



# INSTRUCTIONAL PACKAGE

CET 216

Soil Mechanics

Effective Term  
2021 - 2022

# INSTRUCTIONAL PACKAGE

## Part I: Course Information

Effective Term: 2021.10

COURSE PREFIX: CET 216

COURSE TITLE: Soil Mechanics

CONTACT HOURS: 5.0

CREDIT HOURS: 3.0

### **RATIONALE FOR THE COURSE:**

This course covers soil types, their engineering properties, and techniques of field and laboratory identification and testing.

### **COURSE DESCRIPTION:**

This course covers soil types, their engineering properties, and techniques of field and laboratory identification and testing.

### **PREREQUISITES/CO-REQUISITES:**

(( COMPANION Elementary Algebra 075 or ACCUPLACER Elementary Algebra 075 or New ACCUPLACER Adv Algebra 230 or ACT Math 19 or SAT Mathematics 460 or New SAT Mathematics 500 or Credit level MAT 175 Minimum Grade of C or Credit level MAT 175 Minimum Grade of TC or Credit level MAT 110 Minimum Grade of C or Credit level MAT 110 Minimum Grade of TC) or ( Multiple Measures Math 1) ) and (Credit level EGR 270 Minimum Grade of C or Credit level EGR 270 Minimum Grade of TC)

\***Online/Hybrid** courses require students to complete the [Dli Orientation Video](#) prior to enrolling in an online course.

### **REQUIRED MATERIALS:**

Please visit the Bookstore online site for most current textbook information. Use the direct link below to find textbooks.

[BOOKSTORE](#).

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

### **ADDITIONAL REQUIREMENTS:**

Scientific or Engineering Calculator / Engineering Paper  
Ability to solve algebraic equations  
Knowledge of Microsoft Excel

Basic drafting/communicative skills for lab report preparations

### **TECHNICAL REQUIREMENTS:**

Access to Desire2Learn (D2L), HGTC's student portal for course materials.  
myHGTC and college email access.

### **STUDENT IDENTIFICATION VERIFICATION**

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

### **CLASSROOM ETIQUETTE:**

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

**NETIQUETTE:** is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit [Online Netiquette](#).

## **Part II: Student Learning Outcomes**

### **COURSE LEARNING OUTCOMES and ASSESSMENTS\*:**

#### **Module #1**

Materials Covered: Chapters 1 and 2

\*Assessment: Test 1

Learning Outcomes:

1. Name examples of the various rock formations and describe processes by which they are weathered.
2. Explain the difference between AASHTO and USCS sand designations.
3. Obtain useful soil data from lab experiments such as grain-size determination and Atterberg limits.
4. Construct block diagrams showing soil components and (based on lab data) calculate soil properties such as void ratio, moisture content, etc.

#### **Module #2**

Materials Covered: Chapters 3, 4 and 5

\*Assessment: Test 2

Learning Outcomes:

1. Be able to use Coulomb's equation to estimate the shear strength in soils.

2. Describe numerous methods of sampling soils; perform various soils tests such as the cona and vane penetration tests and the standard proctor compression.
3. Discuss terms related to the permeability of a soil.
4. Be able to predict the water flow rate through soil using Darcy's Law and the flow pattern through soils by using the concept of flow nets.
5. Be able to compute vertical soil stresses beneath footings of various shapes using several different methods.

### **Module #3**

Materials Covered: Chapters 6, 7 and 8

\*Assessment: Test 3

Learning Outcomes:

1. Be able to differentiate between primary and secondary consolidation settlement in soils and to determine from an "e vs. log p" graph (developed in lab) whether a clay is normally or over-consolidated.
2. Be able to estimate soil shear capacities with Coulomb's equation and to determine lab and field estimates of soil shear strengths by various methods.

***\*Students – please refer to the Instructor's Course Information sheet for specific information on assessments and due dates.***

## **Part III: Grading and Assessment**

### **EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS\***

Students' performance will be assessed, and the weight associated with the various measures/artifacts are listed below.

#### **EVALUATION\***

Tests	30%
Assignments	20%
Projects/Portfolios	25%
Class Participation	10%
Final Exam	15%
	<hr/>
	100%

***\*Students, for the specific number and type of evaluations, please refer to the Instructor's Course Information Sheet.***

### **GRADING SYSTEM:**

Please note the College adheres to a 10 point grading scale A = 100-90, B = 89 – 80, C = 79 – 70, D

= 69 – 60, F = 59 and below.

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the academic calendar for deadlines for add/drop ([ACADEMIC CALENDAR](#)). You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

## Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student and a student may not be permitted to reenroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

**For online and hybrid courses**, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

## Part V: Student Resources



### THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):

The SSTC offers to all students the following **free** resources:

1. **Academic tutors** for most subject areas, **Writing Center support**, and **college success skills**.
2. Online **tutoring** and academic support resources.
3. Professional and interpersonal communication **coaching** in the EPIC Labs.

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring, contact

the SSTC at [sstc@hgtc.edu](mailto:sstc@hgtc.edu) or self-schedule in the Penji iOS/Android app or at [www.penjiapp.com](http://www.penjiapp.com). Email [sstc@hgtc.edu](mailto:sstc@hgtc.edu) or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the [Online Resource Center](#) to access on-demand resources.



## **STUDENT INFORMATION CENTER: TECH Central**

TECH Central offers to all students the following free resources:

1. **Getting around HGTC:** General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. Use the [Online Resource Center \(ORC\)](#) including Office 365 support, password resets, and username information.
3. **In-person workshops, online tutorials and more services** are available in Desire2Learn, Student Portal, Degree Works, and Office 365.
4. **Chat with our staff on TECH Talk**, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-8552.

Visit the [Tech Central](#) website for more information. Live Chat and Center locations are posted on the website. Or please call (843) 349 – TECH (8324), Option #2.

## **STUDENT TESTING:**

Testing in an **online/hybrid** course may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms

Further more tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

## **DISABILITY SERVICES:**

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to HGTC's [Accessibility and Disability Service webpage](#). The Accessibility and Disability staff will review documentation of the student's disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

## **STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:**

Horry-Georgetown Technical College prohibits discrimination and harassment, including sexual harassment and abuse, on the basis of race, color, sex, national or ethnic origin, age, religion, disability, marital or family status, veteran status, political ideas, sexual orientation, gender identity, or pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation in educational programs and/or activities.

## **TITLE IX REQUIREMENTS:**

All students (as well as other persons) at Horry-Georgetown Technical College are protected by Title IX—regardless of their sex, sexual orientation, gender identity, part- or full-time status, disability, race, or national origin—in all aspects of educational programs and activities. Any student, or other member of the college community, who believes that he/she is or has been a victim of sexual harassment or sexual violence may file a report with the college's Chief Student Services Officer, campus law enforcement, or with the college's Title IX Coordinator, or designee.

\*Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

## **INQUIRIES REGARDING THE NON-DISCRIMINATION/TITLE IX POLICIES:**

**Student and prospective student** inquiries concerning Section 504, Title II, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.

**Dr. Melissa Batten, VP Student Affairs**

*Title IX Coordinator*

Building 1100, Room 107A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5228

[Melissa.Batten@hgtc.edu](mailto:Melissa.Batten@hgtc.edu)

**Employee and applicant** inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.

**Jacquelyne Snyder, VP Human Resources**

*EEO and Title IX Coordinator*

Building 200, Room 212A, Conway Campus

PO Box 261966, Conway, SC 29528-6066

843-349-5212

[Jacquelyne.Snyder@hgtc.edu](mailto:Jacquelyne.Snyder@hgtc.edu)