

SWS 4911, Supervised Research in Soil and Water Science
Credits: 0-3

Catalog Description:

Firsthand, authentic research in Soil and Water Science under the supervision of a faculty member. Projects may involve inquiry, design, investigation, scholarship, discovery or application.

Pre-requisites and Co-requisites: None

Instructor Information: Name, Office location, Telephone number, Email address
Office hours: Day(s), time(s)

Graduate or Post-doctoral Student Research Mentor: (if applicable) Name,
Office location, Telephone number, Email address

Course Objectives: After completion of this course, the student will be able to

- search the literature
- take proper safety precautions in the laboratory, if relevant to the project
- properly keep an accurate record of research performed
- approach a research problem and develop a methodology
- write a research report
- work in a team environment, if relevant to the project
- conduct herself/himself responsibly and ethically in research

The student will have fully participated in the research process with a desirable outcome of a final written report that synthesizes data collected or gathered and evaluates the hypothesis under investigation.

Textbooks/Required Materials:

There is no required text in this course. If appropriate to the project, the student may be required to purchase a laboratory notebook and is encouraged to consult with their research adviser for recommendations on the style of notebook to use. Students should also consult in advance with their research adviser on the necessity of owning a calculator, laptop computer, etc. in order to perform their project tasks.

Recommended reading includes the following or comparable works on the same topics:

- Responsible Conduct of Research, National Science Foundation, available online at <http://www.nsf.gov/bfa/dias/policy/rcr.jsp>.
- On Being a Scientist: Responsible Conduct in Research, 2nd Edition, National Academy Press, 1995. Available at no cost at <http://www.nap.edu/readingroom/books/obas>.

- Avoiding Plagiarism Guide, George A. Smathers Marston Science Library, available online at <http://www.uflib.ufl.edu/msl/07b/studentplagiarism.html>.
- The Craft of Scientific Writing, 3rd Edition, by Michael Alley (1996), Springer-Verlag, NY, NY.
- The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid, by Michael Alley (2002), Springer-Verlag, NY, NY.

Attendance Policy:

Students conducting undergraduate research are expected to exercise a significant degree of autonomy in their work, completing research tasks with relatively little direct oversight from their research adviser. Nevertheless, the student should dedicate a minimum number of hours on their project that is consistent with the total credit hours sought for the experience. Besides the minimum expectations outlined in this section of this syllabus, the faculty adviser may also have additional expectations for participation, including attendance at group meetings, individual meetings, etc.

0 Credit Hours: Students can enroll in this course for 0 credit hours. This situation would be preferred by students who are approaching a maximum number of credit hours toward their degree or who are unable to cover the cost of tuition for these credits. Students registering for 0 credit hours should carefully discuss with their faculty adviser the time expectations for completion of the requirements of the class, and these expectations should be clearly articulated on the Undergraduate Research Form.

NOTE: If the student is only enrolled in 0 credit hours of SWS 4911 in a given semester with no other courses, they will be charged for 1 credit hour of tuition and fees.

1-3 Credit Hours: Students are expected to devote a minimum of three hours per week of actual work in this class for each credit in which they are enrolled. Students can enroll in a total of 6 credit hours of this course during their undergraduate study at UF. Students should carefully discuss with their faculty adviser the time expectations for completion of the requirements of the class, and these expectations should be clearly articulated in the Undergraduate Research Form.

The policies for allowable absences and make-up work follow the university attendance policies:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Assessment:

- 70% *Degree to which student meets expectations.* Expectations are to be established by the research adviser and student prior to the student's enrollment in this course. The agreed-upon expectations will be reflected on the Undergraduate Research Form signed by both the student and research adviser. The following is a minimum set of expectations for every student enrolled in this class for credit: i.) develop a project plan, ii.) perform experimental work or applied experimental work, iii.) write a research report. These minimum expectations as well as additional expectations (e.g., attendance at departmental research seminars, participation in research group meetings, etc.) are to be clearly established and articulated to the student by the research adviser prior to commencement of the research project.
- 15% *Quality of the final report.* The faculty adviser will provide clear expectations of the desired format, content, and deadlines of the final report. A final oral report may also be required as determined by the faculty advisor. The faculty adviser will grade the final report.
- 15% *Attendance.*

You will receive a final grade of satisfactory (S) or unsatisfactory (U) in this course. A grade of S will be assigned if you achieve a cumulative score of 70% on the assessments above.

For more information on grades and grading policies, please visit:
<http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*" You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "*On my honor, I have neither given nor received unauthorized aid in doing this assignment.*"

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated.

Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.

Software Use:

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- *University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, www.counseling.ufl.edu/cwc/*
 - Counseling Services
 - Groups and Workshops
 - Outreach and Consultation
 - Self-Help Library
 - Training Programs
 - Community Provider Database
- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*

Services for Students with Disabilities

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

**Soil and Water Science
UNDERGRADUATE RESEARCH FORM**

Once this application is completed, the student should bring it to 2181 McCarty Hall A and see Mr. Michael Sisk to register for the course.

Student Information (to be completed by the student applicant):

Date: _____

Term: _____ Number of credits: _____

Name (last, first, middle initial):		UFID Number:
Local Street Address:		
City, State, Zip Code		Phone Number:
Major:	Current Class/College:	Expected Graduation Date:
Gatorlink E-mail Address:		

BRIEF DESCRIPTION OF RESEARCH PROJECT AND EXPECTATIONS FOR COMPLETION:

I have prepared the research description above in consultation with my research adviser. I have read the responsibilities of the student included on this application, and agree to undertake these responsibilities.

Student's Signature:_____

Faculty Adviser Information (to be completed by Faculty Adviser):

Name:	College and Department:
E-Mail Address:	Campus P.O. Box:

Graduate Student/Post-Doctoral Mentor (if applicable):

Name:	College and Department:
E-Mail Address:	Campus P.O. Box:

Will the student's research involve with an infectious agent or clinical samples?

___Yes ___No

Will the student's research involve methods or procedures requiring specific safety training?

___Yes ___No

If yes to either question, describe specific training that the student will receive prior to performing these activities or training the student has already received.

What are the expectations for the student's attendance in this project (e.g., estimated hours/week in your laboratory, in seminars, group meetings, etc.)?

I approve of the research description submitted by the student applicant. I have read the responsibilities of the research adviser (see next page) and agree to undertake these responsibilities.

Faculty Adviser's Signature: _____

I have read the responsibilities of the research adviser (see next page) and agree to undertake these responsibilities.

Mentor's Signature (if applicable): _____

RESPONSIBILITIES OF THE STUDENT

1. Work actively doing research and participating in other related activities for at least 3 hours each week for every credit hour enrolled in the course.
2. Keep clear accurate records of your work.
3. Understand how to conduct research in a responsible and ethical manner. Follow the UF Honor Code at all times.
4. Follow all safety protocols and ask questions about safety protocols before performing any procedure about which you are unsure.
5. Ask for assistance when you need it.
6. Keep your faculty research adviser and/or mentor informed of your results.
7. If required, learn to work on a team while also pursuing independent research on your project.
8. Write and submit a research report following the guidelines and expectations of your faculty adviser and/or mentor.
9. Strive to go beyond the minimum expectations of preparing a literature review and project plan, performing the research, and writing a final report. Seek out opportunities for oral presentations at a conference, writing and submitting a journal paper of your work, etc.
10. Turn in a copy of your report on or before the last day of class to James Bonczek in 2195 McCarty Hall A. Your grade will not be entered unless a written report is on file.

RESPONSIBILITIES OF THE FACULTY ADVISER AND STUDENT MENTOR

1. Provide support and supervision of the student (either directly or by referring her/him to someone else, e.g., graduate student or postdoctoral associate).
2. Meet regularly with the student to review her/his progress and to provide guidance in moving forward in her/his project.
3. Arrange for all safety training that is appropriate for the student to ensure her/his safety in your laboratory.
4. Help the student understand the broader context in which her/his research project fits and understand the basis for methods and procedures used.
5. Provide frequent feedback on the student's performance, accompanied by recommendations for improving performance if needed.
6. Provide feedback and establish deadlines on the student's
 - project plan
 - final report
 - other requirements as noted on the Undergraduate Research Form
7. Encourage the student to go beyond the minimum expectations of preparing a literature review and project plan, performing the research, and writing a final report.
8. Assign the student's final grade and contact Michael Sisk or mjsisk@ufl.edu not later than the last day of final exams to submit the final grade.