



Walters State Community College Course Syllabus

Course Information

Course Number and Name: AGRI 1051 Intro to Soil Science Lab

Section ID: 80583.202380

Semester and Year: Fall 2023

Start Date: August 21, 2023

End Date: December 08, 2023

Course Format: CON - Conventional Methodology

Catalog Course Description: Lab associated with AGRI 1050. A study of the physical, chemical, and biological properties of soils as these properties relate to soil management and fertility. The student will examine differences in soils and relate these differences to the origin of the particular soil, its productive capacity and the best management practices for the soil with respect to erosion control, tillage practices, natural moisture supply, aeration, and fertility of the soil.

Meeting Details: T; 02:20PM - 04:10PM; TECH 130

Course Drop Deadline: October 27, 2023

Instructor Information

Name: Matthew McClellan

Office Location: TECH 138

Office Hours: Schedule posted on office door and in eLearn

Office Phone: 423-585-2651

Email: Matthew.McClellan@ws.edu

Supervisor Name: Dr. Tera Howerton

Supervisor Phone: 423-585-6961

Secretary Name: Tammy Jones/Kathy McFarling

Secretary Phone: 423-585-2644/423-585-6972

Required Textbook(s) and Materials

Materials for lab will be provided as needed.

Supplemental or Optional Materials

Supplemental lab materials will be made available to students through AGRI 1050 eLearn site and via handouts.

Student Learning Outcomes/Objectives

- To develop an understanding of soil origin and formation.
- To describe the characteristics significant in the evaluation of a soil for agricultural purposes.
- To evaluate soil fertility and nutrient content as it pertains to agriculture.
- To become familiar with soil characteristics as related to non-agriculture uses.
- To make selected chemical, physical, and visual appraisals of specific soils.

Instructional Approach and Methods

Lab will meet in person. Attendance is mandatory in lab sections and field trips, not attending lab or failing to complete lab assignments will negatively impact grade.

Assessment, Evaluation and Testing Procedures

Each test will be announced at least one class meeting in advance. Students who have excused absences are expected to take a missed test on the day discussed with the instructor. The time and date of make-up testing must be established prior to the testing date.

Tests will be taken in eLearn, in person. Students should be prepared to take exams electronically.

Grading Scale

The points earned in the lab section of this course are added with the lecture section. The grading scale for lab is pass/fail. If you earn a grade of A, B, C, or D in the corresponding lecture section, you will receive a "pass" for the lab section. If you receive a grade of F in the corresponding lecture section, you will receive a "fail" for the lab section.

Assignments

Assignments and Projects will be assigned throughout the semester. It is the student's responsibility to keep up with class assignments, projects and due dates. For assignments/projects, the student should check the class page in eLearn or see the instructor for further explanation.

Students with excused absences must complete all make-up work within 7 DAYS, but no later than the last scheduled meeting of the class. Exceptions to this rule must be discussed with and cleared by the instructor BEFORE the deadline. Examples of excused absences include, but are not limited to, personal illness, illness of a spouse, child, or close family member, bereavement, and pre-approved school functions.

Faculty are not obligated to allow students to make up work missed due to unexcused absences. Students with unexcused absences may not be allowed to submit assignments.

Class Participation

This class may involve visits to off-campus locations. Travel to these locations is the responsibility of the student. Most of these visits are to private property where students are invited for a class and/or lab meeting. It is the responsibility of the student to arrive on time, park in an appropriate location and be courteous at all times. Littering, smoking in or around buildings and the use of any profanity or vulgar language is strictly prohibited. Please remember, you are going to college to become a "professional" in the field of agriculture. This is your beginning point in the eyes of our host and the instructor.

Because of the nature of this course with open discussion topics, regular attendance and classroom participation is required, and everyone is expected to participate in discussions or class presentations in order to receive full credit. Every effort will be made to keep the topics interesting. Some will be controversial, but the student is expected to approach the discussions with an open mind and in an objective manner. All students are expected to attend every class with a portion of the grade dependent upon attendance and participation. All written assignments must be typed. Excessive absences may substantially lower the semester grade. The college requires the instructor to keep accurate records and to report when students are not attending class.

Course and Class Policies/Procedures

Once class has started, please be courteous and give your attention to the instructor. Reading e-mail, browsing the Web, playing games, or working on other assignments are not appropriate activities during lecture or lab. Failure to abide by this rule or any other course ground rules can result in students being asked to leave the classroom.

Campus policies prohibit the use of ALL tobacco products inside all buildings. (See the [Walters State Catalog/Handbook](#).)

Campus policies prohibit minors from accompanying parents into the classroom and from being left unsupervised outside in hallways. (See the [Walters State Catalog/Handbook](#).)

Food and drinks at the computer stations are prohibited.

Syllabus

Syllabus is subject to change as the need arises throughout the semester.

Passwords

Passwords for individual student computer accounts are NOT to be shared with other students or provided to unauthorized persons outside of the school environment.

Additional Course Requirements/Details/Information

This syllabus will cover AGRI 1050/51 - Introduction to Soil Science and lab. All points accumulated in this lecture/lab corequisite course will be counted as one. Students will receive an A-F letter grade designation for AGRI 1050; students will receive a pass/fail grade designation for AGRI 1051.

Lab Objectives:

Lab 1-Geology

- To recognize the variety of sub-disciplines that exist within soil science
- To define “soil”
- To understand the primary soil forming factors and processes
- Gain an understanding of local geologic process and their impacts on soil formation
- Identify landscape positions and understand influences on soil formation

Lab 2-Soil Physical Properties

- To learn the concepts and methods used for identifying and describing soils (color, structure, texture)
- determine Munsell color of dry and moist soil samples
- identify soil structure using the Field book for describing and sampling soils
- classify soil texture using the “Feel Method”

Lab 3-Profile Descriptions

- identify master and subordinate horizons
- determine physical properties of soil horizons
- complete a detailed description of the soil profile
- Learn to use soil evaluation equipment
- describe soil profiles in situ and by auger boring
- Properly document soil profile description

Lab 4-Transects

- Complete a detailed description of the soil profile
- Identify master and subordinate horizons
- Understand how soil forming processes cause soil differentiation across a landscape
- Predict soil type based on landscape position, vegetation, etc.

Lab 5-Bulk Density

- directly measure bulk density and particle density using the graduated cylinder method for coarse textured, non-aggregated soil samples
- determine bulk density of a soil core, accounting for compaction during collection
- calculate soil porosity

Lab 6-Karst Development (Natural Tunnel)

- Understand how karst impacts landscapes in Appalachia
- Understand water quality issues associated with karst
- Understand how climate and time affect karst development

Lab 7-Soil Sampling

- Collect a proper soil sample for nutrient, pH, and PSA analyses
- Understand use of soil sampling tools

- Properly document soil sample for lab analysis

Lab 8-Particle Size Analysis

- determine the percent sand, silt, and clay of a soil sample using the hydrometer method
- classify soil textural class
- Compare PSA results to "feel method" of texture analysis

Lab 9-Nutrient Testing

- determine soil pH using pH probe
- determine nutrient content of soil samples
- learn proper use of soil sample testing lab equipment

Lab 10-Soil Colloid Worksheet

- Understand soil colloidal fraction and chemical makeup

Lab 11-Web Soil Survey

- Understand digital soils mapping software
- determine soil characteristics from digital data
- Understand soil mapping techniques

Lab 12-Soil Carbon

- Determine whether a given soil is a carbon sink or source
- Understand how soils sequester carbon
- Understand organic matter breakdown and accumulation

Academic Honesty

Faculty expect all students to refrain from acts of academic misconduct including but not limited to:

1. Plagiarism - refers to using another person's ideas or writing without giving proper credit to the original source. Indulging in this type of conduct will subject the student to disciplinary sanctions, which may be imposed through the regular institutional procedures of Walters State Community College as outlined in the Student Handbook. Plagiarism will result in a grade of "0" for the paper/exam/presentation. Student Conduct and Disciplinary Sanctions contained in the college Catalog/Student Handbook apply (see policy 04:18:02 Disciplinary Sanctions). Plagiarism includes, but is not limited to the following:

- a. Using cut/paste tool from original document with no references given.
 - b. Copying another student's work and submitting it as one's own.
 - c. Forging or otherwise altering signatures.
 - d. Giving or falsifying academic documents or materials.
2. Cheating - construed as attempting to deceive or mislead which includes, but is not limited to the following:
- a. Utilizing old tests, projects, notes or written papers.
 - b. Providing unauthorized information to a fellow student about exam content.
 - c. Receiving unauthorized aid from any source with quizzes, examinations, or other assignments.
 - d. Seeking information in an unacceptable manner during/preceding an exam or other assigned work (cheat sheet, verbal exchange, looking at another person's paper or electronic device, utilizing headphones, using textbook when the test/quiz is not an open book test/quiz, using textbook test bank etc.).
 - e. Consulting with a classmate or others when taking a computerized test.
 - f. Disregarding other specific policies and procedures outlined for a particular class.
 - g. Utilizing unapproved technology/electronic equipment during testing (i.e.: mobile devices such as cell phones, smart devices, or tablets, etc.).
 - h. Using the same Internet Protocol network address (IP address) as another student for testing without approval from the course faculty.
3. The use of any generative artificial intelligence (AI) tool, such as OpenAI's ChatGPT, Google's Bard, or any other pre-trained language model (commonly referred to as "chatbot"), must be cited for any assignment where it has been used and may not be used unless specifically allowed by your instructor. Please see your instructor or the course policies within the syllabus if you have questions.

Student Resources

TUTORING SERVICES

Students in need of tutoring assistance are encouraged to contact the Office of Student Tutoring located as follows:

- Morristown Campus - Student Services Building Room L107 - (423) 585-6920
- Niswonger Campus - GRNV 226 - (423) 798-7982
- Sevierville Campus - MMH Room 210 - (865) 286-2787

- Claiborne Campus - Room 123A - (423) 851-4761

Specific tutoring assistance in mathematics and writing is available in-person and online as follows:

- Morristown Campus - English Learning Lab - HUM 120 - (423) 585-6970

[Walters State English Learning Lab \(opens in new window\)](https://www.waltersstate.edu/academics/humanities/writing-lab)
[ws.edu/academics/humanities/writing-lab](https://www.waltersstate.edu/academics/humanities/writing-lab)

- Morristown Campus - Mathematics Lab - MBSS 222 - (423) 585-6872

[Walters State Mathematics Learning Lab \(opens in new window\)](https://www.waltersstate.edu/academics/mathematics/learning-lab)
[ws.edu/academics/mathematics/learning-lab](https://www.waltersstate.edu/academics/mathematics/learning-lab)

TECHNOLOGY SUPPORT

Students who need assistance with computing and technology issues should contact the IET Helpdesk by phone at Morristown: (423) 318-2742; Niswonger: (423) 798-8186; or Sevierville: (865) 286-2789 or on-line access.

[Walters State Helpdesk \(opens in new window\)](https://www.waltersstate.edu/helpdesk)
[helpdesk.ws.edu](https://www.waltersstate.edu/helpdesk)

STUDENTS WITH DISABILITIES SUPPORT SERVICES

Students with disabilities must register with Student Support Services each semester in the Student Services Building, Room U134 (phone (423) 585-6892) if they need any special facilities, services, or consideration.

[Walters State Student Support Services \(opens in new window\)](https://www.waltersstate.edu/student-services/disability/)
[ws.edu/student-services/disability/](https://www.waltersstate.edu/student-services/disability/)

SUICIDE PREVENTION STATEMENT

Walters State is committed to and cares about all students. Support services are available for any person at Walters State who is experiencing feelings of being overwhelmed, hopelessness, depression, thinking about dying by suicide, or is otherwise in need of assistance. For immediate help, contact the National Suicide Prevention Lifeline by calling or texting 9-8-8 or the Trevor Lifeline at 1-866-488-7386. Veterans may also contact the Veterans Crisis Line at 1-800-273-8255 (press 1) or Text 838255.

Walters State has a relationship in place with the following community agencies to provide services (may include crisis referral services, prevention screenings, etc.):

- Cherokee Health Systems 423-586-5032

- Frontier Health 423-467-3600

College Policies

STUDENTS HANDBOOK AS OFFICIAL GOVERNING DOCUMENT

This class is governed by the policies and procedures stated in the current Walters State Community College Student Handbook. All students attending Walters State Community College, regardless of the time, location, or format of the class, must abide by the rules and regulations outlined in the current Walters State Catalog/Student Handbook and the current Walters State Timetable of Classes.

[Walters State Catalog \(opens in new window\)](http://catalog.ws.edu/)
catalog.ws.edu/

[Walters State Timetable of Classes \(opens in new window\)](http://ws.edu/admissions/registration/)
ws.edu/admissions/registration/

PURPOSE, LIMITATIONS AND MODIFICATION OF SYLLABUS

This syllabus sets forth the expectations for the course content, work, and grading as well as expectations for student performance and conduct. The syllabus does not constitute a contract between the student and the instructor or the College. The information contained here is subject to change at any time. The instructor reserves the right to modify this syllabus at any time with written notification to the students. Though changes are possible, it is expected that the course will be conducted as described in this syllabus for the semester/year specified in the Course Information section of the syllabus. This syllabus is only valid for the semester/year specified and course requirements are not guaranteed for future semesters.

COURSE GROUND RULES

- Students must attend the first day of on-ground class or contact the instructor prior to the first class. Failure to do this may result in being dropped from the class. Excessive absences may substantially lower the course grade.
- Regular class attendance is a student's obligation for any course regardless of format. (See the Walters State Catalog/Student Handbook). If a student misses class, it is his or her responsibility to contact the instructor regarding missed assignments and/or activities and to be prepared for the next class assignment.
- Students enrolled in web courses must follow the course attendance policy defined for online attendance during the first week of class and throughout the term. Failure to do this may result in being dropped from the class during week one OR may result in the accrual of absences which may negatively impact the student's grade in the course.

- Students who have not paid fees on time and/or are not correctly registered for this class and whose names do not appear on official class rolls generated by the Walters State student information system (MyWS) will not be allowed to remain in class or receive credit for this course.
- Electronic devices must not disrupt the instructional process or college-sponsored academic activity. Use of electronic devices is prohibited unless use of the device is relevant to the activity and use is sanctioned by the faculty member in charge. Electronic devices that are not relevant to the activity or sanctioned by the faculty member in charge should be set so that they will not produce an audible sound during classroom instruction or other college-sponsored academic activity.

FINANCIAL AID

Students receiving any type of financial aid or scholarship should contact the Financial Aid Office before making any changes to their schedule. Schedule changes without prior approval may result in loss of award for the current term and future terms.

All forms of student Financial Aid may be jeopardized or lost due to the lack of Satisfactory Academic Progress in one or multiple courses. Lack of Satisfactory Academic Progress may negatively impact a student's degree/certificate completion pace and further jeopardize Financial Aid eligibility.

CANCELLATION OF CLASSES AND ACADEMIC CONTINUITY

For information related to the cancellation of classes due to inclement weather or other events, please check the Senators Emergency Text system or the college's Web site at:

[Walters State Homepage \(opens in new window\)](http://www.waltersstate.edu/home/)
[ws.edu/home/](http://www.waltersstate.edu/home/)

[Walters State Facebook page \(opens in new window\)](https://www.facebook.com/WaltersState/)
<https://www.facebook.com/WaltersState/>

[Walters State Twitter page \(opens in new window\)](https://twitter.com/waltersstate)
<https://twitter.com/waltersstate>

or call the college's student information line, 1-800-225-4770, option 1; the Sevier County Campus, (865) 774-5800, option 7; the Niswonger Campus (423) 798-7940, option 7; or the Claiborne County Campus, 423-636-6200, option 7. Also, please monitor local TV and radio stations for further announcements.

When an event or disaster interrupts the scheduled operations of the college and the ability to proceed with the academic course activities as planned, the college and your instructor may alter the course plan outlined in the syllabus. Should an event occur, students should refer to their course e-

Learn pages and/or class materials previously delivered to receive guidance from their instructor. Students should continue to monitor the official college channels of communication listed in the above paragraph. If you would like to sign up for the Senators Emergency Text system, please go to the following Web site:

[Senator Emergency Text System \(opens in new window\)](#)
ws.edu/set/

Dual Enrollment students attending on a high school campus should refer to the high school inclement weather cancellations.

LEARNING MANAGEMENT SYSTEM

Brightspace (commonly known as eLearn or D2L) is the college's Learning Management System (LMS).

Brightspace is committed to accessibility by "deliver[ing] a learning experience that meets the needs of all people, regardless of age or ability." [Brightspace Accessibility Standard \(opens in new window\)](#)

Brightspace is also committed to guarding student data and privacy. [Brightspace Privacy Policy \(opens in new window\)](#)