Course Information

Course
SWS 3022 – Introduction to Soils in the Environment - Online Spring 2021

Class Chats on Tuesdays 6-8 pm ET using Zoom.

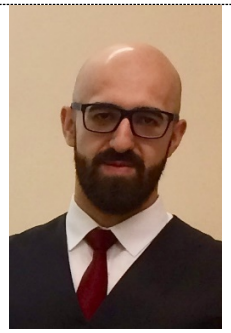
Professor

Dr. Samira Daroub
Dr. Daroub is a Professor in the Soil and Water Sciences Department and works at the Everglades Research and Education Center in Belle Glade, Florida.
Phone: (561) 993-1593
Email: sdaroub@ufl.edu

Office Hours: Please call or email to set up an appointment

Teaching Assistants for Spring 2021

Nan Xu
xn20131020@ufl.edu
Students with last names **A-M**



Leandro Otavio Vieira Filho
lvieirafilho@ufl.edu
Students with last names **N-W**

Credits: 3 credits

LECTURE: All lecture materials are posted on class website. We will be meeting for chat time every Tuesday starting January 19, 2021 from **6-8 pm ET** using Zoom. The chat will be used to go over calculations and answer any questions you may have on HW, quizzes and class materials. Chat time is HIGHLY RECOMMENDED

TEXTBOOK: Elements of the Nature and Properties of Soils by Ray R. Weil & Nyle C. Brady 4th edition 2018 ISBN-13: 978-013325459; *publisher Prentice Hall,*
3rd edition, Pub Date 2009, ISBN-13: 9780135014332; publisher Prentice Hall is Okay to use.

Course Description

This course emphasizes soil physical, chemical, and biological properties in relation to plant growth, the environment, and the soil's place in our daily lives. The course is intended to introduce students to the importance of soils to humans and the environment through study of their morphology, physical and chemical properties, their distribution, and their biological significance. Each student who successfully completes the course should have a practical understanding of the following:

- Properties common to all or most soils on various scales.
- Vocabulary to communicate with agricultural and environmental professionals.
- Management strategies for different soils.
- Problem solving skills to manage soils effectively.
- The importance of soils in sustaining life.
- The impact of soils on environmental quality

Course Objectives

This course satisfies the (P) designation for the physical sciences general education requirement.

Physical science courses provide instruction in the basic concepts, theories, and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

Theses general education objectives will be accomplished through

1. Evaluation of how physical properties of soils influence the behavior, function, and productivity of soils in environmental and agricultural settings.
2. Analysis and computation of how water and chemicals move through soils.
3. Formulation and critical evaluation of hypotheses related to the interaction of soil solution constituents with the soil solid phase.
4. Identification of the major classes of soil organisms and how they influence the cycling of carbon and nutrients in soils.
5. Definition and synthesis of the fundamental elements of soil morphology and taxonomy to communicate important concepts related to soils in the environment.

Student Learning Outcomes

This course also will assess Student Learning Outcomes which can be defined as:

Content: Students demonstrate competence in the terminology, concepts, and methodologies used within the discipline

Communication: Students communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline.

Critical Thinking: Students analyze information carefully and logically from multiple perspectives using discipline-specific methods and develop reasoned solutions to problems.

The Student Learning Outcomes will be assessed through ongoing evaluation. Content will be tested using exams, multiple choice and True/False quizzes, discussions and homework assignments incorporating fundamental concept knowledge and computations relevant to course material. Critical thinking will be assessed through computation, analysis, and application of data/results to issues related to soil management.

Internet Access:

Go to http://elearning.ufl.edu ; Sign in to **Canvas** using your **Gatorlink** account. This will automatically take you to class website. Please note that you must have completed registration to be added to the class list on Canvas:

The class web site has links to:

- Syllabus with schedule of lectures and deadlines. Please note all deadlines are posted on calendar as well as under the syllabus tab. Some deadlines may be updated as needed.
- All lecture materials: including PDFs of Power point presentations and narrated lectures in Adobe Presenter and MediaSite
- Handouts for the lecture to print in pdf format.
- Study guides for the various lectures for the course. The study guides include a list of objectives and material covered in the lectures. The study guides will help you in your study for the course.
- Homework assignments: Submit all assignments using the Assignment tab. No email submission of HW.
- Your grades for exams, quizzes, discussions and homework
- Questions submitted by other students. Answers will be posted on the Discussion tab.

CHAT SESSIONS and Communications

- Class meets for online chats using Zoom on **Tuesdays 6-8 pm ET** for questions, discussion and problem solving via zoom. Please make every effort to attend if you have questions or just to say hi and discuss any class matters. All chats are recorded and posted on class website for on demand review. Please check canvas class calendar for complete chat schedule.
- Join Zoom Meeting for spring semester 2021 (connect from your own computer- sign in using your ***full name please***- **The zoom URL for all chat meetings for spring 2021 is posted on class website** under Zoom Conferences.
- Our chat sessions are audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

- **Communication** with the instructor will be via e-mail, phone calls, discussion posts, chat meetings or by appointment. **Please try to use the Canvas email** and write SWS 3022 in the subject line in addition to any other description of email.
- **Hardware requirements and internet accessibility are mandatory.** You will need high-speed internet access (for accessing class website), a webcam, a microphone, and a headset when using zoom. **Speakers create feedback and are not adequate** for online communications. All hardware and connectivity must be tested prior to course commencement.

Assignments, Discussions & Exams

- **HW Assignments:** All homework assignments need to be submitted using Assignments tool in Canvas. HW is used to emphasize learning concepts in the lectures. *NO emailed or faxed HW will be accepted.* Please turn in your HW on time. All HW will stay open for a 48 h grace period after due date with 5% penalty on grade. NO HW are accepted after the grace period.
- **Discussion**: Topics for discussion will be included as part of some lecture materials and are graded. You need to have one original posting as well as a reply to at least two fellow students. **Please note that you are not able to view other students' contributions to the discussion until your first submission is posted**. First post is due on Friday with comments and replies due on Monday.
- **Quizzes:** will be conducted online. Each quiz will consist of 10 questions randomly selected from a larger bank of questions. You may take the quiz two times during the prescribed period following completion of each related course module. The highest grade will be registered.
- **Exams** are open-book and consist of interpretive questions as well as objective multiple choice and true/false questions. Quizzes are designed as partial exam preparation. Students are expected to synthesize course concepts to respond to short answer, short essay questions that are designed to explore student application of fundamental processes and concepts. All exams are online on Canvas and will allow ample time for completion. Exam dates and deadlines are detailed below. Submissions will be via the "Assessments" tab in Canvas. Therefore, you are expected to complete the exams in a timely manner and not wait until the last minute. **Connectivity, hardware, or other computer-related issues are no excuse for lack of timely submission without proper documentation**. Exams also are timed. ***In addition, there will be opportunities to earn bonus points in this class.***

Grade Scale:

Letter Grade	Points	Numerical Grade	GPA Points
A	≥ 736	92-100	4.0
A-	≥ 720	90-91.9	3.67
B+	≥ 688	86-89.9	3.33
B	≥ 664	83-85.9	3.0
B-	≥ 632	79-82.9	2.67
C+	≥ 616	77-78.9	2.33
C	≥ 576	72-76.9	2.0
C-	≥ 560	70-71.9	1.67
D+	≥ 528	66-69.9	1.33
D	≥ 504	63-65.9	1.0
D-	≥ 472	59-62.9	0.67
E	< 472	<59	**0**

For information on current UF policies for assigning grade points, see https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Assignment	Point Value	Approx. Percent of Grade
Exams	**360**	**44%**
HW Assignments	**175**	**22%**
Quizzes	**165**	**21%**
Discussion	**100**	**13%**
TOTAL	**800**	**100%**

✦ Attendance and Make-Up Work

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at: https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

✦ Online Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/.

Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

✦ 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.

- **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/**

- **Campus 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/**
- U Matter We Care, **www.umatter.ufl.edu/** *U Matter, We Care*: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care website to refer or report a concern and a team member will reach out to the student in distress.
- *Career Resource Center,* First Floor JWRU, 392-1601, https://career.ufl.edu/

Student Complaints:

Residential Course: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/

Online Course: Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. See : http://www.distance.ufl.edu/student-complaint-process for more details.

You will need Adobe Flash Player to listen to narrated lectures and Adobe Acrobat Reader to download the handout for the lectures.
Download FREE Adobe Acrobat Reader, Adobe Flash Player and PowerPoint viewer.

Week Tuesdays	Topics Introduction to Soils	Assessment
Week 1 Jan 11, 2021	**Review Module:** 1) Syllabus Review 2) Review of chemical principles 3) Class introductions • ***No Chat Jan 12***	Quiz 1- syllabus HW 1: chem. review Discussion 1- Introduce yourself
Week 2 Jan 19	**Module 1: The soils around us** • **Read in the textbook: (Chapter 1)** • ***Jan 18 Martin Luther King, Jr. Day***	Quiz 2
Week 3 & 4 Jan. 25 & Feb 1	**Module 2: Formation of soils from parent materials** • **Read in the textbook: (Chapter 2) pgs. 26-57**	HW 2 Quiz 3
Week 5 Feb 8	**Module 3: Soil physical properties** • **Read in the textbook: (Chapter 4) pgs. 94-133**	HW 3
	Exam I: Modules 1-3 **Open Saturday Feb 13- Monday Feb 15 @11:59 pm ET**	**Exam 1**
Week 6 Feb 15	**Module 4: Soil water** • **Read in the textbook (Chapter 5) pgs. 134-161**	HW 4 HW 5 (bonus pts)
Week 7 Feb 22	**Module 5: Soil water Calculations**	Quiz 4 Discussion 2
Week 8 March 1	**Module 6: Soil Colloids** • **Read in the textbook (Chapter 8) pgs. 235-265**	
Week 9 March 8	**Module 7: Soil Colloids Calculations**	Quiz 5 (bonus pts) HW 6
	Exam 2: Modules 4-7 **Open Sat. March 13– Mon. March 15, 2021 @11:59 pm ET**	**Exam 2**

Week 10 March 15	**<u>Module 8:</u> Soil Acidity** • Read in the textbook (**Chapter 9**) pgs. 266-294	Discussion 3 HW 7 Quiz 6
Week 11 March 22	**<u>Module 9:</u> Soil Organic Matter** • Read in the textbook (Chapter 11) pgs. 353-385.	Discussion 4
Week 12 & 13 March 29 & April 5	**<u>Module 10:</u> Soil classification** • Read in the textbook (Chapter 3)	Quiz 7 HW 8
Week 14 April 12	**<u>Module 11</u>: Soil salinity and alkalinity** • **Read in the textbook (Chapter 9) pgs.298-315**	Quiz 8
Week 15 April 19	**<u>Module 12:</u> Nutrients – N & P**	
	Discussion 5- Course topics **Classes end Wed April 21; Reading Days: April 22-23,2021**	Discussion 5
	Exam 3: Modules 8-12 **Open Sat. April 24 - Mon. April 26 @11:59 pm ET**	**Exam 3**

Due Dates – Spring 2021

Please note schedule is subject to change- always check calendar on class website

- ***All HW are due on Fridays @ 11:59 pm ET (HW remain open for 48 hours after deadline for 5% penalty)***
- ***Discussions: First post for discussion due on Fridays with replies and comments due on Mondays@ 11:59 pm ET***
- ***All quizzes are open Fridays @ 6 am till Monday @ 11:59 pm ET***
- ***Exams open Saturdays @ 6 am till Monday @ 11:59 pm ET; EXAM DATES ARE FINAL***
- ***Exceptions for deadlines are noted below***
- ***Online Chat sessions are scheduled for Tuesdays 6-8 pm ET***

HW	Due Fridays	Quizzes & Exams	Due Mondays
HW 1	Jan 22	Quiz 1	Jan 19 (Tuesday)
HW 2	Feb. 5	Quiz 2	Jan 25
HW 3	Feb 12 (No 48h grace period)	Quiz 3	Feb 8
		EXAM 1	Feb 15
HW 4	Feb 26	Quiz 4	March 1
HW 5	Feb 26 (bonus pts)	Quiz 5 (bonus pts)	March 15
HW 6	March 12 (No 48h grace period)	EXAM 2	March 15
	No Assignments Due March 16-23		
HW 7	March 29 (Monday)	Quiz 6	March 29
HW 8	April 9	Quiz 7	April 12
		Quiz 8	April 19
		EXAM 3	April 26
Discussions	First post Due Fridays	Comments and replies Due Mondays	
Discussion 1	Jan 15	Jan 19	
Discussion 2	Feb 26	Feb 29	
Discussion 3	April 2	April 5	
Discussion 4	April 9	April 12	
Discussion 5	April 21	N/A	