

ENVS 299/399/499 (OR 495) RESEARCH SEQUENCE

The ENVS undergraduate research sequence of courses consisting of 299R, 399R and 499R (or 495) is for students who may be considering careers in research and who seek intensive, structured and progressive research training. The research sequence provides a mechanism for students who are interested in ENVS research to get involved in research early in their academic careers, before they are expected to undertake an entirely independent project. Students usually will begin this sequence as sophomores with ENVS 299, leading up to ENVS 499 (or ENVS 495) as seniors.



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ENVS 299

ENVS 299R: Fundamentals of ENVS Research

This course is intended to provide undergraduates a structured means of receiving training under the supervision of a faculty member in a particular field of study. ENVS 299 allows more students to access research at an earlier stage in their undergrad careers, resulting in greater involvement in more in-depth independent work as undergraduates. Students will learn foundational skills for research in a field of environmental sciences, including training in lab or field techniques, data collection, organization and analysis, literature search and review, and report/paper writing. ENVS 299 represents a stepping stone for students who plan to undertake advanced independent projects.

ENVS 299 expectations (expectations will vary based on number of enrolled credits):

Students enrolled in ENVS 299 for 4-hour credit will allocate ~10 hours a week to research. Participation in an ENVS 299 course is equivalent taking any other undergraduate class. Not showing up during the scheduled time (unless prior arrangements are made) will impact the final grade. Student evaluation in the ENVS 299 research course will be based on:

1. Participation in lab/field work Students will have flexibility to schedule their presence at the lab, but once they allocate their weekly time they are expected to be present at the lab/field.
- 2a. Participation in biweekly journal club discussions. Once every other week students will participate in a journal club discussion, and will be required to present at least two papers during the semester.
- OR
- 2b. Participation in one-to-one discussions and guided readings with Research advisor.
3. Students will be asked to submit bi-weekly reports describing their involvement in field/laboratory activities. Optionally, they will be able to briefly describe and discuss the papers they read during the reported period. These bi-weekly reports will help the advisor evaluate the student's performance and guide the student through her/his learning of supervised research.



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ENVS 399

ENVS 399R: Intro to Independent Research

This course forms part of the 299-499 Independent Research Course Series. It is intended for students who have had some prior introduction to research, either in ENVS 299 or in another class or field. ENVS 399 is intended for those students with experience in a supervised research setting. Students enrolled in the ENVS 399 will be responsible of pursuing a research protocol/question designed by a research advisor and will be in charge of the execution and analysis of the data related with that protocol. Active interaction between the student and the advisor will warrant the proper implementation and finalization of the proposed protocol.

The rationale of the course is to provide foundation skills for research in a field of environmental sciences, including training in lab or field techniques, data collection, organization and analysis, literature search and review, and report/paper writing. ENVS 399 represents an important intermediate course for students who plan to undertake advanced independent projects in ENVS 499 or an honors thesis in ENVS 495. With ENVS 299, 399 allows more students to access research at an earlier stage in their undergrad careers, resulting in greater involvement in more in-depth independent work as upperclassmen.

ENVS 399 is a pre-requisite for ENVS 499.

ENVS 399 expectations (expectations will vary based on number of enrolled credits):

Students enrolled in ENVS 399 for 4-hour credit will allocate 10 hours a week to research.

Participation in an ENVS 399 course is equivalent taking any other undergraduate class. Not showing up during the scheduled time (unless prior arrangements are made) will impact the final grade. Student evaluation in the ENVS399 research course will be based on:



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ENVS 399 CONT.

1. Participation in lab/field work

Students will have flexibility to schedule their presence at the lab, but once they allocate their weekly time they are expected to be present at the lab/field.

2a. Participation in biweekly journal club discussions

Once every other week students will participate in a journal club discussion, and will be required to present at least two papers during the semester.

OR

2b. Participation in one-to-one discussions and guided readings with Research advisor.

3. Students will have to submit bi-weekly reports describing their involvement in field/laboratory activities, and briefly describing the papers read during the reported period. These bi-weekly reports will help the advisor evaluate the student's performance and guide the student through her/his learning of supervised research.

If you are interested in enrolling in ENVS 399, contact your ENVS faculty advisor.



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ENVS 499

ENVS 499R: Advanced Independent ENVS Research

This course is the culmination of the Independent Research Course Series. It is intended to provide seniors ENVS student with a structured means of receiving training under moderate supervision of a research advisor in a particular field of study.

Unlike ENVS 399, ENVS 499 is targeted to those students with enough skills to perform independent research. Particularly, students enrolled in ENVS 499 will be responsible for pursuing a research protocol/question of their interest, and will be in charge of the execution, analysis and report of findings with proper guidance and advice from the research advisor. Active interaction between the student and the advisor will warrant the proper implementation and finalization of the proposed protocol. The rationale of the course is to provide foundation skills for independent research in a field of environmental studies.

ENVS 499 Expectations

Students enrolled in ENVS 499 for 4-hour credit will allocate approx 10 hours a week to research. Participation in an ENVS 499 course is equivalent taking any other undergraduate class. Not showing up during their scheduled time (unless prior arrangements are made) will impact the final grade.

Student evaluation in the ENVS 499 research course will be based on:

1. Participation in lab/field work

Students will have flexibility to schedule their presence at the lab, but once they allocate their weekly time they are expected to be present at the lab/field.

2a. Participation in biweekly journal club discussions

Once every other week students will participate in a journal club discussion, and will be required to present at least two papers during the semester.

OR

2b. Participation in one-to-one discussions and guided readings with the research advisor.



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ENVS 499 CONT.

3. Students will be asked to submit bi-weekly reports describing their involvement in field/laboratory activities and briefly describing the papers read during the reported period. These bi-weekly reports will help the advisor evaluate the student's performance and guide the student through their individual research.

4. Final research paper. At the end of the semester students will have to turn in a final scientific paper describing the background of their research, the methods they employed, and the main results and discussion derived from their research. The structure and content of the report will be determined by the research advisor.

ENVS 495: Honors Research

ENVS majors with with a 3.5 overall GPA are invited to apply to the Honors Program, conducted during their Senior year. Students who are interested in the program should contact the faculty departmental Honors coordinator in their Junior year.



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