



Horry-Georgetown
Technical College

COURSE INSTRUCTIONAL PACKAGE

TUF 275

Performance Turf Design and
Construction

Effective Term

Fall 2026/Spring 2027/Summer 2027

Part I: Course Information

Effective Term: Fall 2026/Spring 2027/Summer 2027

COURSE PREFIX: TUF 275

COURSE TITLE: Performance Turf Design and
Construction

CONTACT HOURS: 5.0

CREDIT HOURS: 3.0

RATIONALE FOR THE COURSE:

Every management factor of turfgrass management ties back to construction in many ways. Frequently, a graduate is responsible for rebuilding a variety of turfgrass related items to guarantee the proper laying surface and strategy are insured. Graduates frequently have found themselves as a foreman-superintendent during new course or field construction. Due to the extreme cost of USGA greens construction, sand-based field construction, and the various important items related to the various ancillary, the student needs to understand construction principles and how to alter them to adapt to their own needs.

COURSE DESCRIPTION:

This course is a study of the concepts needed to design, construct and renovate various golf and sports turf playing surfaces. Topics include: USGA green construction, proper survey and layout of athletic fields, drainage methods, construction timelines and budgeting.

PREREQUISITES/CO-REQUISITES:

TUF 172 and TUF 252

REQUIRED MATERIALS:

Please visit the [BOOKSTORE](#) online site for most current textbook information. Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

ADDITIONAL REQUIREMENTS:

None

TECHNICAL REQUIREMENTS:

- Access to Desire2Learn (D2L), HGTC's learning management system (LMS) used for course materials.
- Access to myHGTC portal for student self-services.
- College email access – this is the college's primary official form of communication.

ATTENDANCE VERIFICATION:

The Add/Drop Period is the first 7 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format classes. Please refer to the [academic calendar](#) for deadlines for add/drop. You must attend at least one meeting of all 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

IDENTIFICATION VERIFICATION:

Students enrolled in online courses will be required to complete identity verification. Please refer to your Instructor's Course Information Sheet for information regarding this requirement.

STUDENT COURSE EVALUATIONS:

Each semester, students are provided with an opportunity to participate in course evaluation surveys. These evaluations offer crucial feedback to instructors and the College, leading to enhancement of educational quality. By completing these surveys, you play a key role in the ongoing improvement of teaching methods and course content, ensuring future students enjoy a better learning experience. Students are encouraged to complete these surveys as your active participation in this process reflects your dedication to your education and drives positive change.

CLASSROOM ETIQUETTE AND STUDENT RIGHTS AND RESPONSIBILITIES:

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 an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

To ensure a positive College experience, guidelines exist in numerous areas of campus life. The Student Code for The South Carolina Technical College System “The Student Code” (3-2-106.1) applies to all HGTC students. The Student Code sets forth rights and responsibilities of the individual student, identifies behaviors that are not consistent with the values of college communities, and describes the procedures that will be followed to adjudicate cases of alleged misconduct. Students are expected to conduct themselves in a civil manner, that is respectful of the rights of others, and that is compatible with the college’s educational mission. Students are expected to comply with all of the college’s duly established rules and regulations regarding student behavior while on campus; while participating in off-campus college sponsored activities; and while participating in off-campus clinical, field, internship, or in-service experiences. Students are expected to comply with all course requirements as specified by instructors in course syllabi and to meet the standards of acceptable classroom behavior set by instructors. For more information, login to your myHGTC account under “Student Rights and Responsibilities” card then select “Student Code of Conduct” or the “Student Catalog and Handbook.”

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

UNIT I

The student will be able to describe in detail all preparations made for construction and to prepare prioritized step by step documentation of the construction phases.

Student Learning Outcomes:

1. List the major phases of construction.
2. Discuss any contracts and specifications that are necessary for construction.
3. Detail the factors that will alter the specifications for construction.
4. Describe the necessary details in a construction contract.
5. Explain the appropriate time for a superintendent/grounds manager to be hired.

6. Discuss the responsibilities held by a superintendent during the construction period.
7. List the different types of bidding procedures and steps in the bidding process.
8. Prepare a flowchart of a critical path network for golf course construction.
9. Explain the advantages to using the critical path method.
10. Prepare a construction activity plan.
11. Discuss the first stage of construction.
12. Itemize the equipment that is needed by the construction crew.
13. Discuss the three phases of basic construction.
14. List everything that rough grading includes.
15. Explain the importance of stripping topsoil.

UNIT II

The student will be able to construct a green and to discuss in detail the advantages and disadvantages of a USGA green. This also ties directly to sports turf field construction of sand-based mediums.

Student Learning Outcomes:

1. List the major steps of putting green construction.
2. Explain the two methods of achieving surface contours.
3. Discuss the three steps of subsurface drainage.
4. Design and install subsurface drainage.
5. List the primary concerns of putting green soils and the criteria necessary to make the soil percolate properly.
6. List the disadvantages and advantages of sandy soils.
7. Explain the importance of laboratory soils tests.
8. List the laboratory tests necessary for greens soils.
9. Run the tests necessary on soil for greens construction.
10. State where reliable soils tests can be obtained.
11. List the criteria necessary for selection of root zone soil amendments.
12. List the types of organic material in order of acceptability.

13. List the types of greens construction.
14. Draw a cross section of a USGA green.
15. List specific and particle size to gravel ratios required.
16. Discuss the coarse sand layer in USGA greens construction.
17. Explain the purpose of ringing the green.
18. Totally explain a perched water table.
19. Create a perched water table in a laboratory.

UNIT III

The student will be able to build a California sand green system or a hybrid-type system of greens construction.

Student Learning Outcomes:

1. Explain the California and hybrid designs of greens construction
2. Explain what Purr-Wick means
3. Explain the function of the impermeable barrier.
4. Explain the importance of sand selection.
5. Discuss the soil principles.
6. Describe a sand green and explain the scientific principles behind its operation.
7. Compare the sand used for sand greens with the sand for USGA and Purr-Wick.
8. List the advantages and disadvantages of a sand green.
9. List the problems of contouring with sand greens and give corrective solutions.
10. Explain the PAT system.
11. Explain how finish grading greens should be done.

UNIT IV

The student will be able to explain the methods of renovation of greens and construction of tees and fairways.

Student Learning Outcomes:

1. Discuss the advantages of dragging in pipelines.
2. Explain the operation of these verti-drain.
3. Explain the Cambridge Sportsturf drainage system.
4. Explain the individual steps of the Cambridge system.
5. List the equipment necessary to install a Cambridge system.
6. List the major steps in tee construction.
7. Explain the subsurface drainage system of tee construction.
8. List the major steps in fairway construction and explain each.
9. Define and explain the use of French drains.
10. Explain stone removal during fairway construction.
11. Explain final grading methods.

UNIT V

The student will be able to construct a bunker. Also: body of water, bulkheads, cartpaths, pitchers mound, infield skin

Student Learning Outcomes:

1. Describe the parts of a bunker.
2. List criteria for good bunker construction.
3. Explain the various methods of bunker construction.
4. Design a drainage system for a bunker.
5. List multiple ways of lip construction.
6. List methods of sand placement in bunkers and skins in sports fields.
7. Discuss the methods for mound construction.
8. Discuss the types of bunker liners.
9. List methods of dam construction.
10. List methods of sealing the pond floor.
11. List methods of regulating spillways and overflows.
12. Examine cartpath construction methods and costs
- 13.** Understand the sequence and components needed for bulkheads

- 14. *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/Quizzes	40%
Assignments/Papers/Projects	30%
Class Participation	20%
Final Exam	10%
	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, and Is also negatively impact academic progression and financial aid status.

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 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, refer to your Instructor's Course Information Sheet for any required on-site meeting times. In online courses, attendance is fulfilled through the submission of academic work. Please be aware that instructors may require exams to be proctored either online or at an approved testing site. If you choose to use a testing center other than those provided by HGTC, that center may charge a fee for its services.

Part V: Student Resources



THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):

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

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

Visit the [Student Success & Tutoring Center](#) website for more information. To schedule tutoring or coaching, contact the SSTC at sstc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email sstc@hgtc.edu or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the SSTC [Online Resource Center](#) to access on-demand resources.

STUDENT INFORMATION CENTER – TECH Central:



TECH Central offers all students the following **free** resources:

1. Getting around HGTC: General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. In-person and remote assistance are available for Desire2Learn, Student Portal, Degree Works, and Office 365.
3. 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. You may also call (843) 349-5199.



HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries have librarians and staff who can aid with research, computers to support academic research and related school-work, and individual/group study rooms. Printing is available as well at each location. Visit the [Library](#) website for more information or call (843) 349-5268.

STUDENT TESTING:

Testing in HGTC courses may occur during regularly scheduled class time or online, with or without proctoring. Tests may be delivered in the following formats:

- Digitally through D2L
- In writing on paper
- Through a publisher platform (note: some publisher platforms carry an associated fee)

Tests may include time limits and may require proctoring depending on the course.

When proctoring is required and is not provided by the course instructor in the classroom, students may complete their test face-to-face at an [HGTC Testing Center](#) or another approved testing site, or online using HGTC's online proctoring provider. For more information about available proctoring options, visit the [Online Testing](#) section of the HGTC Testing Center webpage.

Students testing at an HGTC Testing Center should note the following:

- **Appointments must be scheduled at least 24 hours in advance.**
- **A physical, government-issued photo ID is required to test.**

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. Students seeking accommodations are encouraged to visit HGTC's [Accessibility and Disability Service webpage](#) for detailed information.

It is the student's responsibility to self-identify as needing accommodations and to provide appropriate documentation. Once documentation is submitted, the student will participate in an interactive process with Accessibility and Disability Services staff to determine reasonable accommodations. Students may begin the accommodations process at any time; however, accommodations are **not retroactive** and will only be applied from the point at which they are approved. Students must contact the office **each semester** to renew their accommodations.

For assistance, please contact the Accessibility and Disability Services team at disabilityservices@hgtc.edu or 843-796-8818 (call or text).

COUNSELING SERVICES:

HGTC Counseling Services strives to optimize student success through managing personal and academic concerns that may interfere with achieving educational goals. Staff are available to every student for assistance and guidance on personal matters, academic concerns and other areas of concern. HGTC offers free in-person and telehealth counseling services to students. For more information about counseling services, please reach out to counseling@hgtc.edu or visit the website the [Counseling Services webpage](#).

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Our sincere commitment to both effective business management and equitable treatment of our employees requires that we present this Policy Statement as an embodiment of that commitment to the fullest.

Discrimination is conduct that includes unjust or prejudicial treatment based upon an individual's age, race, color, sex, religion, national origin, disability, and genetic information or any other protected classes deemed unlawful under State or Federal law that excludes an individual from participation in, denies the individual

the benefits of, treats the individual differently, or otherwise adversely affects a term or condition of a person's working or learning environment. This includes failing to provide reasonable accommodation, consistent with state and federal law, to persons with disabilities.

All inquiries regarding the federal laws as they relate to discrimination on the basis of sex may be directed to Jen Riddei, Title IX Coordinator, Horry-Georgetown Technical College, Building 1100C, Room 107B, 2050 HWY 501 E, PO Box 261966, 843-349-5218, Jenifer.Riddei@hgtc.edu.

Student and prospective student inquiries concerning the federal laws and their application to the College or any student decision may be directed to Dr. Melissa Batten, Vice President, Student Affairs, and Section 504 & Title II Coordinator, Horry-Georgetown Technical College, Building 1100C, Room 107A, 2050 HWY 501 E, PO Box 261966-6066, 843-349-5228, Melissa.Batten@hgtc.edu.

Employee and applicant inquiries concerning the federal laws and their application to the College may be directed to Jacquelyne Snyder, Vice President, Human Resources and Employee Relations and the College's Affirmative Action/Equal Opportunity Officer, Horry-Georgetown Technical College, Building 200C, Room 205B, 2050 HWY 501 E, PO Box 261966, Conway, SC 29528-6066, 843-349-5212, Jacquelyne.Snyder@hgtc.edu.

TITLE IX REQUIREMENTS:

Title IX of the Education Amendments of 1972 protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination.

HGTC prohibits the offenses of sexual harassment, domestic violence, dating violence, sexual assault, and stalking and will provide students, faculty, and staff with necessary information regarding prevention, policies, procedures, and resources.

Any student, or other member of the college community, who believes that they have been a victim of sexual harassment, domestic violence, dating violence,

sexual assault, or stalking may file a report with the college's Title IX Coordinator or campus law enforcement*.

*Faculty and Staff are required to report these incidents to the Title IX Coordinator 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).

All inquiries regarding the federal laws as they relate to discrimination on the basis of sex may be directed to Jen Riddei, Title IX Coordinator, Horry-Georgetown Technical College, Building 1100C, Room 107B, 2050 HWY 501 E, PO Box 261966, 843-349-5218, Jenifer.Riddei@hgtc.edu.

PREGNANCY ACCOMMODATIONS

Under Title IX, colleges must not exclude a pregnant student from participating in any part of an educational program. Horry-Georgetown Technical College is committed to ensuring that pregnant students receive reasonable accommodations to ensure access to our educational programs.

Students should advise the Title IX Coordinator of a potential need for accommodations as soon as they know they are pregnant. It is extremely important that communication between student, instructors, and the Title IX Coordinator begin as soon as possible. Each situation is unique and will be addressed individually.

Title IX accommodations DO NOT apply to Financial Aid. Financial Aid regulations do not give the College any discretion in terms of Financial Aid eligibility.

Certain educational programs may have strict certification requirements or requirements mandated by outside regulatory agencies. Therefore, in some programs, the application of Title IX accommodations may be limited.

To request pregnancy accommodations, please complete the *Pregnancy Intake Form* that can be found [here](#).