



# **INSTRUCTIONAL PACKAGE**

FOR 265  
Equipment & Timber Harvesting

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 265

COURSE TITLE: Equipment & Timber Harvesting

CONTACT HOURS: 3 hr lecture; 3 hr lab

CREDIT HOURS: 4

### RATIONALE FOR THE COURSE:

This course is designed to acquaint the student with the variety of logging equipment and methods used in the harvesting of trees. The student will also learn how to establish an operating budget or business plan for a small timber harvesting firm including equipment payments, operating costs, payroll, benefits, etc. (Successful completion of this course and completion of the SC BMP Field Orientation with the SC Forestry Commission qualifies a student for their SC TOP Logger certification.)

### COURSE DESCRIPTION:

This course is an analysis of logging situations and decision-making regarding timber harvesting. A study of the various equipment and tools used in forestry operations, techniques of operating and maintaining equipment, and harvesting operations and the costs involved are included. Students will prepare a business plan for a timber harvesting company.

### PREREQUISITES/CO-REQUISITES:

(Credit level FOR 156 Minimum Grade of C or Credit level FOR 156 Minimum Grade of TC) and (Credit level FOR 269 Minimum Grade of C or Credit level FOR 269 Minimum Grade of TC) or (Credit

level MAT 120 Minimum Grade of C or Credit level MAT 120 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:**

Students will need to have a Hard Hat and boots (steel-toe are preferred) for lab; a pocket engineer's scale (10 units / inch); flash drive, calculator, and safety glasses. SC Best Management Practices for Forestry Manual will be provided in class.

### **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.

**LAB EXERCISES:** This class has an outdoor lab associated with it. This course will entail frequent field trips to timber harvesting operations, often under hazardous conditions. Hardhats will be required to be worn on all field labs where heavy equipment will be present. Please come appropriately dressed for lab with long pants and boots. Students are reminded to be alert at all times, and think safety.

## Part II: Student Learning Outcomes

### COURSE LEARNING OUTCOMES and ASSESSMENTS\*:

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

#### Module #1

**Materials Covered:** Chapters on Logging History, Skidding, Felling and Limbing, Bucking & Loading

**\*Assessment(s):** Complete class review activity / Unit Test

#### Learning Outcomes:

1. Describe the basic components of a timber harvesting system.
2. Explain how a logging deck and associated skid trails are to be laid out.
3. Identify the various mill specifications effecting load merchandizing, delivery and price.
4. Identify load limitations (height, weight and length) for interstate and intrastate highways.

#### Module #2

**Materials Covered:** Chapters on Reasons for Harvesting Plans, Visual Quality & Timber Harvesting, Buying Timber, and Selling Timber.

**\*Assessment(s):** Complete class review activity / Unit Test

#### Learning Outcomes:

1. Identify the different ways that advanced harvest planning can improve productivity, landowner satisfaction, safety and environmental protection.
2. Identify the steps necessary to prepare a tract of timber for sale.
3. Identify the steps necessary to successfully purchase a tract of timber.
4. Identify what steps need to be examined to protect the visual quality of a property during a timber harvesting operation.

#### Module #3

**Materials Covered:** Chapters on Chainsaw, Hand Tools, Safety, Land Ownership Trends, Logging Business and Non-conventional Logging Systems

**\*Assessment(s):** Complete class review activity / Unit Test

**Learning Outcomes:**

1. Identify the working parts of a chainsaw and the lubrication and service points.
2. Identify the role that some hand tools still enjoy in this business. Know safety rules regarding the safe use of hand tools and power equipment. Know common methods of hand tool maintenance and repair.
3. Identify the national and regional trends in landowner and how it influences equipment size and costs.
4. Identify the settings that require non-conventional logging systems (balloon, cable, helicopter, swamp, etc).

**Module #4**

**Materials Covered:** Chapters on Best Management Practices for Forestry, Sustainable Forestry Initiative (SFI) and SC TOP Logger Certification.

**\*Assessment(s):** Complete class review activity / Unit Test

**Learning Outcomes:**

1. Identify the legal requirements associated with the Clean Water Act and SC Best Management Practices as they relate to timber harvesting, site preparation and environmental protection.
2. Identify the voluntary steps associated with the industry based Sustainable Forestry Initiative (SFI) Program.
3. Successful completion of this course and completion of the SC BMP Field Orientation with the SC Forestry Commission qualifies a student for their SC TOP Logger certification.

**Module #5 - Capstone Project**

**Learning Outcomes:**

1. Apply academic knowledge in a professional setting.
  - a. Prepare a property for and execute a timber cruise and value assessment. Collect data using tally sheets and/or data collectors.
  - b. Compute all volumes and values using self-designed fixed plot spreadsheets in Excel.
  - c. Prepare a competitive bid on the timber to be harvesting based on quality, markets and cruise information.
2. Develop a timber harvesting plan for a property and budget the operational costs of a timber harvesting business.
  - a. Design an entry level timber harvesting company and layout decks, trails and buffers.
  - b. Compute the various fixed ownership and operational costs for each piece of equipment and associated labor.
  - c. Factor in all associated costs including workman's compensation, insurance, taxes, depreciation, etc.

**\*Course Assessments:**

Develop a business management plan and apply it against a timber sale for operational profitability.

Learn about the impacts of depreciation and taxes for a business.

**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	25%
Harvesting Plan	15%
Timber Appraisal	10%
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, 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 [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 #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)