degree Deadlines

For deadline information, please visit the graduate school website:

http://www.colorado.edu/GraduateSchool/academics/doctoral_graduation_packet.html