



# **INSTRUCTIONAL PACKAGE**

FOR 206  
Forest Ecology

Effective Term  
Fall 2022/Spring 2023/Summer 2023

# 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 2022

COURSE PREFIX: FOR 206

COURSE TITLE: Forest Ecology

CONTACT HOURS: 2.0 Lecture, 3.0 Lab

CREDIT HOURS: 3.0

### RATIONALE FOR THE COURSE:

All living organisms in a forest ecosystem and their environment are linked together. An understanding of the interrelationship between organisms and their environment and organism to organism will help us sustain ecosystem stability and function, promote long term productivity and reduce losses to stress. The student will gain an understanding of the environmental factors affecting the plant community; plant community inter-relationships; factors influencing plant distribution and succession; and environmental forces affecting forest management.

### COURSE DESCRIPTION:

This course is a study of the nature of forests and forest trees, how they grow, reproduce, and their relationships to the physical and biological environment.

### PREREQUISITES/CO-REQUISITES:

Multiple Measures English 1 or Credit level ENG 155 Minimum Grade of C or Credit level ENG 155 Minimum Grade of TC or Credit level ENG 101 Minimum Grade of C or Credit level ENG 101 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.

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

### **ADDITIONAL REQUIREMENTS:**

#### SAFETY AWARENESS

All laboratories are conducted outdoors in whole or in part, regardless of weather conditions. Appropriate clothing is required, including pants and boots. Please do not wear sandals, tennis-shoes, sneakers, crocs, flip-flops, slippers, etc. Appropriate protective clothing should be worn when inclement weather is anticipated. Students should consider raingear, jackets, and gloves. Because of the obvious health risks associated with exposure to inclement weather, the instructors reserve the right to dismiss any student who is not properly dressed from any lab period. Being outdoors carries some additional risk. Always be aware of your surroundings. Pay special attention while crossing roads or examining trees near roads. Bees, wasps and yellow jackets, although not common, may be encountered during a lab. You may wish to inform your instructor of any allergies or other medical conditions that you may have. Poison-ivy will be present, so know what the species looks like. It is everyone's responsibility for keeping the class safe.

### **TECHNICAL REQUIREMENTS:**

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

### **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](#).

**SAFETY:** Prior to going to the woods for a field lab, the instructor will hold a safety briefing identifying the boundaries of the study area, any known hazards and the proper use of Personal Protective Equipment assigned to that exercise. Long pants and boots are required for field labs.

## Part II: Student Learning Outcomes

### COURSE LEARNING OUTCOMES and ASSESSMENTS\*:

#### Module 1:

##### Introduction to Forest Ecology

**Materials Covered:** Kimmins Chapter 3, Perry Chapters 2-4, Luoma Chapters 1-2

**Assessment(s):** Unit Exam, Lab Exercises

##### Learning Outcomes:

1. Define ecology and ecosystems, specifically as applied to forests and forestry.
2. List the subdivisions of ecology
3. Identify global ecosystems
4. Identify major forest types and climatic controls
5. Understand the effects of climate change on forest distribution
6. Explain the general role of silvics in forest ecology
7. Describe the nutrient cycle

#### Module 2:

##### Understanding Forest Site Factors

**Materials Covered:** Kimmins Chapters 7-11, Perry Chapter 14, Journal Articles, Luoma

**Assessment(s):** Essay (Literature Review), Lab Exercises

##### Learning Outcomes:

1. Explain temporal and geographical variations in climate (solar radiation, temperature, wind)
2. Describe the physical nature of solar radiation and the ecological effects of solar radiation/light on the forest ecosystem
3. Identify the effects of temperature on plants and animals and forest ecosystems
4. List the steps of the water cycle
5. Define adaptations of plants and animals to water availability
6. Describe how moisture affects plant distribution, nutrient availability and competition
7. List the physical, chemical and biological properties of soils and describe how they affect plant growth
8. Label a soil profile
9. Discuss soil development and soil classification

#### Module 3:

##### Ecological Succession

**Materials Covered:** Kimmins Chapter 17, Perry Chapter 8, Journal Articles, Luoma

**Assessment(s):** Unit Exam, Lab Exercises

##### Learning Outcomes:

1. Define succession and describe classical concepts/models of succession
2. Describe the mechanisms of succession
3. Discuss changes in the ecosystem during succession (function, stability, biodiversity, animal communities)
4. List and describe the three major types of sere

5. Describe how forest management affects succession

**Module 4:**

**Natural Disturbance**

**Materials Covered:** Kimmins Chapter 12, Perry Chapter 7, Journal Articles

**Assessments(s):** Unit Exam, Lab Exercises

**Learning Outcomes:**

1. List the different types of natural disturbances that can affect an ecosystem
2. Describe how fire, wind, tectonic activity, flooding, invasive species, pests and pathogens can affect forest ecosystems
3. Describe how these disturbances can be mitigated with forest management
4. Describe how environmental protection/conservation is involved with natural disturbance and forest management

**Module 5:**

**Community Ecology**

**Materials Covered:** Kimmins Chapter 15, Perry Chapters 9-13

**Assessment(s):** Final Exam, Final Essay, Lab Exercises

**Learning Outcomes:**

1. Describe the structure and form of plant communities
2. Explain the concept of the ecological niche
3. Discuss the interactions and relationships between trees and other species within an ecosystem
4. Describe the aspects of an ecosystem that create diversity within the community
5. Define biodiversity and apply the concept to describe a natural ecosystem
6. Explain the relationship between forest structure and biological diversity
7. Discuss how forest management can affect community ecology

***\*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 are listed below.

#### EVALUATION\*

<b>Exams</b>	<b>40%</b>
<b>Labs</b>	<b>30%</b>
<b>Final Paper</b>	<b>15%</b>
<b>Final Exam</b>	<b>15%</b>
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	<b>100%</b>

***\*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 **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 [ssc@hgtc.edu](mailto:ssc@hgtc.edu) or self-schedule in the Penji iOS/Android app or at [www.penjiapp.com](http://www.penjiapp.com). Email [ssc@hgtc.edu](mailto:ssc@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 #1.

### **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)