

**SWS 5716C - Pedology - Spring Semester,
2015 Syllabus for Distance Education (DE)**

Students COURSE INFORMATION

INSTRUCTOR:

Willie Harris, apatite@ufl.edu

G163 McCarty Hall

Office Phone (352-294-3110), Home Phone (352-372-5687); Cell Phone (352-213-8747)

Office Hours: 10:00 - 11:30 am, Tuesday and Thursday

DE FIELD LABORATORY DESCRIPTION:

Arrangements will be made to provide field experience for DE students. This is essential for a course like pedology, which pertains to soils on real landscapes. Field experience will include field soil investigations in the student's community, performed with my input and remote assistance. Students must gain access to a Munsell Color Book for soil descriptions. Tools that will be needed are digging implements (shovels and spades or a hand auger, depending upon the situation faced in exposing the soil profile) and a metric tape measure. A dull knife for digging in the soil and a rag for wiping hands are also needed in many cases.

Students will make an on-line presentation of the results of their soils investigations.

CAMPUS LECTURE & LABORATORY SCHEDULE: (In case DE students opportunity to attend)

Lecture: Monday and Wednesday, Period 4, McCarty Hall B 3124, 10:40 -11:30 am

Lab: Wednesday, Periods 6-9, 12:50 – 4:55 pm – Meet at McCarty Hall “A” loading zone or McCarty B 3108, as per weekly instructions.

COURSE OBJECTIVES:

1. Become familiar with conceptual issues involved in the study of soils at landscape scales.
2. Learn to interpret (make practical predictions about) and classify soils from soil descriptions.
3. Understand processes involved in soil development.
4. Understand how soils are affected by parent material, vegetation, landscape, climate, and time.

COURSE DELIVERY:

Lectures are recorded and made available on line for DE students. All lecture materials will be conveyed via a website (see below). Some laboratories for on-campus students may be recorded as well, and made accessible to DE students (DE students will have their own field lab experience as well, as specified above). There will be an on-line *discussion* (the word "chat" does not fit with lofty discussions of pedology!) session of approximately one hour scheduled for DE students for one evening a week (Tuesdays from 7-8 PM).

STUDENT RESPONSIBILITIES:

Students are responsible for using adequate computer and audio equipment for on-line discussion. Students will be tested on materials presented in class, assigned readings, and anything that arises from the online discussions (which will be recorded). Grades will be based on test scores and other criteria approximately as follows:

Midterm Exam:	30%
Final Exam:	30%
Field Assignment:	30% (includes lab-related exercises)
Other Assignments:	10%

TEXT & READINGS:

No traditional textbook will be used. However, readings will be assigned from USDA materials, including Soil Taxonomy and the Soil Survey Manual. These documents are available for direct use or download. Let me know if you have problems accessing them. A webpage (see below) will be used to post notes and provide links to useful information. Other readings (e.g., journal articles, etc.) will also be assigned through the UF library course reserves. I am in the process of getting this class set up under it.

WEBPAGE ADDRESS: <http://soils.ifas.ufl.edu/wgharris/SEED/PEDOLOGY.HTM>

GRADE SCALE:

A	= 90 to 100
B+	= 86 to 89
B	= 80 to 85
C+	= 76 to 79
C	= 70 to 75
D+	= 66 to 69
D	= 60 to 65

LECTURE OUTLINE:

I. Introduction

- A. Course objectives and subject matter
- B. Definitions

II. Soil morphology

- A. Properties used in describing soil layers
- B. Soil horizon designations
- C. Concepts relating to the description, sampling, and mapping of soils
- D. Genetic and interpretive significance of soil morphology

III. Introduction to soil components

- A. Organics (<http://www.ar.wroc.pl/~weber/humic.htm>)
- B. Minerals

IV. Weathering and soil formation

- A. Physical and chemical weathering processes
- B. Mineral weathering reactions and sequences

V. Processes of horizon development

- A. Surface horizons
- B. Translocation of Fe, Al, and organic carbon
- C. Colloidal translocation
- D. Densification and induration
- E. Al and Fe oxide and hydrous oxide accumulation
- F. Carbonate and salt accumulation
- G. Redox influences

VI. Soil classification

- A. Introduction
 - 1. Rationale and history
 - 2. Philosophical issues
- B. USDA soil taxonomic system (Chapter 2)
 - 1. Categories, classes, and nomenclature
 - 2. Diagnostic horizons
 - 3. Other definitive features
 - 4. Application to soil mapping and correlation
 - 5. Discussion of strengths and weaknesses
 - 7. Overview of soil orders
- C. Other approaches to soil classification (if time permits)

VII. Environmental factors of soil formation

- A. Introduction
- B. Parent material
- C. Time
- D. Relief
- E. Climate
- F. Organisms

Academic Honesty, Software Use, UF Counseling Services, Services for Students with Disabilities

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: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

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 wellbeing are encouraged to utilize the university's counseling resources. The UF Counseling and 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. The Center is located at 3190 Radio Road.

- *Career Resource Center*, CR-100 JWRU, 392-1601, www.crc.ufl.edu/
- *Student Health Care Center*, 392-1161, <http://shcc.ufl.edu/>
- *University Counseling & Wellness Center*, 352-392-1575, <http://www.counseling.ufl.edu/cwc/>

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, 392-8565, <http://www.dso.ufl.edu/drc/>