**Earth and Planetary Sciences Graduate Program**

**GEL 299 Syllabus**

Quarterly Research Related Tasks

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| --- | --- | --- | --- |
| **Student Name:** |  | **Quarter:** (F/W/S) |  |
| **299 Units (1-12):** |  | **Year:** |  |
| **Research Task** | **Expectations & Deadlines1** | **Hours/ Week2** |
| Meetings w/Advisor & Research Group |  |  |
| Project Management |  |  |
| Laboratory Analysis  |  |  |
| Data Analysis |  |  |
| Fieldwork |  |  |
| Literature Review |  |  |
| Writing |  |  |
| Prepare For & Attend Conferences |  |  |
| Laboratory / Code / Field Equipment Maintenance |  |  |
|  |  |  |

1Deadlines listed for research tasks due before the end of the quarter.

2Hours per week serves as guidance for allocating your time. Actual time committed to each task will vary from week to week.

Course Overview

Masters and doctoral graduate students enrolled in the Earth and Planetary Science Graduate Program are expected to engage in research-focused independent study culminating in a written dissertation.

Full time students are expected to enroll in a minimum of 12 units. During the first 2 years of the program, some of these units will go toward required courses. For the remaining units, the student is expected to enroll in GEL 299 units. According to the Carnegie Rule, each unit is equivalent to 3 hours of time, either spent in or out of class. Therefore, a student will enroll in 1 to 12 units of GEL 299 units representing between 3 to 36 hours of time *per week* working on their research. These units account for the student’s time committed to making progress on their independent research project.

Assessment of whether a student is making satisfactory progress towards their degree in any given quarter will be based on the number of GEL 299 units the student is enrolled in and the documented progress made toward their thesis or dissertation research tasks in that quarter.

Course Goals

* Learn to gather information (data, techniques, current understanding, theories, questions) from the research literature and synthesize that information to
	+ motivate new research directions,
	+ provide context for a proposed project,
	+ interpret data and draw conclusions,
	+ learn methods, techniques, calculations, theory to be applied or built on in your project
	+ decide on the next steps needed to build on current research progress
* Develop skills in scientific writing, including
	+ synthesizing and summarizing academic research
	+ clear and concise explanation of technical methods
	+ explaining results with a clear distinction from interpretation and implications
	+ using figures and tables in conjunction with writing
* Implement and apply research specific analysis, techniques, tools, and methods for your specific dissertation research
	+ Critical analysis of methods in terms of applicability, limitations, uncertainties, cost (time and money)
	+ Critical analysis of data or model results in terms of uniqueness, applicability, quality, uncertainties, etc.
* Develop oral communication skills focused on clear, concise and engaging communication of scientific concepts, and results for the purposes of teaching and informing.
* Development project management skills including
	+ Breaking down a project into smaller tasks and determining the order in which to proceed through a project
	+ Time management (determining time needed to complete tasks, planning when and how to accomplish project tasks, coordinating work with collaborators)
	+ Communicating with other people related to the project (advisor, collaborators, funding institutions)

Typical GEL 299 Research Related Activities

Graduate students are expected to

* Keep track of EPS-GP degree requirements and inform your advisor of these well ahead of time.
* Schedule time for and conduct your research activities each week and use this time efficiently and effectively.
* Read research papers each week and create written summaries of each.
* Ask for resources, guidance and clarification on any topic that you need to understand better.
* Come prepared for and attend all scheduled lab/group meetings, reading group, collaborator meetings (if applicable).
* Communicate with your advisor about any issues that arise related to your GEL 299 activities as soon as they occur.
* Prepare for and give research talks on the progress of your research.
* As part of your research training you are expected to contribute to shared maintenance of the laboratory, field gear, samples, and/or numerical code.

Difference between 299 and paid GSR work

* GEL 299 represents your academic work, while a GSR represents paid work. This may or may not overlap, depending on factors like the funding source, available projects, and depth and breadth of the work.
* This syllabus represents the work expected of you in order to earn a Satisfactory (S) grade in GEL 299 units this quarter. If you are on GSR, you will receive a Written Notice of Appointment that includes a Description of Duties, which lays out the work you are responsible for as part of your paid employment.
* If you are a TA or Reader, your GEL 299 will be fully separate from your paid work.
* Fellowships come with no expectation of work (i.e. employment) and thus provides an opportunity to focus more on your GEL 299 and thesis/dissertation work.

Grading

Unsatisfactory work in GEL 299 units can lead to a lack of overall progress toward your thesis/dissertation, but can also importantly have academic consequences. You can read more about Academic Standing (<https://grad.ucdavis.edu/progress-and-academic-probation>), Academic Notice (https://grad.ucdavis.edu/warnings-probation-and-disqualification), and Time to Degree (https://grad.ucdavis.edu/normative-time). Please reach out to the Graduate Program Coordinator or your Graduate Advisor if you have any questions about academic standing and progress.

Mentoring Resources

* Graduate Studies provides resources for mentees (<https://grad.ucdavis.edu/mentoring-resources-mentees>) and mentors (<https://grad.ucdavis.edu/resources-mentors>).
* They also provide additional guidance for establishing a positive working relationship between mentees and mentors (<https://ucdavis.app.box.com/s/eev7ni38leffk6kgnk7dioq9arovheas>). Consider if you want to fill out a mentor-mentee agreement or an Individual Development Plan to help you set goals, manage your time, develop professionally, and communicate effectively.

Student Resources

* Links to all campus resources are at my.ucdavis.edu
* Aggie Mental Health: [https://mentalhealth.ucdavis.edu](https://mentalhealth.ucdavis.edu/)

Academic Integrity

Just as in any other academic course, you are expected to meet the UC Davis Code of Academic Conduct (<https://ossja.ucdavis.edu/code-academic-conduct>).

UC Davis Principles of Community

Each member of the Earth and Planetary Sciences community is responsible for knowing and upholding the UC Davis Principles of Community (<https://diversity.ucdavis.edu/principles-community>).

Students with Disabilities

UC Davis is committed to ensuring equal educational opportunities for students with disabilities. Students must request academic accommodations prior to or at the beginning of each quarter by visiting the Student Disability Center (https://sdc.ucdavis.edu) and completing an SDC Accommodation Request Form. The University is not required to provide any academic accommodation that would result in a fundamental alteration of the academic program. Please note that it can take up to two weeks to process accommodation requests, so it is very important to submit the request form early. If classroom or examination accommodations are approved, the student will receive an accommodation letter with instructions regarding notifying instructors of the accommodations authorized.