

UC DAVIS
GEOLOGY GRADUATE PROGRAM
GRADUATE STUDENT HANDBOOK
AND GRADUATE DEGREE REQUIREMENTS



Twenty-eighth Edition, Fall 2017

V.3_9/20/2017

FORWARD

Welcome to the Geology Graduate Program (GGP) in the Department of Earth and Planetary Sciences at UC Davis. Graduate school is an important stage in your career as a scientist. Perhaps for the first time you will be participating in the process of scientific inquiry. Our goal is to challenge students and prepare them for careers in academia, industry, or business. Our hope is that your stay here will be both exciting and productive, and this handbook is designed to assist you with a successful graduate career. In it, you will find information about the requirements you must meet to complete a graduate degree in Geology at UC Davis. In addition, you will find information on financial aid, departmental facilities, life in Davis, and some of the rules and procedures that are part of UC Davis. We wish you the best of luck!

CONTENTS

I. Orientation and Mentoring Information.....	2
II. The Powers That Be.....	4
III. Requirements for the graduate degree.....	5
A. General requirements.....	5
B. Requirements for the M.S. degree.....	8
C. Requirements for the Ph.D. degree.....	11
V. Financial support for graduate students.....	16
A. Graduate Program support.....	16
B. External support.....	17
IX. Requirements for TA and GSR hiring.....	18
VI. The role of graduate students in the Department of Earth and Planetary Sciences (rights and responsibilities).....	19
VII. What to do if you are having problems.....	21
IV. Department facilities and intranets.....	23
VIII. Department of Earth and Planetary Sciences Collections Policy.....	25
X. Quick Reference for M.S. and Ph.D.	27





ORIENTATION AND MENTORING INFORMATION FOR ENTERING GRADUATE STUDENTS UC DAVIS GEOLOGY GRADUATE PROGRAM

REGISTRATION: Enroll in 12 units. Get a Student ID Card.



LIBRARY CARD: Take your Student ID Card to Shields Library to complete a short application to authenticate your library account. See: <http://library.ucdavis.edu>



MOTOR VEHICLE PARKING PERMIT: Transportation and Parking Services (TAPS) is located southeast of the Pavilion and near the baseball field. See: <http://taps.ucdavis.edu>. The goClub provides free parking permits if you commit to riding your bicycle or taking the bus for the majority of the year. See <http://goclub.ucdavis.edu>



BICYCLE REGISTRATION: It is a campus requirement to have your bike registered. Go to TAPS, southeast of the Pavilion and near the baseball field. Be sure to take your bike with you when you go.

UNITRANS: Unitrans is the student bus system, which provides service throughout the City of Davis. <http://unitrans.ucdavis.edu>

ESTABLISHING CALIFORNIA RESIDENCY: Office of the Registrar. Rules and regulations for establishing residency in California are explained at <http://registrar.ucdavis.edu/tuition/residence/index.cfm>



OFFICE ASSIGNMENT: Find Mandy Hanou, Graduate Program Coordinator (rm. 2119D). For access to offices, labs, microscope cabinets, or lane cabinets, ask your faculty adviser/major professor or the lab PI/Manager to submit a request at <http://epsinfo.geology.ucdavis.edu/forms/access-provisioning-request.php>. Email gel-keys@ucdavis.edu with any questions.

BROWN BAG SEMINAR: Every Friday, noon. Students and faculty give informal lectures on research, travel, or other interests. Bring a bag lunch.

DEPARTMENT SOCIALS: Don't miss the Fall Field Trip, December Party, and Spring Ice Cream Social!

CAMPUS RESOURCES

- **Graduate Student Association:** The Graduate Student Association is the representative student government of all of UC Davis' graduate students. <http://gsa.ucdavis.edu/>
- **UC Davis Student Health Services:** Student Health and Wellness Center. 752-2349, <https://shcs.ucdavis.edu>
- **UC Davis Student Disability Center:** The University of California, Davis, is committed to ensuring equal educational opportunities for students with disabilities. <http://sdc.ucdavis.edu/>
- **UC Davis Mediation Services:** Provides no cost mediation and conflict management services for faculty, staff and graduate students facing conflict at work. <http://mediation.ucdavis.edu/>
- **UC Davis Student Academic Success Center:** 2205 Dutton Hall, 752-2013, <http://success.ucdavis.edu>
- **UC Davis Center for Educational Effectiveness:** Programs and resources for TAs. <http://cee.ucdavis.edu>
- **UC Davis Counseling and Psychological Services:** <https://shcs.ucdavis.edu/counseling-services>

CITY LIVING

- **Banks and S&L's:** Centrally located downtown between E & F and 3rd & 4th streets.
- **Utilities:** PG&E (gas and electricity): <http://www.pge.com>; AT&T: <http://www.att.com>

- **Newspapers:**

Davis Enterprise: <http://www.davisenterprise.com>;

Sacramento Bee: <http://www.sacbee.com>



- **Movies:** There are 11 screens downtown. Tuesday is cheap night. In addition, films are frequently shown on campus. Check in *The Aggie*, the daily student newspaper. <http://www.theaggie.org>

SPORTS AND RECREATION

- **UC Davis Campus Recreation and Unions** <https://cru.ucdavis.edu>
- **UC Davis Intramural Sports:** basketball, softball, soccer, and many more
- **UC Davis Craft Center:** take classes or use the studios.
- **Swimming:** on campus at the Rec Pool, Hickey Gym, free with Student ID Card; off-campus through Davis Aquatic Masters Swim Team or local fitness clubs.
- **Outdoor Adventures (near the Silo):** climbing, backpacking, whitewater rafting, cross-country skiing, sailboarding, and more!



MENTORING GUIDELINES

The Mentoring Guidelines followed in the Geology Graduate Program (GGP) are the same as those found in the UC Davis Graduate Student Guide:

<https://gradstudies.ucdavis.edu/sites/default/files/upload/files/publications/gs201-gradstudentguide.pdf>



THE POWERS THAT BE

You will be dealing with many committees and advisers during your stay here at Davis. Below is a list to help you keep them straight.

FACULTY ADVISER(S), (ALSO KNOWN AS THESIS ADVISOR, DISSERTATION ADVISER): The Faculty Adviser is the faculty member who provides the primary supervision and guidance of the student in the Geology Graduate Program (GGP).

ADVISORY COMMITTEE: The Advisory Committee consists of *three* members of the faculty, including the Faculty Adviser, and will meet with the student (both M.S. and Ph.D.) once a year at the Annual Advisory Committee Meeting. Normally, the Advisory Committee is the same as the Master's Thesis Committee or the Doctoral Dissertation Committee. For Ph.D. students, the Advisory Committee members are responsible for approving the dissertation proposal before the Qualifying Exam, and are normally 3 of the 5 members of the Qualifying Exam Committee.

MASTER'S THESIS COMMITTEE OR DOCTORAL DISSERTATION COMMITTEE: The three members of the Thesis or Dissertation Committee (normally the same as the Advisory Committee) read, approve and sign the final version of the thesis or dissertation. The Faculty Adviser is normally the chair of this committee. The student must ask each member to serve on the committee. Once the members have agreed to serve, the Graduate Adviser formally nominates them. The student downloads and completes the candidacy form located at: <https://grad.ucdavis.edu/current-students/forms-information>. The Dean of Graduate Studies (see requirements section) reviews the application for candidacy and formally appoints the committee. For the regulations on who is eligible to serve on your Thesis or Dissertation committee, see the *Policy on Service on Advanced Degree Committees* at: <https://gradstudies.ucdavis.edu/sites/default/files/upload/files/grad-council/gc1998-01-uc-davis-graduate-council-policy-rev-06-final.pdf>

One member of a student's committee may be external to UC Davis. The student should submit an *External Committee Membership Application*, complete with a CV, for any external committee member, found here: <https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/gs311-external-committee-membership-app.pdf>. One member of a student's committee (not the chair) may participate remotely, such as through voice or video calling. The student should submit a *Committee Member Remote Participation Request* for any committee member participating remotely, found here: <https://gradstudies.ucdavis.edu/sites/default/files/upload/files/facstaff/gs342-committee-member-remote-participation-request.pdf>.

QUALIFYING EXAMINATION COMMITTEE: Required for Ph.D. students only, the Qualifying Examination Committee is composed of at least five members, including the Dissertation Adviser. Also included are at least one member from outside the Geology graduate program (from the UC Davis faculty or from outside UC Davis), and (usually) the other members of the Dissertation Committee. The Dissertation Adviser cannot serve as chair of the Qualifying Examination Committee. The qualifications for membership on the Committee are the same as those for the Dissertation Committee (see above). External committee members and remote participants must also be approved using the forms listed above. The student completes the *Application for the Qualifying Examination* which must be signed by the GGP Chair Delegate. The Dean of Graduate Studies reviews the Application for Qualifying Examination and appoints the committee. **The student should submit the Application for Qualifying Examination to Graduate Studies at least 6 weeks prior to this examination.**

GRADUATE ADVISERS: The Geology Graduate Program has three Graduate Advisers. They handle almost all graduate affairs on behalf of the Graduate Program, and sign the numerous forms that a student must submit during his/her graduate career. The advisers for 2016-2017 are:

- Chair of GGP: **Sujoy Mukhopadhyay** (rm. 3115). In charge of continuing student matters; handles student evaluations and progress meetings. Also will approve and sign most forms and petitions to Graduate Studies.
- Admissions Chair: **Eric Cowgill** (rm. 3121). Handles admissions and new students.
- Fellowships and Educational Policy Chair: **Magali Billen** (rm. 2129). Handles graduate student support such as fellowships and TA assignments.
- General Graduate Adviser: **Dawn Sumner** (rm. 3111)

GRADUATE PROGRAM COORDINATOR: Mandy Hanou is the Graduate Program Coordinator (rm. 2119). When you need assistance with GGP administrative issues, see her first.



REQUIREMENTS FOR THE GRADUATE DEGREE IN GEOLOGY

The following are the requirements for a Geology graduate degree in the Geology Graduate Program at UC Davis. These requirements may change from year to year, but a student is governed by those rules under which he/she either entered or leaves the program (at the student's discretion). Below are the requirements effective for the 2016-2017 academic year.

UC DAVIS REQUIREMENTS: The UC Davis Graduate Studies website provides details on requirements and guidelines. Please consult the following documents if you wish to have additional information about these university requirements:

- **Graduate Student Guide:**
<https://gradstudies.ucdavis.edu/sites/default/files/upload/files/publications/gs201-gradstudentguide.pdf>
- **Graduate Studies Adviser's Handbook:**
<http://gradstudies.ucdavis.edu/sites/default/files/upload/files/facstaff/gs202-advisers-handbook.pdf>

GENERAL GRADUATE PROGRAM REQUIREMENTS:

1. Students *must* enroll for a minimum of 12 units per quarter. Under exceptional circumstances only, students may be admitted to the Graduate Program as part-time students. The conditions under which a student may be admitted and participate in the Graduate Program in part-time status will be determined by the student and Faculty Adviser, in consultation with the Graduate Advisers.
2. Any student in a degree program in the Department of Earth and Planetary Sciences, working toward a degree in Geology, must have a Faculty Adviser who is a member of the Geology Graduate Program (GGP).
3. Students must enroll in Geology 290, our weekly departmental seminar, each quarter prior to passing their Qualifying Exam. Enrolling in GEL 290 is strongly recommended thereafter.
4. All new students are required to take GEL 390, "Methods of Teaching in Geology", during their first Fall Quarter. All students are required to take the T.A. Orientation offered by the Center for Educational Excellence (CEE) during their first year.
5. A graduating student must complete the Department's *Exit Checklist*, with all of the required signatures, before receiving his/her degree. The checklist shows that the student has turned in all materials (e.g. keys, thesis, etc.) and can be found here: <http://epsinfo.geology.ucdavis.edu/forms>

REQUIRED MEETINGS AND FORMS: Students are expected to make satisfactory progress toward their degree goals. To facilitate their progress, several meetings and forms are required each year as indicated:

- A. **Introductory Meeting:** first-year students only. Prior to their first quarter at UC Davis, each new student will meet with two Geology Graduate Advisers to discuss their particular program of study, possible course deficiencies, other administrative issues, and their courses for the first year.
- B. **Continuing Student Meeting:** In February of each year, each student will meet with the GGP chair individually to discuss mostly administrative issues and academic goals, to ensure that the student's progress in the program is satisfactory. The Advisers will evaluate the student's progress on the basis of the deadlines described below under **M.S. STUDENTS AND PH.D. STUDENTS**, on the basis of a short written evaluation by the Faculty Adviser prior to the meeting, and on the basis of discussions at the meeting. Failure to make satisfactory progress is likely to affect the student's financial support, as well as their standing in the Graduate Program.
- C. **Prospectus Meeting:** first-year students only. In Spring quarter of the first year, each graduate student will meet with a committee including their Faculty Adviser, one of the Graduate Program Advisers and one other faculty member to discuss their prospectus. See **DEGREE REQUIREMENTS** for more details. Please bring a *Prospectus Cover Sheet* to the meeting to be completed, found here: <http://epsinfo.geology.ucdavis.edu/forms>
- D. **Annual Advisory Committee Meeting:** all non-first-year students. In Spring Quarter, each graduate

student will meet with their Advisory Committee to discuss *research* issues primarily. Students are strongly encouraged to communicate with all members of their Thesis or Dissertation Advisory Committee simultaneously, at regular intervals in their graduate program. Awarding of Durrell funds (see page 16) is contingent upon the completion of this meeting annually (or for first-years, the Prospectus Meeting). Please complete an *Annual Advisory Meeting* form before the meeting and bring it with you to the meeting. The form can be found here: <http://epsinfo.geology.ucdavis.edu/forms>

- E. **Student Financial Support Meeting:** All students are required to meet with their Faculty Advisers in Spring Quarter to discuss student financial support for the following academic year, and submit to the Graduate Program Coordinator a signed statement of support expectations. A brief follow-up meeting will occur in September before classes begin, to provide an updated support statement. Please complete a *TA Request and Funding Report Form* before the meeting and bring it with you to the meeting. The form can be found here: <http://epsinfo.geology.ucdavis.edu/forms>
- F. **Graduate Student Progress Report:** All Faculty Advisers will complete a progress report for their student(s) each Spring Quarter. The student, Faculty Adviser, and GGP Chair will all sign this form. All evaluations of marginal or unsatisfactory progress will be forwarded to the Office of Graduate Studies.

MANUSCRIPTS:

1. *Any* manuscript written by a student and citing the Department of Earth and Planetary Sciences, UC Davis, as the institutional affiliation must be reviewed before submission and approved by an appropriate member of the faculty in the Department of Earth and Planetary Sciences, normally the Faculty Adviser. Any manuscript that is intended to be part of a M.S. or Ph.D. thesis must be submitted for review by the Thesis or Dissertation Committee *no later than* the time at which the manuscript is submitted for possible publication.
2. Co-authored material is acceptable for inclusion in theses/dissertations, but the student must have completed the bulk of the research, written the text, and be first author. Issues of co-authorship should be discussed in the Annual Advisory Committee Meeting prior to completion of the thesis/dissertation. *All theses/dissertations must include a prominent statement defining the contributions and responsibilities of each author of co-authored material.*
3. Permission must be received for copyrighted (published) work *subsequently* included in a thesis/dissertation. Consult the UC copyright website for additional information: <http://www.InnovationAccess.ucdavis.edu/copyright>

FILING FEE: Students who have completed *all* Department requirements, with the exception of the thesis/dissertation, the public Departmental seminar, and for Ph.D. students, the Thesis Defense, may choose to go on “Filing-Fee Status.” Students must be at the “writing stage” before entering Filing Fee Status. Students who are on Filing Fee Status are not eligible for the privileges and the use of facilities regularly accorded to enrolled students (e.g., desk space in the Department, library, Department laboratories, **Student Health Center** and Student Health Insurance, etc.). A one-time fee is paid when the student applies for Filing-Fee status. Note, the university will easily grant filing fee status for one quarter, but will only extend this to two quarters in **very** special circumstances. It is Department policy that all students who are on Filing-Fee Status must meet the following requirements:

- A. At the beginning of each quarter in Filing-Fee Status each student *must* submit tangible and acceptable written evidence that he/she has made progress on his/her thesis or dissertation during the preceding quarter. Evidence will be evaluated by the Faculty Adviser and one of the Graduate Advisers.
- B. M.S. students *must* complete his/her graduate degree within 12 months of the beginning of their Filing-Fee Status, including summer.
Ph.D. students *must* complete his/her graduate degree within 18 months of the beginning of their Filing-Fee Status, including summer.

Failure to meet Filing-Fee Policy requirements will result in dismissal from the program. If, following dismissal, the student wishes to complete his/her graduate degree, he/she must apply and be accepted for read-

mission to the Department and to UC Davis. The *Filing Fee Application and Regulations* can be found here: <https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g305-filing-fee-app.pdf>

CHANGING DEGREE GOALS:

- **From M.S. degree to Ph.D. degree:** Graduate students pursuing a M.S. degree in the UC Davis Geology Graduate Program who wish to complete a Ph.D. degree upon finishing the M.S. should complete a Petition for Change of Graduate Degree Objective, and complete the following steps. The Petition must be filed with the Graduate Program Coordinator and Chair of the GGP by January 15 of the academic year prior to the anticipated start of their Ph.D. program, typically the second year in the M.S. program at UC Davis. This ensures that M.S. students who wish to continue into the Ph.D. program are considered for admission along with new applicants to the program during the regular application cycle. Note, that if the student goes on Filing Fee status to complete their M.S. degree, then they must apply to the Ph.D. program as a new student and can not use the Petition for Change of Graduate Objective form.

Admission to the Ph.D. program is competitive; earning a M.S. in the GGP does not guarantee admission to the Ph.D. program. Before registering as a Ph.D. student, the M.S. degree must be completed; the Petition for Change of Graduate Degree Objective will not be signed by the Chair of the GGP and submitted to the Registrar until the M.S. thesis title page has been signed by all members of the Thesis Committee, signifying that all M.S. degree requirements have been met. Registration as a Ph.D. student can be deferred until later if necessary, but no extension of financial support is guaranteed. A total of 5 courses (2 non-breadth and 3 breadth) taken as an M.S. student in Geology at UC Davis will be counted toward the Ph.D. course requirements.

- **From Ph.D. degree to M.S. degree:** Students who change their degree objectives from the Ph.D. to M.S. must abide by the departmental support commitment for M.S. students (namely, two years of guaranteed support), from their date of admission as Ph.D. students.

GRADUATE STUDENT PROGRESS:

Both the student and the Faculty Adviser will be expected to be aware of and to abide by the requirements outlined in the Department of Earth and Planetary Sciences's *Graduate Student Handbook* provided to both student and Adviser at the beginning of each each academic year, in both paper and electronic form.

Failure to meet specified program deadlines, as determined at the Continuing Student Meetings with the Graduate Advisers, will result in the student being placed on departmental probation for funding, potentially jeopardizing future financial support. The student will receive a warning that is also forwarded to the Adviser and to the UC Davis Office of Graduate Studies. If not addressed, this could lead to a designation of unsatisfactory progress, resulting in a letter from the Dean of Graduate Studies placed in the student's file.

The responsibility for understanding and meeting program deadlines lies first with the **graduate student**. The next responsible person is the student's Faculty Adviser; any faculty member who admits a graduate student to work him/her accepts the responsibility of understanding program deadlines and discussing them with the student. First the Graduate Program Coordinator (GPC), and then the Geology Graduate Advisers provide the final check to see that program deadlines have been met.

ADVICE:

Talk to your Faculty Adviser regularly. It is his or her responsibility to advise you; it is your responsibility to seek his or her advice when you need it. Clear communication is essential to success in graduate school.

OFFICE OF GRADUATE STUDIES: FORMS

Many actions related to Graduate Study at the University require a form. Please take some time to skim the list of forms at the Graduate Studies website: <http://gradstudies.ucdavis.edu/forms>



M.S. STUDENTS

Graduate students who are pursuing the Master of Science degree in Geology must complete the following University and Graduate Program requirements.

UNIVERSITY REQUIREMENTS:

1. The student must complete at least three academic quarters in residence at the University of California, Davis (“in residence” is defined as at least 12 units of upper division and/or graduate courses per quarter).
2. Students must maintain at least a 3.0 grade point average (only courses in 100 and 200 series and with a grade of A, B, C, or S count toward the GPA and the course requirements).
3. Students must complete 30 units of course work at the *graduate and upper division levels*. Of these, at least *12* must be graduate courses in the major subject. *Geology 290, 298 and 299 are counted toward this requirement. (see below for Graduate Program’s course requirements.)*
4. Students must file an official application for Advancement to Candidacy at least one academic quarter before completion of all degree requirements and after completion of at least one-half of their course requirements. The *Candidacy for the Master’s Degree - Thesis Plan I (GS313)* form can be found at <https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g313-masters-candidacy-plan1.pdf>
5. The Master’s thesis must be written on a topic approved by the Graduate Advisers. The final thesis is submitted to a committee of three members (the Thesis Committee) recommended by the Geology Graduate Program Chair and officially appointed by the Dean of Graduate Studies through the application for candidacy. The thesis must be approved by each member of the committee, and each member must sign the title page certifying that the student has completed his/her thesis.
6. The thesis must be filed with the Office of Graduate Studies in proper format. For instructions and filing dates see the website: <https://grad.ucdavis.edu/current-students/academic-services-information/filing-thesis-or-dissertation>
7. The Normative Time to Degree for the Geology M.S. program is six quarters (two years).

GRADUATE PROGRAM REQUIREMENTS:

1. **Courses.** M.S. students must undertake a program of a *minimum* of 5 courses (for at least 12 units). The classes should be selected to provide breadth of knowledge appropriate for a M.S., and to provide the depth of knowledge appropriate in a student’s specialization(s). Classes must be selected in consultation with the Advisory Committee, and can include classes in geology or other fields deemed appropriate by the Committee. Classes may be upper-division or graduate level, in the Department of Earth and Planetary Sciences or in a different department. Students are strongly encouraged to enroll in GEL 281N. Certain courses, but not all, may be taken more than once for credit; check the UC Davis course catalog.
2. **Breadth Requirement.** The courses selected for #1 (above) must include at least one graduate-level course from three different categories of the seven sub-disciplines listed below. These three classes must all include an oral presentation by the student, and be 3-unit courses at the 200-level:
 1. paleontology: 260, 261, 262
 2. sedimentology/oceanography: 205, 206, 226, 228, 232
 3. petrology/geochemistry: 206, 227, 246, 247, 250, 251, 253, 254, 255, 285
 4. structure/tectonics: 214, 216, 218, 219, 220, 295, 296
 5. environmental geology/geomorphology/resources: 230, 235
 6. geophysics: 217, 219, 236, 238, 240, 241, 242
 7. planetary science: 244, 245

Some courses above are listed in more than one subdiscipline. However, in each year, each of these cross-listed courses will be assigned to one breadth category depending on the focus of the course. The same course may be taken for credit in different quarters to complete different breadth categories, if on a different topic. GEL 298 (Group Study) courses that are 3 unit courses and require an oral presentation, may be taken to meet breadth requirements. When a GEL 298 course is offered it will be assigned to one breadth category. GEL 298 courses may be taken more than once for credit, if on different topics.

3. **Prospectus.** By the 6th week of the third quarter in residence, the student must submit a prospectus for his/her thesis research. The prospectus text will not exceed **10** typed **double-spaced** pages (figures and references can exceed the 10-page limit) and must include the following elements:
 - i. Summary/Abstract
 - ii. Statement of problem to be investigated.
 - iii. Background; why the problem is important.
 - iv. Methods used to investigate the problem.
 - v. Discussion; relevance of possible results to the solution of the problem.
 - vi. References.

4. **Prospectus Meeting.** After completion of the prospectus and before the end of the third quarter, the student will meet with a committee composed of one Graduate Adviser, the Thesis Adviser, and one “expert” in the field of research. Together, they will discuss the prospectus, the proposed research, its suitability for a M.S. thesis, and the ability of the student to complete the proposed research. M.S. thesis research should be more limited in scope than Ph.D. research, with a reasonable expectation of completion in two years. This meeting can have the following outcomes:
 - i. The student is encouraged to proceed with his/her M.S. research.
 - ii. The student may be asked to take additional courses.
 - iii. The student may be asked to modify the proposal or proposed research. The revised proposal will be submitted by the student and reevaluated by the committee.
 - iv. The student may be recommended for disqualification from the program. This recommendation may be appealed to the Graduate Advisers and a final appeal may be made to the Dean of Graduate Studies.

Once approved, a **copy of the prospectus with signed cover sheet should be submitted** to Graduate Program Coordinator.

COMPLETION OF THE M.S. DEGREE

The completion of the M.S. includes two main components: 1) a written thesis and 2) a departmental exit seminar. The minimum time constraints for each component, described below, will be strictly adhered to by the Thesis Committee. Master’s degree candidates must complete their degree requirements within four calendar years of entering the Graduate Program in Geology.

1. **Thesis.** The thesis may be written in one of two formats: thesis format, with chapters, and appendices to archive data; or manuscript format, intended for submission for publication in a professional journal in the student’s field of research. As a guideline, one manuscript usually suffices to represent a new scientific contribution to fulfill the M.S. thesis requirement in the Geology Graduate Program. The manuscript does not have to be published, or submitted for publication prior to the granting of the degree. It must, however, be in a form approved for submission by the Thesis Committee. The student should discuss the format of the thesis with the Advisory Committee members early in the process prior to submittal of drafts for review and evaluation, and all should agree on a schedule of draft submittals and revisions, before drafts are submitted. Note, university policy gives one month for faculty to complete and return comments on a thesis draft.

The thesis must be approved by each member of the Thesis Committee. Approval can consist at this

stage of either a signature on the title page, or verbal approval of the text of the latest thesis draft. It is the student's responsibility to ensure communication among all members of the Thesis Committee as to the approval status of the other members.

- 2. Departmental Exit Seminar.** The student must present a public departmental seminar on the results of their research before a final draft can be accepted. The seminar can be scheduled after the thesis draft is approved. The student must arrange to reserve a room for the seminar with the Graduate Program Coordinator (GPC), ensuring that she is aware that the seminar is taking place, and where and when. The seminar should be presented during the academic year, if possible.

Final acknowledgment of completion of all M.S. degree requirements is required by all members of the Thesis Committee in the form of a signature on the title page after your exit seminar. Both the GPC and the Chair of the Geology Graduate Program must be notified once all signatures have been obtained, following completion of the exit seminar.

[Students wishing to complete a Ph.D. in the GGP after completion of their M.S. degree must at this point obtain signatures and file a Petition for Change of Graduate Degree Objective with the Registrar, before submitting the thesis to Graduate Studies for conferral of the M.S. degree.]

- 3. Submit the Thesis.** The thesis and all critically-related supplementary files (see below) must be submitted to the ETD/Proquest website. Graduate Studies will access and review your thesis through this submission. Instructions for electronically filing your thesis or dissertation (ETD) and formatting guidelines are available online at: <https://grad.ucdavis.edu/current-students/academic-services-information/filing-thesis-or-dissertation>. The thesis will be uploaded as a single PDF file. Supplementary files that are critically-related to the thesis can be upload in various formats depending on the type of information (e.g., maps, data tables, audio, video, input files for numerical simulations, student written source code). If these files are too large to upload to the website, they can be submitted on a CD, DVD or thumb drive (see instructions on the ETD FAQ page: <http://www.etsadmin.com/cgi-bin/main/faq?siteId=65#ts7>). Remember that this is the archive of record for you and your advisor, therefore including all essential data for reproducing results or continuing work from your thesis should be included. Also, note that it is the practice of major journals and science funding agencies to require all necessary information for reproducing the work to be included as Supplementary Information in publications, so this requirement insures that your thesis also meets these requirements.
- 4. Meet with a Student Affairs Officer at the Office of Graduate Studies.** You will need to make an appointment to meet with Elizabeth Sturdy at Graduate Studies to turn in your final paperwork, including the signed title page of your thesis. It is recommended that you contact Graduate Studies early in the quarter to schedule your appointment, as they get very busy at the end of the quarter. See the *Master's Candidate Degree Completion List* (<https://gradstudies.ucdavis.edu/current-students/forms-information>) for details on what paperwork to complete before this meeting.
- 5. Department Exit Checklist.** All finishing students are required to complete the department's *Exit Checklist* with the staff and faculty listed on the form: <http://epsinfo.geology.ucdavis.edu/forms>.
- 6. M.S. degree can be conferred.** Exceptions to this schedule of events can be made, rarely, to accommodate unforeseen extenuating circumstances; the student should consult with the Chair of the GGP in this case.

A thesis collection of samples, software and/or maps to be deposited in the Department may be required by the Thesis Committee.

See also:

- *Office of Graduate Studies Master's Candidate Degree Completion List* (<https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g304-masters-degree-completion-list.pdf>)
- *Academic Dates & Deadlines 2016-2017* (<https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/academic-calendar.pdf>)



PH.D. STUDENTS

Graduate students who are pursuing a Doctorate degree in Geology must complete the following University and Graduate Program requirements.

UNIVERSITY REQUIREMENTS:

1. Students working toward a Doctorate must be registered and in University residence for a minimum of six full-time quarters (12 units each quarter).
2. Students must maintain at least a 3.0 grade point average (only courses in 100 and 200 series and with A, B, C, or S count toward the GPA and the course requirements).
3. Students must complete 72 units of coursework at the graduate and upper division levels. Of these, at least 12 must be graduate courses in the major subject. Geology 290, 298 and 299 are counted toward this requirement. (see below for Graduate Program's course requirements.)
4. Upon satisfaction of *all* departmental requirements, and having maintained a 3.0 GPA, the student must apply for and take the Qualifying Examination. The application should be filled out by the student and signed by the Geology Graduate Program Chair. It should be submitted to the Office of Graduate Studies at least *six weeks* prior to the examination date to allow all committee members to be notified. The committee normally consists of five members (see **THE POWERS THAT BE** for the qualifications required for membership). At least one member must be appointed from outside the Geology Graduate Program. The *Qualifying Examination Application* can be found at <https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g319-qualifying-exam-app-phd.pdf>

The Qualifying Examination (see **GRADUATE PROGRAM REQUIREMENTS** for a brief description) can have three outcomes:

- a. Pass;
- b. No pass with the option to retake all or part of the examination within a specified time period, or to satisfy specific requirements;
- c. Fail.

After the Qualifying Examination, the Chair of the Exam must submit the *Report on Qualifying Examination for Admission to Candidacy*. For a retake of the Qualifying Examination, the Chair of the exam will submit a *Second Report on Qualifying Examination for Admission to Candidacy*

5. Upon successful completion of the Qualifying Examination, the student must apply for Advancement to Candidacy for the Ph.D. degree. *The Candidacy for the Degree of Doctor of Philosophy, Plan C* form can be found here: <https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g322-phd-candidacyc.pdf>
6. A doctoral student has *4 calendar years* after the date they pass their Qualifying Exam to submit a satisfactory dissertation.
7. The Normative Time to Degree for the Geology Ph.D. is twelve quarters (four years).

GRADUATE PROGRAM REQUIREMENTS:

1. **Courses.** Ph.D. students must undertake a program that includes a *minimum* of 8 technical courses (for at least 22 units) *prior* to taking their Qualifying Examination. The classes should be selected to provide breadth of knowledge appropriate for a Ph.D., and to provide the depth of knowledge appropriate in a student's specialization(s). Classes must be selected in consultation with the Advisory Committee, and can include classes in geology or other fields deemed appropriate by the Committee. Classes may be *upper-division or graduate level*. Students are strongly encouraged to enroll in GEL 281N. Certain graduate level courses, but not all, may be taken more than once for credit; check the UC Davis course catalog.

Students with a prior M.S. degree:

- A student with prior M.S. degree from an outside program may include up to 2 courses from their M.S. work to fulfill the requirements for 2 of the 5 non-breadth courses.
 - A student with a prior MS degree from the Geology Graduate Program at UC Davis may include 5 courses from their M.S. work to fulfill the requirements for 2 of the 5 non-breadth courses and the 3 breadth courses.
2. **Breadth Requirement.** The courses selected for #1 (above) must include at least one graduate-level course from three different categories of the seven sub-disciplines listed below. These three classes must all include an oral presentation by the student, and be 3-unit courses at the 200-level:
1. paleontology: 260, 261, 262
 2. sedimentology/oceanography: 205, 206, 226, 228, 232
 3. structure/tectonics: 214, 216, 218, 219, 220, 295, 296
 4. petrology/geochemistry: 206, 227, 246, 247, 250, 251, 253, 254, 255, 285
 5. environmental geology/geomorphology/resources: 230, 235
 6. geophysics: 217, 219, 236, 238, 240, 241, 242
 7. planetary science: 244, 245
3. **Prospectus.** By the 6th week of the third quarter in residence, the student must submit a prospectus for his/her dissertation research. The prospectus will not exceed **10** typed *double-spaced* pages (figures and references can exceed the 10-page limit) and must include the following elements:
- i. Summary/Abstract.
 - ii. Statement of problem to be investigated.
 - iii. Background, why the problem is important.
 - iv. Methods of investigating the problem.
 - v. Discussion; relevance of possible results to the solution of the problem.
 - vi. References.
4. **Prospectus Meeting.** After completion of the prospectus, before the end of the 1st year in the program, the student will meet with a committee composed of one Graduate Adviser, the Dissertation Adviser, and one “expert” in the field of research. Together, they will discuss the prospectus, the proposed research, and the ability of the student to complete the proposed research. This meeting can have the following outcomes:
- i. The student may be encouraged to expand the prospectus into a formal Ph.D. dissertation proposal.
 - ii. The student may be required to modify and resubmit the prospectus for reevaluation by the committee.
 - iii. The student may be required to proceed toward a M.S. degree prior to continuing in the Ph.D. program. His/her suitability for the Ph.D. program will be reconsidered upon the successful completion of the M.S. degree.
 - iv. The student may be asked to leave the Graduate Program.
- Once approved, a **copy of the prospectus, signed cover sheet and proposal** should be submitted to the Graduate Program Coordinator.
5. **Proposal.** A student entering the Ph.D. program with a B.S. degree or M.S. degree from an outside program will submit a proposal for Ph.D. research before the start of the 6th quarter in residence. A student entering the Ph.D. program after completing a M.S. in the Geology Graduate Program at UC Davis will submit a proposal for Ph.D. research before the start of the 4th quarter in residence. Note, extensions will only be considered if the topic of research for the Ph.D. is significantly different from that of the completed M.S. degree: such requests will be reviewed by the Graduate Program

Chair, in consultation with the Advisory Committee. The proposal text will be a formal National Science Foundation-style proposal: www.nsf.gov/pubs/policydocs/pappguide/nsf13001/gpg_index.jsp, will not be longer than 15 single-spaced pages and *must* be approved by *each* member of the Advisory Committee. The student must submit the proposal for review by the committee at least 6-8 weeks before the planned Oral Qualifying Exam. This gives the committee 4 weeks to review the proposal and then be able to decide whether to approve the proposal (see #6 below). Approval of the proposal by at least three members of exam committee must be recorded on the *Dissertation Proposal Cover Sheet* (<http://epsinfo.geology.ucdavis.edu/forms>) and submitted, along with a copy of the proposal, to the Graduate Program Coordinator at least 30 days prior to the scheduled exam date. The proposals must have the following elements:

- i. Summary.
- ii. Introduction, statement of the problem, why it is important, and previous work.
- iii. Proposed methods, how methods will allow the student to investigate the problem.
- iv. Research plan, including a timetable.
- v. Discussion, relevance of possible results to the solution of the problem.
- vi. Extensive references.

Approval of the proposal by the Advisory Committee indicates that they agree that the scientific questions posed by the student are appropriate at the Ph.D. level, that the research strategy is well founded, and that there is reasonable expectation that the Ph.D. research can be brought to a successful conclusion. Approval of the proposal indicates that it is defensible in the student's Qualifying Examination.

6. **Qualifying Exam.** Upon satisfaction of all departmental requirements, and having maintained a 3.0 GPA, the student must apply for the Qualifying Examination using the *Qualifying Examination Application* found at <https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g319-qualifying-exam-app-phd.pdf>. Students entering the Ph.D. program with a B.S. degree or M.S. degree from an outside program must take the Qualifying Examination by the end of the 6th quarter in residence. A student entering the Ph.D. program after completing a M.S. in the Geology Graduate Program at UC Davis must take the Qualifying Examination by the end of the 4th quarter in residence. Normally, this is an oral exam, and will consist of a short presentation (less than 15 minutes) of the proposed research by the student, followed by a question-and-answer period. The student, in consultation with his/her Examination Committee, normally chooses at least three topics upon which he/she will be formally questioned. The examination typically takes about three hours. The student is strongly encouraged to discuss the topics with each of the committee members well before the exam. The university specifies three criteria by which the student is judged:

1. Relevant portions of the student's previous academic record.
2. Performance on specific parts of the examination.
3. Overall evaluation of the student's performance and potential for scholarly research as indicated during the examination.

The student should remember that the Qualifying Examination will include a defense of the proposed research, including the problem, the methodology and the background.

Ph.D. students have 4 years from the date on which they pass their Qualifying Exam to complete their dissertation.

7. **Teaching Assistantship.** Each Ph.D. student *must* serve at least one quarter as a Teaching Assistant in an undergraduate geology course offered by the Department. To qualify for a Teaching Assistantship, the student must take or have taken GEL 390, the T.A. orientation and writing course offered by the department. The TA orientation offered by CEE at the beginning of Fall quarter is also required.

COMPLETION OF THE Ph.D. DEGREE

The completion of the Ph.D. includes two main components: 1) a written dissertation and 2) a departmental exit seminar, followed by a closed-door defense with the Dissertation Committee (University Ph.D. Degree Plan C). The minimum time constraints for each component, described below, will be strictly adhered to by the Dissertation Committee. Ph.D. students must complete all degree requirements within four calendar years (12 quarters), regardless of their enrollment status (including quarters on Filing Fee, PELP, and no enrollment), following their passing the oral Qualifying Exam.

1. Dissertation:

- The dissertation may be written in one of two formats: (1) dissertation format, with chapters, and appendices to archive data; or (2) manuscript format, intended for submission for publication in a professional journal in the student's field of research. As a guideline, three manuscripts usually suffice to represent new scientific contributions to fulfill the Ph.D. dissertation requirement in the Geology Graduate Program. The three manuscripts must evidence a coherent and unified intellectual effort by the doctoral student; three unrelated manuscripts on different topics will not suffice. They must, however, be in a form approved for submission by the Dissertation Committee. The student should discuss the format of the dissertation with the Advisory Committee members early in the process prior to submittal of drafts for review and evaluation, and all should agree on a schedule of draft submittals and revisions, before drafts are submitted. Note, university policy gives one month for faculty to complete and return comments on a dissertation draft.
- At the beginning of the anticipated final year of the Ph.D. the candidate *must* schedule an Annual Advisory Committee Meeting to evaluate the current status of the dissertation research and to determine if a one-year time line is realistic for completion of all Ph.D. requirements.
- *Prior* to scheduling the departmental seminar and dissertation defense date, the Ph.D. candidate must confer with the Dissertation Committee to determine the expected completion date. In most cases, *this will require submitting a complete draft of the written dissertation to the Dissertation Committee*. A complete draft of the dissertation is typically one that has gone through at least one round of review/revision between the dissertation adviser and Ph.D. candidate.
- A minimum of two weeks before the dissertation defense and departmental seminar a complete and defensible dissertation *must* be submitted to the Dissertation Committee for review. At this time the departmental seminar and dissertation defense date is scheduled. A *defensible* dissertation is one that has gone through (probably) multiple rounds of review and revision between the dissertation adviser and Ph.D. candidate.

2. **Departmental Exit Seminar.** All students completing a dissertation for the Ph.D. degree must present a public departmental seminar on the results of their work before the final dissertation can be accepted. The seminar can be scheduled after the dissertation draft is approved. The student must arrange to reserve a room for the seminar with the Graduate Program Coordinator (GPC), ensuring that she is aware that the seminar is taking place, and where and when. The seminar should be presented during the academic year, if possible.

Dissertation Defense. The dissertation defense follows the public departmental seminar and is a closed-door oral examination by the Dissertation Committee of any aspects of the research. Students admitted prior to July 2009 can opt to abide by the defense requirement should they choose, but are not required to do so. The possible outcomes of the dissertation defense are:

1. Dissertation defense is certified as is. All members of the committee sign the dissertation.
2. Dissertation requires minor revisions. All members of the committee sign the dissertation except the committee chair. The student completes the revisions and then

obtains the signature of the committee chair when revisions are accepted.

3. Dissertation requires major revisions. The student is given one year to complete the revisions and is required to schedule a new dissertation defense date.

Final acknowledgment of completion of all Ph.D. degree requirements is required by all members of the Dissertation Committee in the form of a signature on the title page. Both the GPC and the Chair of the Geology Graduate Program must be notified once all signatures have been obtained, following completion of the exit talk.

The Dissertation Committee Chair will also complete the *Report of Final Examination for Ph.D., Plan C*, found here: <https://gradstudies.ucdavis.edu/current-students/forms-information>.

3. Submit the Dissertation. The dissertation and all critically-related supplementary files (see below) must be submitted to the ETD/Proquest website. Graduate Studies will access and review your thesis through this submission. Instructions for electronically filing your thesis or dissertation (ETD) and formatting guidelines are available online at: <https://grad.ucdavis.edu/current-students/academic-services-information/filing-thesis-or-dissertation>. The dissertation will be uploaded as a single PDF file. Supplementary files that are critically-related to the dissertation can be upload in various formats depending on the type of information (e.g., maps, data tables, audio, video, input files for numerical simulations, student written source code). If these files are too large to upload to the website, they can be submitted on a CD, DVD or thumb drive (see instructions on the ETD FAQ page: <http://www.etdadmin.com/cgi-bin/main/faq?siteId=65#ts7>). Remember that this is the archive of record for you and your advisor, therefore including all essential data for reproducing results or continuing work from your dissertation should be included. Also, note that it is the practice of major journals and science funding agencies to require all necessary information for reproducing the work to be included as Supplementary Information in publications, so this requirement insures that your dissertation also meets these requirements.

4. Meet with a Student Affairs Officer at the Office of Graduate Studies. You will need to make an appointment to meet with Elizabeth Sturdy at Graduate Studies to turn in your final paperwork, including the signed title page of your dissertation. It is recommended that you contact Graduate Studies early in the quarter to schedule your appointment, as they get very busy at the end of the quarter. See the *Doctoral Candidate Degree Completion List* (<https://gradstudies.ucdavis.edu/current-students/forms-information>) for details on what paperwork to complete before this meeting.

5. Department Exit Checklist. All finishing students are required to complete the department's *Exit Checklist* with the staff and faculty listed on the form: <http://epsinfo.geology.ucdavis.edu/forms>.

6. Ph.D. degree can be conferred. Exceptions to this schedule of events can be made, rarely, to accommodate unforeseen extenuating circumstances; the student should consult with the Chair of the GGP in this case.

A thesis collection of samples, software and/or maps to be deposited in the Department *may* be required by the Dissertation Committee.

See also:

- *Office of Graduate Studies Doctoral Candidate Degree Completion List* (https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g303_doctoraldegreecompletionlist.pdf)
- *Academic Dates & Deadlines 2017-2018* (<https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/academic-calendar.pdf>)

FINANCIAL SUPPORT FOR GRADUATE STUDENTS

GRADUATE STUDENT SUPPORT:

In the Geology Graduate Program currently, M.S. students are guaranteed support for **two** years, in the form of a TA, GSR (Graduate Student Researcher), or fellowship, or a combination of these; Ph.D. students are guaranteed support for **five** years, in the form of a TA, GSR, or fellowship, or a combination of these. M.S. students approved to change their degree objective to the Ph.D. after finishing the M.S. at UC Davis are guaranteed an additional four years of support, in the form of a TA, GSR or fellowship, for a total of **six** years of support.

These guarantees include fee remission, however there are some fees that aren't covered by fee remission on campus:

- Each quarter that a student TAs, they will be responsible for paying approximately \$276 in fees not covered by their remission agreement.
- International Students are responsible for a one-time fee of \$159.
- All new students must pay a one-time Document Fee in Winter Quarter of \$150 (https://registrar.ucdavis.edu/local_resources/docs/doc-fee/document_fee.pdf)
- Students will have to pay the Candidacy fee upon advancing to Candidacy
- Some health center charges or copays are not included in fee remission

M.S. students needing additional support beyond their guaranteed allotment will be considered as “alternates” for support, and will be awarded support in the form of a TA or GSR if and as it is available, Alternate support in the form of TAs per student are limited to one quarter for M.S. students. PhD students can expect an additional year of funding beyond their guaranteed years so long as they are making good progress towards their degree objective. Although these limits will be reviewed and adjusted depending on programmatic needs and prior GSR/fellowship support granted to the student, they will be considered as the default policy. University rules state that students can receive a maximum of 15 quarters of TA support and 15 quarters of GSR support. The student is still required to complete the degree within normative time (4-6 years for Ph.D. students).

DEPARTMENTAL SUPPORT:



The Department of Earth and Planetary Sciences can provide financial support to students in the form of Graduate Student Research Appointments and Teaching Assistantships. Requirements for hiring of GSRs and TAs are given on page 18.

Graduate students who are US citizens, permanent residents or immigrants are required to file a “Free Application for Federal Student Aid” (FAFSA), or a renewal, every year: <http://www.fafsa.ed.gov/>. It is strongly suggested that you file by the priority processing date of March 2. This form, submitted directly to the Federal Student Aid Program Office, Iowa City, Iowa, is used to determine financial need only. Financial need is a component of the eligibility criteria for many fellowships, and for all forms of federal financial aid.

• Teaching Assistantships:

Teaching Assistantships are awarded to students on the basis of qualifications as a teaching assistant and their progress toward their degree. A Teaching Assistant is assigned to a specific class, and in general the student is expected to work 20 hours per week. Typical duties include organizing and teaching laboratories or discussion sections for classes, grading papers and assisting with field trips. A call for TA applications is sent by the Graduate Advisers during Spring quarter.



Teaching Assistants are considered to be Academic Student Employees (ASE) for the quarters in which they TA. As such, your employment is covered by a collective bargaining agreement between the University and the United Auto Workers. That is to say, you're in a union. See: ucnet.universityofcalifornia.edu/labor/bargaining-units/bx/contract.html

• Graduate Student Researchers:

GSR support may be provided by individual faculty members. Funding comes from research grants and the GSR is expected to work on research related to the grant. Students may receive GSR support

from their Faculty Advisers and discuss the requirements and terms of the assistantship with the faculty member in charge.

- **Research Support:**

The Department has a small reserve of funds (known as the Durrell Fund) available to help offset research costs accrued by students in their thesis or dissertation research. Typical amounts awarded are from \$500 to \$2,000. The student is expected to have applied to all appropriate external and University sources before applying to the Department for research support. The Department will make a decision on internal funding during Spring Quarter. Instructions for applying for these funds will be sent to you during Winter quarter.



UNIVERSITY AND EXTRAMURAL SUPPORT:

Many sources of funding exist, both within the University and outside the University, for which you may apply to support yourself and your research. If you qualify, it is well worth your time and effort to apply for these funds, because they are often not well advertised and the competition is frequently less fierce than you might imagine. The following Graduate Studies website provides extensive information on fellowships and graduate scholarships available to both new and incoming graduate students: <https://grad.ucdavis.edu/financial-support-0>



TEACHING ASSISTANTS AND GRADUATE STUDENT RESEARCHERS IN THE DEPARTMENT OF EARTH AND PLANETARY SCIENCES, UC DAVIS

When graduate students are admitted to the Department of Earth and Planetary Sciences, they are offered a graduate support package. It includes a description of their first year's support (normally 3 quarters). This support may take the form of fellowships, GSRs and/or Teaching Assistantships. Furthermore, we guarantee continued support at the same level for some number of succeeding years. Continued support is contingent upon the student's successful progress toward a degree, and upon the availability of funds within the Department. Our ability to make and honor these commitments is crucial to our recruitment and retention of outstanding students.

REQUIREMENTS FOR HIRING TEACHING ASSISTANTS:

All applicants are expected to meet the following requirements in order to be Teaching Assistants (TAs) in the Department of Earth and Planetary Sciences. Under some circumstances, such as an unanticipated need by the Department, the Graduate Advisers may waive one or more of the requirements.

1. TAs must be enrolled as graduate students at the University of California, Davis. Students must meet all of the criteria for hiring by the University, and be in good academic standing. TAs must be enrolled for a minimum of 12 units.
2. TAs must have completed the Center for Educational Excellence (CEE)'s TA orientation program in the beginning of Fall or Winter quarter of their first year.
3. Teaching Assistants must have completed, or will be enrolled in, the Department's "Methods of Teaching in Geology" course (GEL 390).
4. TAs must be qualified for the subject they will be teaching. This qualification can be demonstrated by one or more of the following:
 - i. A Bachelors degree in Geology.
 - ii. A knowledge of the field through prior work or academic experience.
 - iii. Prior enrollment in the course or its equivalent.



REQUIREMENTS FOR HIRING GRADUATE STUDENT RESEARCHERS:

Graduate Student Researchers (GSRs) are almost always employed on a research grant or contract, under the direction of the Principal Investigator (P.I.) of that grant or contract. Therefore, the decision to hire a GSR is made by the P.I. All applicants are expected to meet the following requirements in order to be GSRs in the Department of Earth and Planetary Sciences.

1. Must be enrolled as graduate students at the University of California, Davis. Students must meet all of the criteria for hiring by the University, and be in good academic standing. GSRs must be enrolled for a minimum of 12 units.
2. GSRs must be qualified to undertake the research tasks for which they are hired. This qualification may be demonstrated by their academic training and/or prior experience.



THE ROLE OF GRADUATE STUDENTS IN THE DEPARTMENT OF EARTH AND PLANETARY SCIENCES



Graduate students are not merely in the last stages of their formal education. More importantly, they are in the first stages of their scientific careers. Therefore, they must be viewed, and must view themselves, as professional colleagues to the faculty and the staff in the Department of Earth and Planetary Sciences. With this comes all the rights and responsibilities of a professional in the Department. This short section reviews those rights and responsibilities and outlines how graduate students can address any grievances they may have.

THE RIGHTS AND RESPONSIBILITIES OF THE GRADUATE STUDENT:

The graduate student has her or his responsibilities and rights spelled out in the Graduate Student Bill of Rights and Responsibilities (<http://grad.ucdavis.edu/sites/default/files/upload/files/current-students/grad-studentrights.pdf>) issued by the Graduate Student Association and endorsed in principle by the UC Davis Graduate Council and the Office of Graduate Studies. Below, we restate some of the more essential rights and responsibilities. This list is not complete, and students should read the Bill of Rights and Responsibilities for a complete list and more details.

RIGHTS:

1. A graduate student has a right to be respected as a person of merit and junior colleague upon gaining admission to a graduate program.
2. Graduate students have a right to an accurate description of the availability and the likelihood of financial and resource support within their programs.
3. Graduate students have a right to specific and concrete requirements for achieving an advanced degree. In the Geology Graduate Program, these requirements are explicitly spelled out in the Geology Graduate Student Handbook.
4. Graduate students have a right to have their progress towards achieving an advanced degree be evaluated in an objective manner and based on criteria that are understood by the graduate adviser and the student.
5. A graduate student has a right to regular feedback and guidance concerning his or her academic performance. (Ref. #3)
6. Graduate students have a right to not be discriminated against, such as actions based on a student's gender, race, age, sexual orientation, disability, religious or political beliefs.
7. Graduate students have a right to reasonable confidentiality in their communications with professors.
8. Graduate students have a right to refuse to perform tasks if those tasks are not closely related to their academic or professional development program.
9. Graduate students have a right to co-authorship in publications involving significant contributions of ideas or research work from the student.
10. Graduate students have a right to expect that their departments or graduate programs incorporate student representatives into the decision-making process at that level.

RESPONSIBILITIES:

1. Graduate students have a responsibility to conduct themselves, in all educational activities, in a manner befitting an academic colleague. Graduate students' behavior should be a credit to themselves, the higher academic unit and the university.
2. Graduate students have a responsibility to devote an appropriate amount of time and energy toward achieving the advanced degree within "normative time", except when special circumstances apply.
3. Graduate students have a responsibility to provide accurate and honest reporting of research results and to uphold ethical norms in research methodology and scholarship.
4. Graduate students have a responsibility to participate in the campus community to the extent that each is able, and should leave the campus enriched in whatever ways possible.
5. Graduate students have a responsibility to take the initiative in asking questions that promote their understanding of the academic requirements and the financial particulars of their specific graduate program.
6. Graduate students have a responsibility to understand their role in the development of the relationship between faculty mentor and graduate student.
7. Graduate students have a responsibility to uphold the public service aspects of the mission of a public university, at a level appropriate to their ability and graduate program.



WHAT TO DO IF YOU ARE HAVING PROBLEMS WITH INDIVIDUALS, DEPARTMENT POLICIES, OR THE UNIVERSITY

MEDIATION SERVICES AND GRIEVANCE PROCEDURES:

On occasion, a student may find herself or himself in a dispute or difficulty with another individual (faculty, staff, or student), or with a Department policy. The student has a right to address these disputes and to make an effort to have them resolved. Below we have recommended procedures for addressing graduate student complaints and grievances. Students must be aware that, when their complaints result in a formal personnel action against a staff or faculty member, rules of confidentiality may apply that prohibit the student access to some information about their dispute. This can be very frustrating. Please see: http://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/gs201_graduatestudentguide.pdf, <http://gsa.ucdavis.edu>, and <http://mediation.ucdavis.edu/>

WE RECOMMEND THE FOLLOWING SEQUENCE OF PROCEDURES IF YOU FIND YOU HAVE A GRIEVANCE AGAINST AN INDIVIDUAL.

1. Discuss the problem with the individual. You have the right to such a discussion without fear of retribution. Quite often disputes or grievances arise from simple misunderstandings. At other times, problems come about because of inadvertent insensitivity by one of the principals. In either case, the problems can be simply and even pleasantly cleared up between the two involved individuals.
2. Sometimes a dispute cannot be resolved between the principals. Or the student does not feel comfortable confronting the individual alone. If so, the student may discuss the problem with one of the Graduate Advisers. The student has the right to a confidential and objective review of the problem with the Adviser. Such a discussion can include informal and more formal characteristics.
 - In an informal discussion, the student can request total confidentiality, and the Graduate Adviser must respect that request (within limits set forth in the Policies and Procedures Manual of the University). The Graduate Adviser can offer opinions about the seriousness of the problem, its solution, and what the student should do next. At this stage the Adviser is not obligated to take any particular action, but must protect the confidentiality of the situation and must make an objective evaluation of the problem.
 - In a more formal discussion, the Adviser is requested to take some action, such as confronting the antagonist on behalf of the student, bringing the issue to a faculty meeting, or forwarding the issue to the administration. The Adviser may discuss the issue with other Graduate Advisers or the Department Chair, provided that none of them are principals in the dispute. The student has the right to request a written response from the Graduate Adviser explaining what action the adviser has taken, and why she or he has taken it. Under most circumstances the student can request this response within one week.
3. If the student is dissatisfied with the response of the Graduate Adviser, or if the authority of the Graduate Adviser is not sufficient, the student has a wide variety of options. If appropriate, the student may request a meeting with the Department Chair. The student has a right to a written response from the Chair about what action he or she has taken, and why he or she has taken it. Under normal circumstances the student can request this response within one week.
4. After, or instead of, the Department Chair, the student has the right to pursue a grievance in a number of ways. He/she may go to the Graduate Student Association at 752-6108. Alternatively, or in addition, the student may wish to confer with a number of individuals or offices for help with specific problems. Specific examples of avenues for graduate students include:
 - Grievances about the Graduate Program, Graduate Advisers, and general academic issues should be referred to Associate Dean, Office of Graduate Studies, 250 Mrak Hall, 752-0650.
 - Concerns about sexual harassment should be forwarded to Lisa Brodkey, Director, Harassment & Discrimination Assistance and Prevention Program (HDAPP), 752-9255. Complaints should be made promptly because time limits exist for some types of complaints

and responses. If a student formally reports an incident of sexual harassment, the Program must make an official inquiry. However, students may make confidential inquiries by making an anonymous call to the Sexual Harassment Information Line (752-2255).

In general, a student's stay in graduate school should be a scientifically challenging, enjoyable experience, albeit one that occasionally causes frustration and stress, in which disputes between the student and others may arise. While these disputes often are easily resolved, they should not be left to fester over long periods of time. The student has a right to seek a solution so that normal progress can be made toward a degree and a fruitful, productive graduate career can result.

DEPARTMENT FACILITIES AND INTRANETS

A range of equipment and services are available within the Department of Earth and Planetary Sciences for use by graduate students. Their primary function is to aid students in their research, whether it involves chemical analyses, thesis and manuscript preparation, or transportation. Several of the services are available on a recharge basis, so please check the latest rates. See: <http://geology.ucdavis.edu/facilities>

COPYING:

The Department of Earth and Planetary Sciences houses a large, high-volume copying machine in the small room adjacent to the main office. It is available for teaching-related copying. TAs will be given a copier code each quarter in order to make copies.

Personal copying in the department is not available. The closest coin operated copier is in the Physical Sciences Library. Information about copying services in the library is on their web site, <http://library.ucdavis.edu/allservices/copyprint.php>



MAILING AND SUPPLIES:

Students needing paper, pens, overhead transparencies, etc. (for teaching purposes only) can acquire these materials directly from the main office. Mail is delivered and picked up in the Department mail room on Mondays, Wednesdays, and Fridays. If you have mail needing to be sent off-campus, put it in the canvas bag. The department does not pay for shipping or mailing unless it is for teaching or administrative purposes. No personal mail can be placed in the campus mail, even if it is stamped.



SAMPLE PREPARATION:

There are a number of rock preparation facilities available in the Department. The most commonly used facility is the thin-section preparation lab. The Thin Section Lab can prepare polished or covered thin sections and polished grain mounts. Contact Greg Baxter for more information. There are several specialized labs (i.e., microfossil processing, heavy mineral separation, etc.); for access, see the major professor involved in overseeing projects in those labs.



GRAPHICS PREPARATION AND PHOTOGRAPHY:

Janice Fong is the full-time illustrator and webmaster in the Department. She is available to graduate students for consultation in preparation of both traditional and computer graphics for theses, slide presentations, manuscripts, poster sessions and web pages. She can answer your questions about various computer graphics and web design programs, and she also provides technical support for poster printing. You can see Janice for general questions concerning image editing programs and referrals to campus photography services.



COMPUTER FACILITIES:

Besides the campus computer labs that are available for general student use, the Department has a local area network of a wide variety of computers (collectively known as GEONET) available to graduate students, undergraduate students as well as faculty and staff. Kengshi Yang is the Department's system manager. He can provide you with information about the various computer systems. You are expected to abide by the campus acceptable use policy when using these computers. See: <http://manuals.ucdavis.edu/PPM/310/310-23.pdf>. In addition, any computer used on the network, including your own, must abide by the Campus Cyber Safety Program. See: <http://manuals.ucdavis.edu/PPM/310/310-22.pdf>. Additional information about configuring your computer can be found at <http://security.ucdavis.edu/cybersafety.html>.

The most commonly used computers in the Department are Macintosh computers. Computers that are routinely available to graduate students are those that are in room 2231. The Macs have many applications for word processing (e.g. MS Word), spreadsheets, graphics and data analysis. Some Macs are also equipped with scanners, digitizers, image capture equipment and seismic digitizing equipment; see Kengshi for details.

ANALYTICAL FACILITIES:

The Department houses most of the analytical facilities that you might need during your graduate study. All of these facilities require prior instruction before you will be allowed to use them. If you think that you may be using these facilities during your stay here, be sure to discuss your needs and possible training with Dr. Sarah Roeske.

The following instruments are available to graduate students: fully automated electron microprobe; x-ray fluorescence analyzer; x-ray diffractometer; atomic absorption spectrometer; stable isotope mass spectrometer; complete paleomagnetism lab; cathodoluminescent stage and fluid inclusion stages for petrographic microscopes; and high pressure experimental petrology and rock deformation equipment.

Any student wishing to use the above equipment and facilities should seek the approval of the faculty member overseeing its operation. The student and/or his adviser is expected to find or attempt to find funding for the use of the analytical equipment.



ROCK STORAGE:

The Department makes an effort (but not a guarantee) to provide a Lane cabinet to each student for storage of samples. Contact Greg Baxter to be assigned a cabinet and/or cabinet key

MAPS:

The Department has a limited collection of geologic and topographic maps available for graduate student use. Most of the topographic maps cover California, while the geologic maps are global. See the Business Office for access to these maps.



TEXTBOOKS:

The Department has copies of most of the textbooks used in Undergraduate classes. TAs can check out a desk copy of any textbook from the Graduate Program Coordinator (GPC) for one quarter at a time.

TRAVEL:

If you will be traveling for university purposes, you must submit a travel report to Nancy Mackay-Taylor in the business office. Before booking your first trip, you must do the following:

- Visit mytravel.ucdavis.edu and click on the Connexus Travel Portal, then complete the profile section so that you can book travel.
- Add Nancy Mackay-Taylor as a delegate so that she can prepare travel reports on your behalf. Step by step instructions on how to do this are available.

If you need to rent a car for your work, this needs to be done through UC Davis. You should rent through the car companies that have car rental agreements with UC. If you use Connexus, then all the car rental options will be with car companies with UC rental agreements. The liability insurance and Loss Damage waivers are built into the rental rates and the agreements include allowing underage drivers so UC will not pay for these charges or pay for underage fees. See more at http://afs.ucdavis.edu/our_services/travel-e-entertainment/travel/ground.html#rental

Travel, entertainment and pre-trip payment request forms can be found at <http://epsinfo.geology.ucdavis.edu> (under department resources, under forms, then under Travel and Entertainment).

Paper forms can be found in the business office across from the front desk.

Questions? Send an email to gel-travel@ucdavis.edu. Remember, travel reports need to be submitted within two weeks of the return of your trip!

PURCHASING:

The department has a pre-purchasing website in which to request an order for the department to pro-

cess. You should use this website to request approvals for purchases using AggieBuy, such as equipment for your lab or research. The website can be found at <http://prepurchasing.ucdavis.edu>. Place a note in the pre-purchasing system letting us know that you placed a “cart” in Aggie Buy. Please email Corinne Esser at caesser@ucdavis.edu to be added as a user on the pre-purchasing system.

AggieBuy is used for purchasing. Log into AggieBuy at <http://aggiebuy.ucdavis.edu> and set up your profile defaults (accounts, shipping addresses, email notification). Make sure your telephone number is updated in the campus directory; this information is displayed in your AggieBuy profile and used by suppliers to communicate with you as needed. If you have any questions, please refer to the help pages on the AggieBuy website or contact the AggieBuy Help Desk at ab-help@ucdavis.edu or visit Noemi in the business office.

EPSINFO:

The department’s intranet holds many useful policies and forms, as well as a directory of all departmental faculty, staff, and graduate students. This information can be found at <http://epsinfo.geology.ucdavis.edu>.

DEPARTMENT OF EARTH AND PLANETARY SCIENCES COLLECTIONS POLICY

The collections are available for use by anyone in the Department: faculty, staff, graduate, and undergraduate students. The collections consist of rocks, minerals, fossils, and maps, and are used primarily for teaching and exploratory research projects. Most of the collections are in locked cabinets located in various places throughout the department (see below). Keys to open these cabinets will be issued to anyone who has a good reason for using the collections (TAs, GSRs, for senior theses, etc.).



REMOVAL OF SPECIMENS:

Please use the collections. Browsing through the cabinets is fine, as is removing specimens temporarily for a class period (for example) as long as everything that is removed from the drawers for whatever reason is replaced immediately. If you must remove a specimen for longer than a few hours, please tell Sandy Carlson (fossils)/Greg Baxter (rocks) or leave them a note or an e-mail message with the following information:

1. your name
2. the date
3. the name and number of the specimen
4. where the specimen will be located outside its place in the collections.

Please use the collections *responsibly*. Specimens that are not replaced immediately are easily lost or stolen. The department *does not* have help with the day-to-day maintenance of the collections to put away what *you* have taken out.



If you have specific needs for teaching or can't find what you need, please ask.

THE COLLECTIONS:

- **Rocks:** Igneous and metamorphic rocks are organized by rock type. “HC” or “TM” keys will open the cabinets. Sedimentary rocks are organized by rock type and are stored in Haring Hall. Most cabinets are unlocked, or will open with the “TM” key.
- **Minerals:** The minerals are organized systematically. The cabinets open with a “TM” or “MM” key.
- **Fossils:** The fossils are organized systematically. The Lane cabinets will open with the “C415A” key; wooden cabinets will open with the “TM” key.
- **Maps:**
 - **Geologic** - Flat-file and roll maps may be removed only for teaching purposes. Drawer labels are more or less accurate. Feel free to browse through them, but please treat the maps carefully and keep them as organized as possible.

- **Topographic** - The department owns two more or less complete sets of California 7.5' and 15' topographic maps. The Master File is housed in two yellow map cabinets and are to be used in the department only. They may be copied in the Earth and Planetary Sciences office, but are *NOT* to be removed from this immediate area. The Check-out file is housed in two grey map cabinets. The keys to open these cabinets are located in the Main Office. *Please do not use these cabinet tops as storage surfaces for course materials!*

MAP CHECK OUT:



To find out if the department has the map you need, go the Main Office and request the two brown booklets (“California Catalog of Topographic and Other Published Maps”) from the receptionist. These booklets contain a list of the maps in our collection. If you need a visual aid to determine which maps you need, a reference map of California is also available.

TO CHECK OUT A MAP:

1. get the map cabinet keys from the Business Office
2. find the map you want
3. in the cabinet, leave a note that includes:
 - your name
 - the name of the map you checked out
 - the date you checked it out
4. relock the cabinet
5. return the key

*All maps that are removed from the locked cabinets, flat-files, filing cabinets, wall brackets, or roll map boxes ***MUST*** be replaced by the person who removed them.* We do not have sufficient personnel to refile maps for you.

If the department does not have the map you need, Shields Library has a complete set of both 7.5' and 15' (most recent and older) topographic maps for California, and virtually complete sets for Nevada, Arizona, Hawaii, Alaska, and several other states. These maps may be checked out from the library. If you want to purchase your own topographic maps, go to REI (<http://www.rei.com>) in Sacramento or contact the USGS (<http://www.usgs.gov>) directly.

Last updated 8/29/17 MIB

Geology Graduate Program, Masters (Plan I) – Advising Form

Please use this form to keep track of your progress and completion of various degree requirements. You will be asked to e-mail a PDF version to the Grad Chair before yearly meetings, etc... also good to share with major advisor. See Grad Handbook for detailed description of requirements.

Student Name: _____ Advisor: _____

Quarter Started: _____ Expected Quarter Finished (+2 yrs): _____

Courses

Enter course number and name, and quarter and year (e.g., F14) completed.

- 30 units of course-work (university requirement) including ≥ 12 units of research (GEL 299)
- 5 courses for ≥ 12 units, geology or other discipline; 100- or 200-level.
- 3 of which must be breadth courses; 3-unit 200 level; 1 from each of 3 different subdisciplines.

	Course Number	Course Name	Units	Requirement	Quarter
	UCD Req.	CETL two-day TA training	-	Required	
	GEL 390	Geology TA/Writing Course	2	Required	
	GEL 290	Wednesday Seminar	1	Required	ALL
1				Breadth	
2				Breadth	
3				Breadth	
4				General	
5				General	

Research

Enter quarter and year (e.g., F14).

Requirement	Due Date	Completion
Prospectus Document	6th week of 3rd quarter	
Prospectus Meeting	before end of 3rd quarter	
Final Draft of Thesis	before end of 6th quarter	
Exit Seminar	scheduled after thesis draft is certified	
Thesis Collection	Before thesis is signed by faculty advisor	
Department Final Checklist	Before thesis is signed by faculty advisor	
Final Thesis	Submit copy to department online	

Last updated 8/29/17 MIB

Meetings

Enter quarter and year (e.g., F14).

Requirement	Due Date	Completion	
First- year Meeting	Before first quarter		
Prospectus Meeting	Year 1: Start of 3rd quarter		
Continuing Student Meeting	Winter Quarter		
Advisory Committee Meeting	Spring Quarter (or once per year)		

Funding Record

Enter quarter and year (e.g., F14), and then percentage time paid from each source (e.g., 25% TA and 25% Graduate Program Fellow (GPF) OR 50% GSR, etc...).

	Quarter	GSR	TA	GPF	Fellowship	Other
1						
2						
3						
4						
5						
6						
7						
8						

Notes

Use this space for any notes or questions that you'd like to keep track of.

Last updated 8/29/17 MIB

Geology Graduate Program, PhD (Plan C) – Advising Form

Please use this form to keep track of your progress and completion of various degree requirements. You will be asked to e-mail a PDF version to the Grad Chair before yearly meetings, etc... also good to share with major advisor. See Grad Handbook for detailed description of requirements.

Student Name: _____ Advisor: _____

Quarter Started: _____ Expected Quarter Finished (+4-5 yrs): _____

Courses

Enter course number and name, and quarter and year (e.g., F14) completed.

- 72 units of course-work (university requirement) including ≥ 12 units of research (GEL 299).
- 8 courses for ≥ 22 units, geology/other discipline; 100- or 200-level (count 2 or 5 from MS).
- 3 of which must be breadth courses; 3-unit 200 level; 1 from each of 3 different subdisciplines.

	Course Number	Course Name	Units	Requirement	Quarter
	UCD Req.	CETL two-day TA training	-	Required	
	GEL 390	Geology TA/Writing Course	2	Required	
	GEL 290	Wednesday Seminar (pre-cand.)	1	Required	ALL
1				Breadth	
2				Breadth	
3				Breadth	
4				General	
5				General	
6				General	
7				General	
8				General	

Research

Enter quarter and year (e.g., F14).

Requirement	Due Date	Completion
Prospectus Document	6th week of 3rd quarter	
Prospectus Approval	before end of 3rd quarter	
Dissertation Proposal	before end of 6th quarter (UCD-MS: 4 th qtr)	
Qualifying Exam	before end of 6th quarter (UCD-MS: 4 th qtr)	
Final Draft of Thesis	before end of 12th quarter after QE	
Exit Seminar/Defense	scheduled after thesis draft is certified	
Thesis Collection	Before thesis is signed by faculty advisor	
Department Final Checklist	Before thesis is signed by faculty advisor	
Final Thesis	Submit copy to department online	

Last updated 8/29/17 MIB

Teaching Assistant

- Must serve at least one quarter as a teaching assistant (list first quarter): _____

Meetings

Enter quarter and year (e.g., F14).

Requirement	Due Date	Completion				
First-year Meeting	Before first quarter					
Prospectus Meeting	Start of 3 rd quarter					
Continuing Student Meeting	Winter Quarter					
Advisory Committee Meeting	Spring Quarter					

Funding Record

Enter quarter and year (e.g., F14), and then percentage time paid from each source (e.g., 25% TA and 25% Graduate Program Fellow (GPF) OR 50% GSR, etc...).

	Quarter	GSR	TA	GPF	Fellowship	Other
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

Notes

Use this space for any notes or questions that you'd like to keep track of.