Syllabus
ENR3001
Soil Science Laboratory- Autumn 2020

Course Information

- Course times:

<table>
<thead>
<tr>
<th>Class</th>
<th>Days &amp; Times</th>
<th>Synchronous session Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENR 3001-0010</td>
<td>Tu 4:00PM - 7:00PM</td>
<td>Tu 4:00PM – 5:00PM</td>
</tr>
<tr>
<td>ENR 3001-0020</td>
<td>We 12:00PM - 3:00PM</td>
<td>We 12:00PM – 1:00PM</td>
</tr>
<tr>
<td>ENR 3001-0030</td>
<td>We 6:00PM - 9:00PM</td>
<td>We 6:00PM – 7:00PM</td>
</tr>
<tr>
<td>ENR 3001-0040</td>
<td>Th 9:10AM - 12:10PM</td>
<td>Th 9:10AM – 10:10AM</td>
</tr>
<tr>
<td>ENR 3001-0050</td>
<td>Mo 10:00AM - 1:00PM</td>
<td>Mo 10:00AM – 11:00AM</td>
</tr>
<tr>
<td>ENR 3001-0060</td>
<td>Tu 9:10AM - 12:10PM</td>
<td>Tu 9:10AM – 10:10AM</td>
</tr>
</tbody>
</table>

- Credit hours: 1
- Mode of delivery: Distance Learning

Instructor

- Name: Sandy Jones
- Email: jones.13@osu.edu
- Office hours: Mondays and Thursdays from 1:30 p.m.-2:30 p.m.
- Preferred means of communication:
  - My preferred method of communication for questions is email.
  - My class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your notification preferences (go.osu.edu/canvas-notifications) to be sure you receive these messages.
Teaching Assistants

- **Name:** Hengkang Zhao
- **Email:** 
- **Recitation times:** To be determined
- **Name:** Patricia Marie Cordero Irizarry
- **Email:** 
- **Recitation times:** To be determined

Course Prerequisites

- Previous or concurrent enrollment in ENR3000
- Understanding soils requires a working knowledge of the principles and vocabulary of the sciences, including elementary chemistry. Students taking this course without having received credit for college-level introductory chemistry (or an equivalent course) should be aware that understanding of relevant material from these courses is assumed, and time to review basic concepts of chemistry will be limited.

Course Description

This introductory course in soil science laboratory practice complements ENR 3000 Soil Science. Each weekly module will include up to one hour of synchronous online instruction in which important principles and procedures of soil data collection, analysis and interpretation will be discussed. In some modules this instruction will include detailed description of virtual laboratory procedures with accompanying data to be referred to in assignments. Subject matter will be presented in a variety of formats, including demonstrations, videos, lab measurements, problem solving, and reference materials.

Learning Outcomes

By the end of this course, students should successfully be able to:
- Measure important soil characteristics, including morphological, physical, engineering, chemical and biological properties.
- Understand the collection, analysis and interpretation of soil data.
- Compare, contrast properties of soils from different locations.
- Solve simple problems related to soil management, based on soil property data collected and measured in a laboratory setting.
- Use the US Soil Taxonomy and the Web Soil Survey to classify soils at a broad level.
• Understand important soil processes and their influence on soil behavior by measuring changes in properties over time.

• Use online soil survey information and apply available information by developing a land use plan based on soil limitations and opportunities.

General Education Expected Learning Outcomes

As part of the [GE Category Name] category of the General Education curriculum, this course is designed to prepare students to be able to do the following:

• Students understand the basic facts, principles, theories and methods of modern soil science.

• Students learn key events in the history of soil science.

• Students provide examples of the inter-dependence of scientific and technological developments.

• Students discuss social and philosophical implications of scientific discoveries related to the soil resource and understand the potential of science and technology to address problems of the contemporary world, particularly environmental issues, food security, and human health.

This course fulfills these learning outcomes through the sequence of presentations, virtual laboratory exercises, quizzes, individual feedback, assigned readings and the land use planning project.
How This Online Course Works

Mode of delivery:
Carmen + Zoom (Asynchronous Content + Live Class Sessions) This course is 100% online with weekly delivery of up to one hour of synchronous instruction during which students are required to log into Carmen at scheduled times. One-hour synchronous sessions begin the first hour published in the class schedule.

Pace of online activities: This course is divided into weekly modules that are released one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Credit hours and work expectations: This is a 1 credit-hour course. According to Ohio State bylaws on instruction (go.osu.edu/credit hours), students should expect around 1 hour per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 2 hours of homework (reading and assignment preparation, for example) to receive a grade of C average.

Attendance and participation requirements: Because this is an online course, your attendance is based on your online activity and participation. The following is a summary of students’ expected participation:

- Participating in online activities for attendance: at least once per week
  You are required to log into Carmen at a scheduled time for up to one hour of synchronous instruction. During most weeks you will probably log in many times. If you have a situation that might cause you to miss an entire week of class, discuss it with me as soon as possible.

- Office hours: optional
  My office hours are optional.

- Participating in discussion forums: two or more times per week
  As part of your participation, each week you can expect to post at least twice as part of our substantive class discussion on the week’s topics.
Course Materials, Fees and Technologies

Required Materials and/or Technologies

- Reading materials and videos will be accessible through Carmen

Recommended/Optional Materials and/or Technologies

Some assignments require use of a few common household items

- Garden trowel or small shovel
- Gallon plastic freezer bags
- Camera
- Notebook and pencil
- Sharpie for labeling
- Gardening or other work gloves
- Yardstick, meter stick or tape measure

Required Equipment

- **Computer**: current Mac (MacOS) or PC (Windows 10) with high-speed internet connection
- **Webcam**: built-in or external webcam, fully installed and tested
- **Microphone**: built-in laptop or tablet mic or external microphone
- **Other**: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

Required Software

**Microsoft Office 365**: All Ohio State students are now eligible for free Microsoft Office 365. Visit the [installing Office 365](go.osu.edu/office365help) help article for full instructions.

CarmenCanvas Access

You will need to use **BuckeyePass** (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](go.osu.edu/add-device) help article for step-by-step instructions.
• Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.

• [Install the Duo Mobile application](go.osu.edu/install-duo) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at **614-688-4357 (HELP)** and IT support staff will work out a solution with you.

### Technology Skills Needed for This Course

• Basic computer and web-browsing skills

• [Navigating CarmenCanvas](go.osu.edu/canvasstudent)

• [CarmenZoom virtual meetings](go.osu.edu/zoom-meetings)

• [Recording a slide presentation with audio narration and recording, editing and uploading video](go.osu.edu/video-assignment-guide)

### Technology Support

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

• **Self Service and Chat**: [go.osu.edu/it](go.osu.edu/it)

• **Phone**: **614-688-4357 (HELP)**

• **Email**: [servicedesk@osu.edu](mailto:servicedesk@osu.edu)

### Digital Flagship

Digital Flagship is a student success initiative aimed at helping you build digital skills for both college and career. This includes offering an engaging collection of digital tools and supportive learning experiences, university-wide opportunities to learn to code, and a Design Lab to explore digital design and app development. Digital Flagship resources available to help Ohio State students include on-demand tutorials, The Digital Flagship Handbook (your guide for all things tech-related), workshops and events, one-on-one tech consultations with a peer or Digital Flagship staff member, and more. To learn more about how Digital Flagship can help you use technology in your courses and grow your digital skills, visit [go.osu.edu/dfresources](go.osu.edu/dfresources).
Grading and Faculty Response

How Your Grade is Calculated

<table>
<thead>
<tr>
<th>Assignment Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Short Quizzes (lowest quiz score dropped)</td>
<td>90</td>
</tr>
<tr>
<td>Assignments (lowest assignment score dropped)</td>
<td>1100</td>
</tr>
<tr>
<td>Land Use Project</td>
<td>200</td>
</tr>
<tr>
<td>Final Exam</td>
<td>320</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1710</strong></td>
</tr>
</tbody>
</table>

See [Course Schedule](#) for due dates.

Descriptions of Major Course Assignments

**Weekly Short Quiz**
A 20-minute quiz (10 questions, multiple choice, true or false) to encourage reading of the laboratory materials will be made available on Carmen for up to 30 minutes following the end of each synchronous 1 hr session. The first weekly short quiz starts Week 4.

**Assignments**
Assignments consisting of quizzes, reports, data, calculations and descriptions are due on a weekly basis.

**Land Use Project**
The land use project is a more extensive exercise in which the student defines a 500 to 1000-acre area of interest in Ohio on which to locate plan elements of their own design based on the Web Soil Survey information for their chosen area, as well as other online sources. The report consists of a land use plan map and a written justification for the decisions made. The report is expected to be at least two pages, double space (12-point type face), together with associated figures and interpretation tables. Three weeks are allowed for completion of the land use project.
Final Exam
The final exam will be comprehensive, consisting of a variety of multiple choice, short answer and true-false questions along with problems related to soil data provided. Typically, the final has about 100 questions to be completed in 1hr 45 minutes.

Academic integrity and collaboration: Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow [MLA/APA/Chicago etc.] style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in but no one else should revise or rewrite your work.

Late Assignments
Assignments submitted late will decrease in score by 10% per school day. No assignments will be accepted after posting of answer keys. Extenuating circumstances that prevent the student from submitting assignments, taking quizzes or exams by the due date must be discussed with the instructor as soon as possible, preferably before the due date. Otherwise, opportunities to makeup missed quizzes will be granted upon submission of a valid written excuse.

Instructor Feedback and Response Time
I am providing the following list to give you an idea of my intended availability throughout the course. Remember that you can call 614-688-4357 (HELP) at any time if you have a technical problem.

• Preferred contact method: If you have a question, please contact me first through my Ohio State email address, jones.13@osu.edu. I will reply to emails within 24 hours on days when class is in session at the university.

• Class announcements: I will send all important class-wide messages through the Announcements tool in CarmenCanvas. Please check your notification preferences (go.osu.edu/canvas-notifications) to ensure you receive these messages.

• Discussion board: I will check and reply to messages in the discussion boards once mid-week and once at the end of the week.

• Grading and feedback: For weekly assignments, you can generally expect feedback within seven days.

Grading Scale
93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E
Other Course Policies

Discussion and Communication Guidelines
The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style**: While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.

- **Tone and civility**: Let’s maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn’t always come across online.

- **Citing your sources**: When we have academic discussions, please cite your sources to back up what you say. For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.

- **Backing up your work**: Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Academic Integrity Policy
See [Descriptions of Major Course Assignments](#) for specific guidelines about collaboration and academic integrity in the context of this online class.

Ohio State’s Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university’s [Code of Student Conduct](#), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university’s [Code of Student Conduct](#) and this syllabus may constitute “Academic Misconduct.”

The Ohio State University’s [Code of Student Conduct](#) (Section 3335-23-04) defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the university or subvert the educational process.” Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university’s [Code of Student Conduct](#) is never considered an excuse for academic misconduct, so I recommend that you review the [Code of Student Conduct](#) and, specifically, the sections dealing with academic misconduct.
If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university’s Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct (go.osu.edu/coam)
- Ten Suggestions for Preserving Academic Integrity (go.osu.edu/ten-suggestions)
- Eight Cardinal Rules of Academic Integrity (go.osu.edu/cardinal-rules)

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on Title IX

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university
employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.

- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Commitment to a Diverse and Inclusive Learning Environment

This course adheres to The Principles of Community adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen site for this course; and can also be found at https://go.osu.edu/principlesofcommunity. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (https://equityandinclusion.cfaes.ohio-state.edu/). If you have been a victim of or a witness to a bias incident, you can report it online and anonymously (if you choose) at https://studentlife.osu.edu/bias/report-a-bias-incident.aspx.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting ccs.osu.edu or calling (614) 292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1-(800)-273-TALK or at suicidepreventionlifeline.org.

David Wirt, wirt.9@osu.edu, is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with David, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.
Accessibility Accommodations for Students with Disabilities

Requesting Accommodations
The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Disability Services Contact Information

- Phone: 614-292-3307
- Website: slds.osu.edu
- Email: slds@osu.edu
- In person: Baker Hall 098, 113 W. 12th Avenue

Accessibility of Course Technology
This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.
- CarmenCanvas accessibility (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)
- Collaborative course tools
# Course Schedule

Refer to the CarmenCanvas course for up-to-date due dates.

<table>
<thead>
<tr>
<th>Week</th>
<th>Points</th>
<th>Topics, Readings, Assignments</th>
<th>Due Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>100</td>
<td>Measurement, Significant Figures, Rounding and Expressing Numbers</td>
<td>Week 3</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>Dimensional Analysis, Basic Math and Chemistry Review</td>
<td>Week 4</td>
</tr>
<tr>
<td>4</td>
<td>110</td>
<td>Parent Materials (Minerals, Rocks and Sediments), Short Quiz</td>
<td>Week 5</td>
</tr>
<tr>
<td>5</td>
<td>110</td>
<td>Ohio Soil Geography, Legal Description of Land and the Soil Survey, Short Quiz</td>
<td>Week 6</td>
</tr>
<tr>
<td>6</td>
<td>200</td>
<td>Land Use Projects</td>
<td>Week 9</td>
</tr>
<tr>
<td>7</td>
<td>110</td>
<td>Soil Texture, Particle Density, Sedimentation, Clay Flocculation and Dispersion, Short Quiz</td>
<td>Week 8</td>
</tr>
<tr>
<td>8</td>
<td>110</td>
<td>Soil Consistence, Linear Extensibility, Heat of Wetting and Specific Surface Area, Short Quiz</td>
<td>Week 9</td>
</tr>
<tr>
<td>9</td>
<td>110</td>
<td>Soil Air-Water Relationships, Bulk Density, Soil Moisture, Water Movement Through Soil, Short Quiz</td>
<td>Week 10</td>
</tr>
<tr>
<td>10</td>
<td>110</td>
<td>Soil Formation, Soil Profiles, Soil Structure, Morphology, Color and Drainage, Short Quiz</td>
<td>Week 11</td>
</tr>
<tr>
<td>11</td>
<td>110</td>
<td>Cation Exchange Capacity, Potassium and Clay Mineralogy, Short Quiz</td>
<td>Week 12</td>
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<tr>
<td>12</td>
<td>110</td>
<td>Organic Matter Decomposition and Nitrogen, Short Quiz</td>
<td>Week 13</td>
</tr>
<tr>
<td>13</td>
<td>110</td>
<td>Soil Acidity, Liming and Phosphorus, Short Quiz</td>
<td>Week 14</td>
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<tr>
<td>14</td>
<td>110</td>
<td>Soil Taxonomy and Classification, Short Quiz</td>
<td>Week 15</td>
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<tr>
<td>15</td>
<td></td>
<td>Exam review</td>
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<tr>
<td>16</td>
<td>320</td>
<td>Final Exam</td>
<td>Week 16</td>
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