

GES Research at a Glance for New Mentors

Thank you for considering and/or agreeing to be a research mentor! The UHM [Global Environmental Science \(GES\) Program](#) appreciates and recognizes the resources and work you will put in as a mentor, and are grateful for your support. In an undergraduate research setting, the focus of a mentor is to help their mentee(s) develop skills related to the discipline, which might include technical skills, writing skills, use of specific software, etc. as appropriate for the project and discipline. The Program will provide guidance and support as needed.

Students are required to register for a minimum of three (3) credits of **GES 499 Undergraduate Thesis**. The topic, scope, and level of complexity varies per project. All theses become a permanent and official record of contribution to the body of scholarship and research undertaken at UH Mānoa, and are publicly available for purposes of *research, education, and private study*. The Program [uploads the theses on the website](#) and also on [ScholarSpace](#). Students are also required to present the findings of their research at the GES Symposium, which is held at the end of each term (Fall, Spring, Summer).

Mentor Eligibility Criteria:

Faculty members who are UHM faculty members in Bargaining Unit 7 from Rank 3 to Rank 5 (Classification of UHM faculty; Executive Policy 5.221) are eligible to be a GES research project mentor.

- Instruction ('I') faculty: assistant professors, associate professors, and professors
- Researcher ('R') faculty: assistant researchers, associate researchers, and researchers
- Specialist ('S') faculty: associate specialists, and specialists

Graduate students and/or postdoctoral researchers working in UHM faculty laboratories are allowed to mentor GES students only if they are sponsored by their principal investigators, i.e. if the UHM faculty member is the lead instructor/mentor on record and oversees the mentorship and project.

It may also be possible to work with UHM affiliate graduate faculty members as well as UH-system faculty members researchers if a UHM faculty member is willing to collaborate and be the lead instructor/mentor on record.

Faculty mentors may include SOEST faculty—global leaders in the fields of ocean, earth, climate, atmospheric, and space sciences—and other UHM faculty experts in botany, chemistry, coral reefs, economics, environmental anthropology, marine biology, natural resource management, physics, public health, sustainability, and water quality.

Responsibilities of GES Research Project Mentor:

- discuss the project parameters and feasibility with the student (consult GES Program if in doubt)
- assist the student with drafting the GES Thesis Proposal to submit for approval prior to beginning work on the project
- be aware of criteria for GES research projects, Thesis Timeline, and GES Thesis Style and Policy Guide
- be the lead instructor for GES 499 (Undergraduate Thesis); assign a grade at the end of the term(s)

- be clear with your expectations (time requirements, performance, publications, etc.)
- be clear with your availability, particularly around timeline deadlines
- adjust meetings and feedback according to a student's capacity for independent work
- facilitate the exploration of avenues for funding
- ensure the student is aware of ethical standards and best practice in pursuing discipline research/scholarship activities
- consult and collaborate with others regarding student's needs in research, advising, and mentoring relationships
- meet with the student regularly to discuss the project's development
- advise the student on their process (skill development for project, relevant literature, appropriate methodology, research ethics clearances, timeline)
- advise the student on problem areas that need to be addressed
- suggest relevant and appropriate faculty to provide editorial feedback as an external reviewer on the student's thesis
- give timely feedback and approve the student's thesis draft before it is sent to the external reviewer
- give timely feedback on the student's oral presentation before their practice session with a reviewer
- introduce the student at the GES Symposium (scheduled at the end of each term)
- communicate with GES for questions or concerns

Requirements for GES Research Project and Thesis

- A clearly stated purpose/problem statement/set of research questions
- A clearly articulated significance
 - What's at stake? So what?
- A sustained study of a topic that uses appropriate sources to explore the topic
 - Sources can include, but are not limited to, laboratory results; case studies; etc.
- A demonstration of the student's clear understanding and articulation of the broader context and conversations in the discipline(s) and field(s) in which project is located (the literature review)
- A solid grounding in the theoretical framework(s) that the project is using
- A clearly explained and appropriate (justified) methodology/research design
- A robust critical analysis of the subject matter (does not merely present data or describe)
- Proofread and revised for grammatical errors
- Formatted according to the most current GES Thesis Style and Policy Guide
 - As appropriate, contains well-labeled and attributed tables and figures as supplementary material
 - Has a complete Works Cited or Bibliography included in the proper format
 - Recommended length (25 page minimum)

We invite you to browse the following webpages for a more comprehensive understanding of the GES research and thesis requirement:

- [GES Research and Thesis Roadmap](#)
- [Faculty-Mentored Research](#) - includes resources (e.g. Thesis Proposal template, Thesis Style and Policy Guide, etc.)
- [Frequently Asked Questions](#) - curated with GES students in mind

About the GES Program

The ultimate objective of the GES Program in the Department of Oceanography is to produce a student informed in the environmental sciences at a rigorous level and who is able to go on to graduate or professional school; enter the workforce in environmental science positions in industry, business, or government; enter or return to teaching with knowledge of how the Earth system works; or enter the workforce in another field as an educated person with the knowledge required to become a wise environmental steward of the planet.

Visit <https://www.soest.hawaii.edu/oceanography/ges/learning-objectives/> to see GES's **Program Educational Objectives** and **Student Learning Outcomes**.

GES students are expected to act as apprentices in research programs of a theoretical, field (observational), or experimental nature offered by the Department of Oceanography, SOEST, or another department in UH Mānoa of their choosing in consultation with their major advisor. Research for the thesis (**GES 499 Undergraduate Thesis**) is generally conducted during the junior year while the communication course (**GES 490 Communication of Research Results**) is taken during the student's final semester, to prepare them for their final presentation at the GES Symposium. This presentation allows students to share their results with the public and to develop oral communication skills important in today's job place.

Fun fact: the GES program is the first environmental science undergraduate degree program to be awarded accreditation by the [Applied and Natural Science Accreditation Commission of ABET!](#)

GES Program Staff

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