



# **INSTRUCTIONAL PACKAGE**

NRM 207  
Geographic Information Systems

Effective Term  
Fall 2025/Spring 2026/Summer 2026

# INSTRUCTIONAL PACKAGE

## Departmental Mission Statement:

### Forestry Management Technology Department & Program Mission Statement

The mission of the Department, the Programs and its faculty is to support the broader College's goals as detailed above, but also provide a comprehensive silviculturally based environmental education that recognizes the broad multiple uses demanded from the forest environments of South Carolina, the Southeastern United States and the nation.

- We want our graduates to recognize how their daily decisions will have a lasting impact on the social, cultural, economic, and environment fabric of our state, region and country.
- Their natural resource decision making process must be based on the highest professional and ethical standards for the long term protection and promotion of a high demand resource.
- We strive to prepare well trained forest, wildlife and natural resource technicians for both public and private sector employers and promote career opportunities for our graduates.

## Part I: Course Information

Effective Term: Fall 2025/Spring 2026/Summer 2026

COURSE PREFIX: NRM 207      COURSE TITLE: Geographic Information Systems

CONTACT HOURS: 2.0 Lecture, 3.0 Lab      CREDIT HOURS: 3.0 Credits

### RATIONALE FOR THE COURSE:

Forestry is a profession dealing with the management of land resources. Effective management requires understanding the spatial distribution or location of resources (timber, grass, roads, etc.). The course focuses on the manipulation of information in the form of maps, satellite imagery, drone acquired imagery, Global Positioning Systems (GPS) and Geographic Information Systems (GIS). These skills are fundamental for managing resources for the benefit of timber production, wildlife management, etc.

### COURSE DESCRIPTION:

This course is the study of Geographic Information Systems (GIS) concepts, including coordinate systems, projections, datums, data models and sources, spatial statistics, queries and analyses, and basic cartographic principles. Emphasis is on applications within the NRM

field.

**PREREQUISITES/CO-REQUISITES:**

Must be enrolled in one of the following Fields of Study (Major, Minor, or Concentration):  
Forestry Management Tech

Credit level [NRM 106](#) Minimum Grade of C or Credit level [NRM 106](#) Minimum Grade of TC.

**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.

**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.

**STUDENT IDENTIFICATION VERIFICATION**

Students enrolled in online courses will be required to complete identity 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:** Remote Sensing and GIS

\*Assessment(s):      Unit Test  
                                 Skill based labs

Learning Outcomes:

1. Define remote sensing and explain how remotely sensed data are used in Geographic Information Systems (GIS)
2. Identify different sources of remotely sensed data, including aerial imagery, satellite imagery, LiDAR, SLAR and drones.
3. Identify and interpret remotely sensed data acquired from aerial imagery, satellite imagery, LiDAR, SLAR and drones.
  - a. Identify timber types and drainage locations on imagery.
  - b. Interpret land usage patterns observed on imagery.
  - c. Identify roads, buildings, geologic features using imagery.
4. Introduce heads-up digitizing in GIS.

**Module #2**

**Materials Covered:**      Map Projections and Coordinate Systems in GIS, Integrating GPS

\*Assessment(s):      Unit Test  
                                 Skill based labs

Learning Outcomes:

1. Define geographic coordinate systems and map projections
2. Identify the most commonly used geographic and projected coordinate systems used in GIS and GPS.
3. Learn how to project data manually, project data “on the fly” and perform geographic transformations.
4. Collect accurate data with a GPS receiver.
5. Manage, edit and project data collected with a GPS receiver.
6. Develop maps using projected/transformed data and data collected with a GPS receiver.

**Module #3**

**Materials Covered:**      Data Management, Editing and Analysis

\*Assessment(s):      Unit Test  
                                 Skill based labs

## Learning Outcomes:

1. Create, delete, edit, split and merge features using various construction tools.
2. Practice editing with snapping and modify a snapping environment.
3. Define a geodatabase and develop geodatabases, feature classes and features.
4. Convert shapefiles to feature classes.
5. Create, edit and calculate attributes; Modify, expand and relate attribute tables.
6. Use selection, query, join and relate tools.
7. Dissolve, clip, buffer and overlay features.

**Module #4**

**Materials Covered:** Advanced Map Creation, Online Maps and Interactive Maps

\*Assessment(s): Unit Test  
Skill based labs

## Learning Outcomes:

1. Develop a user friendly map template.
2. Define appropriate map symbols and create custom map symbols.
3. Use labels, define rules for label placement, create graphic and dynamic labels.
4. Create maps with various print sizes and determine how to adjust symbols, labels, and text to scale.
5. Create online maps using ArcGIS Online and ArcPro.
6. Create an interactive online map.

**Module #5**

**Materials Covered:** Analyzing Geospatial Data, Capstone Project

\*Assessment(s): Skill based labs  
Capstone Project  
Skills Based Final – **PLO Forestry #2 - Navigate/mark waypoints using GPS (current technology), upload/download data to/from GIS software, delineate forest stand boundaries and calculate land areas within GIS based on GPS waypoints**

## Learning Outcomes:

1. Explore Spatial Analyst.
2. Convert polygon data to raster data and reclassify raster data.
3. Create a plan for capstone project including data needs, final product and end user.

4. Collect data for capstone project.
5. Create a template and interface for capstone project.
6. Present capstone project to class either in-person or in an online interactive environment.

***\*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\***

Unit Tests	40%
Lab Exercises	30%
Capstone Project	20%
Final Exam	10%
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	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. 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, and 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 Academic Coaching for 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 or coaching, 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 SSTC [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. 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. Or please call (843) 349 – TECH (8324), Option # 1.



### **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 an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L.
- Test administered in writing on paper.
- Test administered through Publisher Platforms (which may have a fee associated with the usage)

Furthermore, tests may have time limits and/or require a proctor.

Testing candidates must make their appointments 24 hours in advance.

Students must bring a physical ID in order to take a test.

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. 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](mailto: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](mailto: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 sex, race/color, religion, national origin, age, disability, service in the uniformed services (as defined in state and federal law), veteran status, political ideas, marital or family status, pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation, genetic information, genetic identity, gender expression, or sexual orientation 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.

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

**Student and prospective student** inquiries concerning Section 504, Title II, Title VII, 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, Section 504, and Title II 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**

*Affirmative Action/Equal Opportunity Officer and Title IX Coordinator*  
Building 200, Room 205B, Conway Campus  
PO Box 261966, Conway, SC 29528-6066  
843-349-5212  
[Jacquelyne.Snyder@hgtc.edu](mailto: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 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).

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

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## **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](#).