Instructor: Todd Z. Osborne-Whitney Laboratory for Marine Bioscience, 9505 N Ocean Shore Blvd. St. Augustine, FL 32080  (cell) 352-256-3826 osbornet@ufl.edu

Graduate Teaching Assistant: Taryn Chaya  tarynchaya@whitney.ufl.edu

Course Overview
The course is intended for those preparing to be professional environmentalists and who have minimal knowledge of soil science. Thus, the primary emphasis of the course is defining and describing soil properties and processes that determine the fundamental role soils play in the environment. The instructor will assign additional readings to supplement the text and to add material depth and critical thinking exercises. An optional, associated laboratory (SWS 5050L, 1 credit) and demonstration exercises experientially reinforce the concepts presented in lecture.

Part I (sections # 1-2) of the course describes soil functions and soil formation. Part II (sections # 3-9) describes/analyzes physical, chemical, and biological soil properties and processes, and soil classification. Parts III and IV (sections # 10-15) deal with specific soil types/situations where the previously described terms and processes are integrated to address environmental management issues.

Course Objectives – Students successfully completing the course will be able to:
1. Describe the soil as a dynamic multi-phased medium, and distinguish it from an inert body by characterizing various soil processes and their relationships to the environment.
2. Demonstrate a practical understanding of: a) properties common to all or most soils, b) vocabulary sufficient to communicate with others in soil science and management, c) the different management strategies required for problem soils, d) problem-solving skills to manage soil effectively, and e) an appreciation of the importance of soils in agriculture, the environment, and our daily lives.

Prerequisites: Graduate student status.

Course Format: pre-recorded lectures and weekly live chat session on THURSDAY evenings at 7pm

Frequency: Yearly, Fall semester.


Representative Supplemental Readings:
Course website: lots of additional information, Home Works, Study Questions, Student Outlines visit frequently. (Address provided in class).
Student Responsibilities:
1. Students are expected to study the appropriate text sections and suggested outside readings in anticipation of lecture coverage.

2. Students are expected to actively participate in chat session discussions. Chat session attendance and engagement is strongly recommended (and is rewarded – see below).

3. Students are expected to demonstrate their mastery of presented material by passing written examinations and successfully completing assigned homework.

Student Evaluation:
1. Two examinations will be given; a mid-term (100 points) and a comprehensive final (200 points). Make-up exams are only authorized by instructor and must be justified and authenticated. See UF policies at https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

2. Homework sets will be assigned regularly, and will be graded (total scaled value 100 points). Late homework assignments are penalized 20% per day. You cannot pass the course unless you complete each course requirement.

Grading Scale:
Course grades will be determined by summing all scores and dividing by the maximum score possible (400 points) x 100 to obtain a percentage score: 100-92 = A, 91-90 = A-, 89-88 = B+, 87-81 = B, 80-79 = B-, 78-70 = C, 69-60 = D, <60 = Fail. The instructor reserves the right to add 0-3 points to the final percentage score on the basis of meaningful class participation, demonstrated student interest, and overall student dedication. See UF policies at https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

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:

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. The University encourages students
with disabilities to follow these procedures as early as possible in the semester.

0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/
## SWS 5050 DE
### TOPIC OUTLINE BY SECTION / WEEK

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<td>A. Classification and abundance</td>
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Week 1
Section I. Introduction to Soils
Chat Session 1 9/3 at 7pm
NO HOMEWORK DUE

Week 2
Section II. Soil Formation
Chat Session 2 9/10 at 7pm
HOMEWORK 1 and 2 Due 6:59pm

Week 3
Section III. Physical Properties
Chat Session 3 9/17 at 7pm
HOMEWORK 3 Due 6:59pm

Week 4
Section IV. Soil Water/Hydrology
Chat Session 4 9/24 at 7pm
HOMEWORK 4 Due 6:59pm

Week 5
Section IV Soil Water/Hydrology Cont
Chat Session 5 10/1 at 7pm
HOMEWORK 5 Due 6:59pm

Week 6
Section V. Soil Aeration
Section VI. Soil Colloids
Chat Session 6 10/8 at 7pm
HOMEWORK 6 Due 6:59pm

Week 7
Section VI. Soil Colloids Cont
Chat Session 8 10/15 at 7pm
HOMEWORK 7 Due 6:59pm

Week 8
Section VII. Soil Solution
Section IX. Soil Classification
Chat Session 8 10/22 at 7pm
HOMEWORK 8 Due 6:59pm

Week 9
Section IX. Soil Classification Cont
Section VIII. Soil Organisms
Chat Session 9 10/29 at 7pm
HOMEWORK 9 6:59pm
Mid-term Exam **On-Line Oct 29-Nov 02, Due Nov 02**

Week 10
Section X Soil Acidity
Chat Session 10 11/5 at 7pm

Week 11
Section XI. Soil Salinity
Chat Session 11 11/12 at 7pm

Week 12
Section XII. Anaerobic Soils
Chat Session 12 11/19 at 7pm

**NO CLASS 11/26 THANKSGIVING HOLIDAY**

Week 13
Section XIII. Soil Pollution
Chat Session 12/3 at 7 pm

Week 14
Section XIV.XV. Nitrogen, Phos
Chat Session 14 12/10 at 7pm

**Final Exam**
*(Take Home, Dec 12-17, Due Dec 17)*