

**Nashville State Community College
School of STEM
Civil and Construction Engineering Technology**

Fall 2022 Master Course Syllabus

CIVT 1230 – Soils and Foundations

The purpose of the syllabus is to tell you how the course is organized, what the expectations are, and how you will be graded. In addition, there is important information about how the college will operate during severe weather and how the college will communicate with you. The syllabus is not a contract. Instead, it is meant to help you succeed in this course. If any of the content changes during the semester, you will be notified.

Course information:

Course Title: SOILS AND FOUNDATIONS

Credits: 3 Credits

Class Hours: 2 Class Hours, 2 Lab Hours

Course Description:

This course covers the properties and the testing of soils and concrete in the commercial construction industry as well as the equipment used for earth moving. An overview of foundation types, concrete and reinforcement, mix design, additives, strength is explored. Topics include: soil mechanics, index properties of fine and coarse soil, soil classification and stress analysis. Labs include density, moisture content, sieve analysis, Atterberg Limits, classification and compaction.

Instructor Information:

Name:

Email:

Office Phone:

Office Location:

Office Hours:

Instructor Zoom Room link:

Class Session Zoom Link Information (if virtual):

Required Textbook(s) & Other Materials:

Textbook(s): Soils in Construction, by Schroeder, Dickenson & Warrington. Waveland Press.
ISBN: 978-1-4786-3455-3

Once you have registered for your courses, you should make sure you have the correct textbook and materials for each course. Before courses begin, you can do this by looking up your courses on the bookstore's website (<https://www.bkstr.com/nscstore/shop/textbooks-and-course-materials>) using

your A# or by entering your course information. If you are registered with the Access Center and need an alternate format for the textbook and other course materials, please contact the Access Center at 615-353-3721, 615-353-3741, or accesscenter@nscc.edu.

Digital Course Materials: These ensure you pay less for your course materials and have easy access through D2L throughout the semester. When you registered for this course, the charge for these materials appeared on your account. If you decide you do not want to purchase the course materials embedded in NS Online, you can opt out of the program **until the end of the second week of classes**. If you opt out, you will be responsible for purchasing the required course materials on your own. For more information, please visit www.nscc.edu/dcm.

Honors Option: Honors credit is available in some classes. If you are interested in participating in the Honors Program, please see your instructor within the first four weeks of class.

Course Outcomes: At the end of the semester, this is what you should know and/or be able to do:

1. Perform standard tests used to classify soils by the USCS and AASHTO methods.
2. Learn how to measure basic properties of soils and concrete.
3. Analyze and interpret lab data. Develop good technical reporting and data presentation skills.

Course Competencies:

The following are detailed course competencies, or specific skills or knowledge, intended to help you achieve the course outcomes:

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The following are general education competencies intended to support the course outcomes:

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Topics to Be Covered:

<u>Week</u>	<u>Chapter and Topic</u>
1	No Class – Holiday
2	<u>I. Mass / Volume Relationships</u> Book - Chapter 1: Overview of Rocks and Soils Class - Units, Equation of Line, Density = Mass/Volume Lab 1 – What’s in the bucket? Homework week 1 – Lab1, D2L Quizzes. Bring 3 buckets of soil. Due: Lab 1– D2L Dropbox; Hw 1 under D2L Quizzes
3	Book - Chapter 2; Size and Behavior of Soil Particles Class – Intro to MS Excel software, M/V Relationships Lab 2 – Lab 2 Density of Soil Lab 3 - Moisture Content = $W_{\text{water}}/W_{\text{drysoil}}$ Homework week 2 – Lab 2 & 3, Hw 2 Due: Lab 2, Hw 2

II. Soil Classification

- 4 Book - Chapter 3: Soils Index Properties
Class – Course Grained Soils, Sieve Test Excel Graphs
Lab 4 – Sieve Test
Homework week 3 – Lab 3 Water Content, HW3
Due: Lab 3, Hw 3
- 5 Book - Chapter 4; Soil Classification, Excel Graphs
Class - Fine Grained Soils, Atterberg Limits
Lab 5; Atterberg Limits Plastic (LL, PL, IP)
Homework Lab 4 – Hw 4
Due: Lab 4, Hw 4
TEST #1 (Chapters 1-4) Units, Math (Eq. Line), M/V Relationships
- 6 Book - Chapter 5; Stress Analysis and Engineering Properties.
Class – Review Test 1
Lab 6 Soil Classification
Due: Hw 5
- 7 Book - Chapter 6; The Contract and Contract Documents
Class – Soil Classification. (USCS & AASHTO)
Homework wk 6
Due; Lab 6, Hw 6
- 8 **Spring Break; No Class**
- 9 Book - Chapter 7; Soil Reports
Class – Soil Report Example
Homework wk 7
- III. Compaction**
- 10 Book - Chapter 8; Embankment Construction and Control (Compaction)
Class – Proctor Test, Compacting Equipment
Homework wk 8 - Proctor Test
Lab #7 Proctor Test
- 11 Book - Chapter 9; Dewatering
Class – Field Density: Sand Cone Method, Nuclear Field Density
Lab #8; Field Density Test (Sand Cone Method)
Homework wk 9 –
- 12 Book - Chapter 10; Excavations
Class – Review Test 2

Class – OSHA,

Lab #9;

TEST #2 (Chapters 5-8) 1st Test + Soil Classification + Compaction

IV. Concrete and Foundations

- 13 Book - Chapter 11; Shallow Foundations and Pavements
Class – Shallow Foundations
Homework 10 -
Class – Concrete Mix Design (online and book chapter 8)
Lab #10; Cylinders 3000 v 6000 psi Concrete
- 14 Book - Chapter 12; Deep Foundations
Class – 7 Steps to pour Concrete (Youtube Videos)
Homework 11- Deep Foundations
Class – Concrete, Mortar,
Lab #11; Create wall or footing Lab
- 15 Geology – Rock Identification
Class – Geology Rock ID (Igneous, Sedimentary, Metamorphic)
Sequences and Megasequences
Lab #12 – Break Concrete Cylinders

Test #3 Final Exam (Comprehensive, Soils, Concrete & Foundations)

Course Assessments: We will use the following assessments to demonstrate your understanding, knowledge, and skills: Tests, labs with lab reports, class assignments, homeworks (see below for %).

Grading Policy:

3 Tests (10% each)	30%
10 Labs (4% each)	40%
10 Homeworks (1% each)	10%
<u>10 Class Book assignments (2% each)</u>	<u>20%</u>
Total	100%

Grading Scale:

Letter Grade	Percentage Range
A	90-100
B	80-90
C	70-80
D	60-70
F	Below 60

FA

If you stop attending class or if you are in an online class and stop submitting assignments, but do not turn in a withdrawal form by the deadline, you are still enrolled in class. You will be given a grade of FA, which means you have failed due to not attending class and not completing your assignments. Please refer to the current academic calendar available on the Nashville State web site, looking for the date that indicates it is the “Last Day to Earn F for Attendance (FA).” If you stop attending your course after this date, you will receive an F.

FN

An FN is awarded if you have never attended your course or done any of the work in an online course.

Late Work Policy & Make-up Procedures for Missed Assignments and Work:

Labs shall be turned in the week following the lab. After one week, the lab will not be accepted. Tests shall be completed during the class assigned. No late work without instructor approval.

Attendance Policy

General Policy

- *Absences in a course may affect your final grade.*
- *Tardiness may also affect your final grade.*
- *You are responsible for all work/tests that occur during any missed course session(s) regardless of reason(s) for absence.*
- *If you are not well enough to attend a course session (class), you must notify the instructor as soon as possible before the scheduled course time.*
 - *If you are unable to notify an instructor before the scheduled course time, you must contact the instructor as soon as reasonably possible.*
- *If you have an unavoidable conflict with a scheduled course session, you must notify the instructor before the course session.*
 - *If you are unable to notify an instructor before the scheduled course time, you must contact the instructor as soon as reasonably possible.*

Instructor’s Policy

The attendance policy for this course is: Students are expected to attend all scheduled classes and laboratories. Absences in a course may affect a student’s final grade. The student is responsible for all assigned work in the course regardless of excused or unexcused absences. Tardiness may also affect a student’s final grade. If you miss a lab, you will not be allowed to make it up.

Each student is allowed two absences. Each absence after the second will result in subtracting one letter grade from the final grade. In other words, if you miss three classes your highest grade will be a B. If you miss four classes, your highest grade will be a C. If you miss six classes, you will fail the class. Three lates count as one absence. Late is from 0-15 minutes after the start of class. After 15 minutes you will be counted as absent for the class.

For financial aid purposes, **attendance** is measured by participation in the course. Instructors can determine your level of participation in several ways. Some of those ways are:

- continued attendance
- participation in on-ground or virtual class sessions
- participating in D2L as prompted
- responding to an instructor's email
- posting to a discussion board
- completing and submitting assignments

Technology Statement

- All classes at the College are web enhanced. "Web enhanced" means that components of the course, such as assignments and online discussions, may be located online in the class D2L/NS Online course shell and used in the course, even if the course meets in a classroom on ground.
- You must have access to a computer and an internet connection to complete assignments, engage in online discussions, and access various course materials through D2L/NS Online course shells.
- You may also be required to use free video conferencing platforms (examples: Zoom, Teams, etc.) for course sessions and meetings.
- You will be responsible for appropriate dress while on video. This means that you are expected to dress as if you were in a classroom.
- You will be responsible for a distraction free environment while on video. This means that the professor and others in the course should not be able to hear noise in your home, such as cell phones, TVs, or barking dogs. The best way to do this is to keep yourself on "mute" until you need to speak.
- You will be responsible for making sure your background is neutral. Keep in mind that students and professors come from all around the world, and you are all a part of our community. Therefore, please avoid having images in your background that may be offensive to your classmates.
- Certain publisher materials, such as textbook figures, may not work on cellphones and may require a laptop or a tablet.
- If you have questions or concerns regarding access to a computer or internet resources, please contact your instructor. Additional information is available on the [access to internet and technology website](#).

Computer Labs

Computers are available for all Nashville State students to use at each campus during open hours. Open computer lab availability may vary from campus to campus.

You should check the NSCC website for current hours of operation.

D2L/NS Online and myNSCC

It is your responsibility to check your email in **both** D2L/NS Online course shells and your @my.nsc.edu (student email) on a regular basis. These are the official communication channels between the college

and you. You are responsible for the information communicated through these email channels. D2L/NS Online emails contain specific course information and @my.nsc.edu emails contain important information from college offices, such as Financial Aid.

ADA Compliance Statement

If you need accommodations due to a disability, please do not hesitate to reach out to our Access Center. Disabilities for which you can receive accommodations include documented physical, emotional, and/or learning conditions. Nashville State is committed to supporting your success, and we encourage you to get assistance if needed. If you require accommodations for any courses in which you are enrolled, contact the Access Center at 615.353.3363, or e-mail accesscenter@nsc.edu.

Classroom Misconduct

Disruptive conduct is not allowed in the classroom. Disruptive conduct is any behavior that prevents students from learning and interferes with the ability of the instructor to teach. This may change from course to course; therefore, your individual instructors will give you guidance on what qualifies as “disruptive conduct” in their courses. Please review the [Nashville State Student Code of Conduct policy](#). Please be aware that children are not allowed in class or to be left unattended on campus.

Academic Misconduct

You have started this academic journey to prepare for a future career. Because of this, it is important that you learn the materials being presented in your courses. For this reason, cheating, in any form, robs you of your opportunity to learn and master the material that will enable you to succeed in that future career. Nashville State has a clear [Academic Misconduct Policy](#) that you are expected to follow. In addition, your instructors will clarify what Academic Misconduct looks like and the consequences for violations in each course that you take. The instructor has the authority to assign an “F” or a “zero” for such violations or for the semester grade.

Academic Early Alert System

If you are not doing well in your course, your instructor may send you an Early Alert through your @my.nsc.edu email. This email will go to your academic advisor and Student Success advisor, as well. If you get an Early Alert, contact your instructor immediately. Instructors send these when they want to help you figure out how to get extra support to pass the course. An Early Alert does not mean that you have already failed the course. Rather, it means you are in danger of failing the course if you do not change your learning strategy. Please use an Early Alert to your advantage and as an opportunity to improve your grade.

RAVE Emergency Alert System

You can log in to this free alert system to receive text messages about emergencies related to NSCC campuses: <https://www.getrave.com/login/nsc>. The instructions for this are listed below.

- Your RAVE Username is your NSCC email address.
- If you've never received an email from RAVE with your password, or if you need to reset your password, select “Forgot your password?” and a new password will be emailed to you.
- Should the RAVE system indicate “user not found”, select Register and create your own RAVE account.

Student Wellness

Your well-being is important to us. With this in mind, the college has several resources available to provide support when needed:

- [Free tutoring](#) provides assistance beyond the classroom to help you make the most of your college education.
- [These resources](#) include NSCC email, scheduling, online courses, textbooks, tech check out and support, computer labs on campuses, academic advising, financial advising, COVID-19 information and procedures on campuses.
- [Services](#) that help with bus passes, food, childcare, textbooks, housing, financial counseling, personal counseling, suicide prevention, health insurance.

Equity Statement

Nashville State Community College strives to ensure that each student receives what that student needs to be successful, with goals of success beyond the classroom. We understand and practice ideals of equity and inclusion for our students by embracing a full spectrum of experiences, viewpoints, and intellectual approaches in order to overcome barriers to success.

Inclement Weather & Campus Closings

You get notices about campus closings in these places: text messages from RAVE and www.nsc.edu. Even when campuses are closed, you are still responsible for completing all assigned work. Check D2L/NS Online for a message from your instructor so you do not miss important assignments and due dates, which may change due to the campus closure.

Class Cancellation Policy

Our instructors post messages about cancelling classes in the D2L/NSOnline course shells and/or on the classroom door on campus. These messages can be found in the News and Content section or the Email tab in the online shell. Please check these to be sure that you take advantage of opportunities for learning and points toward your grade.