



INSTRUCTIONAL PACKAGE

FOR-265

Equipment & Timber Harvesting

Effective Term
Fall 2019

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 2019

COURSE PREFIX: FOR-265

COURSE TITLE: Equipment & Timber Harvesting

CONTACT HOURS: Lecture: 3 – Lab: 3

CREDIT HOURS: 4.0

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.

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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.

PREREQUISITES/CO-REQUISITES: Prerequisites: (Credit level [FOR 154](#) Minimum Grade of D or Credit level [FOR 154](#) Minimum Grade of TC) and (Credit level [FOR 156](#) Minimum Grade of C or Credit level [FOR 156](#) Minimum Grade of TC). Co-requisites: Enrollment in FOR-269 or MAT-120 or (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)

REQUIRED MATERIALS:

No textbook is required for this course. 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:

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

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's student portal for course materials. WaveNet and D2L 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.

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.

LAB EXERCISES: 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. Students are reminded to be alert at all times, and think safety.

Part II: Student Learning Outcomes

PART II: STUDENT LEARNING OUTCOMES

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

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.

****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 (4)	40%
Labs / Field Reports (7)	15%
Harvest Plan Project (10%/15%)	25% - Two Parts
Final Exam	<u>20%</u>
	100%

GRADING SYSTEM:

The College's and Departmental grading system is delineated in the Catalog. 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. You must have your Dean's approval if changes in the scale are made.

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.**

Part V: Student Resources



The Student Success and Tutoring Center (SSTC)

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

- 1. Academic coaches** for most subject areas, **Writing Center Support**, and **college success skills.**
- 2. On-line student success and academic support resources.**

Visit the SSTC website: [Student Success & Tutoring Center](#) and visit the student services tab in your WaveNet account to schedule appointments using TutorTrac. For more information, 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 any time.



TECH Central – Student Information Center

TECH Central provides quality enrollment and collegiate guidance for students, faculty, and staff. Services include phone, walk-in, and online technical support for technology training and troubleshooting. Additionally, we offer support in Office 365, Outlook E-mail setup, and ID cards.

Phone: 843-349-5340

Email: techcentral@hgtc.edu

Text: 843-357-8552

TECH Talk (Live Chat): Located on the "Home" tab in WaveNet.

Website: www.hgtc.edu/techcentral

Locations:

Conway Building 1100, Room 132D

Grand Strand Building 200, Room 136

Disability Services:

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to Beth Havens, Director of Student Development on the Conway Campus Jaime Davis, Counselor/Advisor on the Georgetown Campus or Kristin Griffin, Counselor on the Grand Strand Campus. These individuals 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.

Inquiries regarding the non-discrimination policies: Students 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. 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, Section 504, Title II, and Title IX Coordinator, Building 200, Room 212A, Conway Campus, PO Box 261966, Conway, SC 29528-6066, 843-349-5212, Jacquelyne.Snyder@hgtc.edu.

Title IX Requirements

August 2019

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).

<p>Inquiries regarding the non-discrimination policies:</p>	
<p>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.</p>	<p>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.</p>
<p>Dr. Melissa Batten, VP Student Affairs <i>Title IX Coordinator</i></p> <p>Building 1100, Room 107A, Conway Campus PO Box 261966, Conway, SC 29528-6066 843-349-5228 Melissa.Batten@hgtc.edu</p>	<p>Jacquelyne Snyder, VP Human Resources <i>Section 504, Title II, and Title IX Coordinator</i></p> <p>Building 200, Room 212A, Conway Campus PO Box 261966, Conway, SC 29528-6066 843-349-5212 Jacquelyne.Snyder@hgtc.edu</p>