



INSTRUCTIONAL PACKAGE

FOR 154

Mensuration

Effective Term
Fall 2019

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: 2019-2020

COURSE PREFIX: FOR 154

COURSE TITLE: Mensuration

CONTACT HOURS: 2.0 Lecture, 3.0 Lab

CREDIT HOURS: 3.0

RATIONALE FOR THE COURSE:

The purpose of this course is to give the student a working knowledge of the techniques and instrumentation that are commonly utilized to measure the important parameters of a standing forest (basal area, height, diameter, site quality, stand density, and volume). The ability to measure these parameters is essential to develop information required in the decision-making processes involved in silviculture and forest management.

COURSE DESCRIPTION:

This course is a study of the techniques and instruments used in the measurement of standing or harvested trees. The use of log rules, volume tables, yield tables, and elementary statistics are included.

PREREQUISITES/CO-REQUISITES:

(SAT Critical Reading 380 and SAT Mathematics 400) or (ACT English 12 and ACT Math 14 and ACT Reading 17) or (COMPASS Reading 65 and COMPASS Writing 40) or (ACCUPLACER Reading Comp 056 and ACCUPLACER Sentence Skills 058 and ACCUPLACER Arithmetic 043 or ACCUPLACER Elementary Algebra 050) or (COMPANION Reading 056 and COMPANION Sentence Skills 058 and COMPANION Arithmetic 043 or COMPANION Elementary Algebra 050) or (Multiple Measures English 1 and Multiple Measures Math 1)

REQUIRED MATERIALS:

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:

- Hand-held Scientific Calculator w/Trig Functions (Sine, Cosine, Tangent)
- Completion of the American Heart Association's CPR and First Aid Training (\$20/student)

TECHNICAL REQUIREMENTS:

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

STUDENT IDENTIFICATION VERIFICATION

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification 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.

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

Module #1

Materials Covered: Forest Measurements, Scales of Measurement and Rounding, Guide to Written Assignments, Introduction to Statistics and Concepts

***Assessment(s):** In Class Assignments, Quiz, Labs, Exam

Learning Outcomes:

1. Identify the uses and purposes of measuring the forest.
2. Effectively apply rules of rounding for the forest industry.
3. Differentiate between business letters, memos, and professional emails.
4. Create and explain graphs of different forest measurement variables.
5. Recognize how personal choices can bias samples.
6. Calculate mean, mode and median of datasets.
7. Explain the standard deviation and coefficient of variation as they apply to forestry decisions.

Module #2

Materials Covered: Forest Sampling, Land Measurements, Area Determination, GPS, Log Rules and Volume estimates

***Assessment(s):** In Class Assignments, Quiz, Labs, Exam

Learning Outcomes:

1. Differentiate between random, systematic, and stratified sampling.

2. Discuss concept of land area, chains, pacing, and compass operation.
3. Define bearing; azimuth; agonic line; declination.
4. Calculate acreage using a dot grid and GPS.
5. Explain differences in map scales and their use in area determination.
6. Define and calculate cubic volume; cord; MBF; cunit; weight scale.
7. Identify basic log scaling rules.

Module #3

Materials Covered: Measuring Standing Trees, Forest Inventory, Site Index, Stand Density and Stocking, Line Plot and Strip Cruise Calculations

*** Assessments:** In Class Assignments, Quiz, Labs, Exam

Learning Outcomes:

1. Knowledge of log scaling, grading, and tree defects.
2. Demonstrate the safe and proper use of field equipment.
3. Define DBH and its appropriate measurement with specific instruments.
4. Define, establish, and measure total height; merchantable height with specific instruments.
5. Use increment borer to determine "tree age."
6. Define and calculate basal area.
7. Convert existing tree volume table into tree weight table.
8. Create cruise tally card, estimate volume/weight of tallied trees, complete a Stand and Stock Table, and provide an estimate of the forest stand's value based on current timber pricing.

Module #4

Materials Covered: Forest Inventories with Point Samples, 3P Sampling, GIS data use, Forest Assessment of Rangeland, Wildlife, Water, and Recreation

***Assessment(s):** In Class Assignments, Quiz, Labs, Exam

Learning Outcomes:

1. Demonstrate methods and types of timber cruising (100% tally, strip, line-plot, point sampling).
2. Estimate number of trees and the basal area per acre for plot and point sampling.
3. Define and explain 3P sampling and when it is used.
4. Identify the different types of aerial photographs and their uses.
5. Explain the uses of Geographic Information Systems in forestry.
6. Calculate Animal Unit Months (AMU) for rangeland/silvipasture.
7. Estimate animal populations using Lincoln-Petersen Index.
8. Delineate watershed boundaries and classify streams by stream order.
9. Evaluate recreational use indicators to determine the best predictor.

****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 Exams	30%
Lab Exercises	30%
In Class Assignments	20%
Quizzes	10%
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 ([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.

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, 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 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.



Student Information Center: WaveNet Central (WNC)

WNC offers to all students the following **free** resources:

1. **Getting around HGTC**: General information and guidance for enrollment!
2. Use the [Online Resource Center \(ORC\)](#) for COMPASS support, technology education, and online tools.
3. **Drop-in technology support or scheduled training** in the Center or in class.
4. **In-person workshops, online tutorials and more services** are available.

Visit the WNC website: [Wavenet Central](#). Live Chat and Center locations are posted on the website. Or please call one of the following locations: WNC Conway, 349-5182; WNC Grand Strand, 477-2076; and WNC Georgetown, 520-1473.

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 RPNOW, 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 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

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>