

Spring 2016

SWS 4233

Soil and Water Conservation

Instructor
Susan Curry
scurry@ufl.edu
352-294-3147
2163 McCarty Hall A

3 Credits

Office Hours
MTW 11am -12 pm or by appt.

Prerequisites: None

Course Website is through E-Learning Canvas: <http://lss.at.ufl.edu>

Overview:

This course delves into the issues surrounding our two most valuable and most mistreated resources: soil and water. Topics discussed include: Soil/water resources, historical erosions and sediment problems, geologic vs. accelerated erosion, erosion prediction equations and reduction practices, government conservation programs; water conservation, irrigation, drainage and salinity; stormwater management; water reuse; case studies in erosion and sedimentation.

Course Description and Statement of General Education Purpose:

The objective of this course is to provide students with an understanding of the interconnectedness of soil and water conservation. The course focusses on soil and water management as it relates to relevant issues surrounding agriculture and sustainability. Concepts include current soil and water resources, historical erosion and sedimentation problems, geologic vs. accelerated erosion, erosion prediction equations and reduction practices, government conservation programs; water quantity and quality, irrigation, drainage and salinity; stormwater management; water reuse; and corresponding environmental and societal issues.

Course Goals:

- Understand the basic principles of soil and water management and conservation.
- Discuss strategies for soil or water conservation.
- Develop an informed appreciation of the value of our soil and water resources from an environmental, economic, and social perspective.
- Be acquainted with software and technological innovations available for aiding in the best utilization of our soil and water resources

Student Learning Objectives:

- Compare and contrast the agricultural practices of historical civilizations and the resulting soil and water conditions with modern agriculture.
- Describe the functions of soil organic matter and list the factors that affect its subsidence or decomposition.
- List and describe the types of erosion and the active agents in each.
- List the environmental impacts of soil erosion.
- Predict the movement of water based on soil characteristics.
- Define the parameters in the USLE, RUSLE, and RUSLE2 equations.
- Explore the web soil survey and extract information for several areas in the US.
- Compare and contrast two conservation tillage operations to conventional tillage.
- List and describe five different cropping systems for conserving soil.
- Explain the formation of a dead zone and assess the effects of agricultural soil drainage on them.
- Define water harvesting and give examples.

Basic Course Requirements:

Exams consist of short answer, definitions, multiple choice and true/false questions. Study guides and review sessions (through chat session) will be provided prior to each exam. Homework will address current and historic topics in agriculture as it relates to the environment as well as basic assignments related to class lectures. Discussion topics will be available for each module. Students are expected to contribute to the discussions on a regular basis.

Textbook:

Required: "When the Rivers Run Dry: Water-The Defining Crisis of the Twenty-First Century" by Fred Pearce

Recommended: "Soil and Water Conservation for Productivity and Environmental Protection". 4th Ed. F. Troeh et al.

Lecture outlines will be provided on the class web page in Canvas as handouts in pdf format. Required reading material for each of the lecture topics will be provided on the class web page.

Grading:

Exams (3)	30%
Project	20%
Homework	25%
Quizzes	10%
Participation/Discussion	15%
TOTAL	100%

Grades will be based on 3 required one-hour exams, one project/presentation, homework and quizzes, participation, and an optional final exam. **Make-up exams will be approved only due to illness or excused class activities. Make-up exams must be approved prior to the regularly scheduled exam, and must be made-up within two days.** If you are unable to take the exam due to illness, call the instructors prior to the exam to confirm your absence.

Participation accounts for 15% of your grade. Discussion topics will be provided in each module. Students are required to submit a response to these questions as well as respond to at least 3 other student responses. In addition, 5% of this participation grade will be earned for questions and responses during the project presentations through Voicethread.

Homework/Assignments

Homework submissions: Submission of assignments is expected on time. Late work will lose 20% of total points each day and not accepted after 4 calendar days.

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>.

The following grading scale will be used:

A	100-90.0 %	C	75.9-70.0
B+	89.9-86.0	D+	69.9-66.0
B	85.9-80.0	D	65.9-60.0
C+	79.9-76.0	E	<60

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

Online Course Evaluation Process:

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

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://distance.ufl.edu/student-complaints> for more details.

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/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.

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 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
Wellness Coaching
- *Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/*