



THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

Department of Forestry and Wood Technology

FWT 403–Wood Harvesting and Transportation

COURSE PARTICULARS

Course Code: FWT403

Course Title: Wood Harvesting and Transportation

No. of Units: 2

Course Duration: One hour of theory and three hours of practicals per week for 15 weeks.

Status: Compulsory

Course Email Address: fwt403@gmail.com

Course Webpage: <http://www.fwt.futa.edu.ng/courseschedule.php?coursecode=FWT%20204>

Prerequisite: NIL

COURSE INSTRUCTORS

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and

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COURSE DESCRIPTION

Students are introduced to assessment of trees before felling and felling methods. Legal requirements before harvesting will be taught. Logging and transportation are integral part of the course. Students will be taught safety practices in felling, loading and off loading.

COURSE OBJECTIVES

The objectives of this course are to:

- Introduce students to the harvesting methods and equipment used for harvesting
- Determine the age and maturity of forest trees
- Map out harvesting process in the forest to avoid delay in evacuation.

COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course, the student will be able to:

(Knowledge based)

- explain the legal requirements for felling.
- classify and explain the function of different tools and equipment used in wood harvesting;
- explain methods of log transportation from deposit to the mill, their advantages and disadvantages.
- highlight safety practises in logging.

(Skills)

- prepare guidelines for harvesting in the forest
- prepare maintenance schedule for power chain saw.

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Attendance	10%
Assignments	10
Test(s)	20%
<u>Final Examination</u>	<u>60%</u>
<u>TOTAL</u>	<u>100%</u>

GENERAL INSTRUCTIONS

Attendance: It is expected that every student will be in class for lectures and also participate in all practical exercises. Attendance records will be kept and used to determine each person's qualification to sit for the final examination. In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with any of the instructors, indicating the reason for the absence.

Academic Integrity: Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances are prohibited. You are not allowed to make copies of another person's work and submit it as your own; that is plagiarism. All cases of

academic dishonesty will be reported to the University Management for appropriate sanctions in accordance with the guidelines for handling students' misconduct as spelt out in the Students' Handbook.

Assignments and Group Work: Students are expected to submit assignments as scheduled. Failure to submit assignment as at when due will earn zero for the assignment. Only under extenuating circumstances, for which a student has notified any of the instructors in advance, will late submission of assignments be permitted.

Code of Conduct in Lecture Rooms and Laboratories: Students should turn off their cell phones during lectures. Students are prohibited from engaging in other activities (such as texting, watching videos, etc.) during lectures. Food and drinks are not permitted in the laboratories.

READING LIST

Dinwoodie J.M (1981)¹: Timber, its Structure, properties and Utilization. 6th Edition. Macmillan Education LTD Houndmills, Hong Kong. ISBN: 0-333-25751-0

Forest Products Laboratory (1980)²: Excellent overview of wood anatomy and properties in easy to understand terms.

John "Rusty" Dramm (2004)²: Forest Products Utilization and marketing – a selected Bibliography of Technical Publications, the University of Wisconsin.

Julie Morrison and William Wilcox (1974)²: Forest Product Utilization Handbook. Colorado State Forest Service. Colorado State University, Fort Collins, Colorado. CSFS Hdbk 3206.1

Karf, F. Wenger (1984)¹ Forestry Handbook 2nd Edition. Willey International publication, New York. ISBN 0-471-06227-8.

Walker, J.C.F.; B.G. Butterfield; and T.A.G. Langrish (1993)²: Primary Wood Processing: Principles and practice. Chapman Hall. ISBN: 041254802.595pp.

Legend

- 1- Available in the University Library
- 2- Available in Departmental/School Libraries
- 3- Available on the Internet.
- 4- Available as Personal Collection
- 5- Available in local bookshops.

COURSE OUTLINE

Week	Topic	Remarks
1	Wood harvesting definitions. Types of forest and forest terrain classifications	Objectives of harvesting not only from timber production will be discussed and characteristics of forest types
2	<ul style="list-style-type: none"> Harvesting systems/methods of harvesting and factors affecting the choice of harvesting 	Students will be taught clear cutting harvesting shelter wood cut, seed tree, group tree and single selection practices forms at which harvest tree is taken out of the forest will be 2
3 & 4	<ul style="list-style-type: none"> Rotation and rotation types/ factors affecting choice of rotation 	Emphasis on harvesting based on objective of establishing plantation to get maximum yield/returns.
5	Age determination of forest trees: Planting history; cutting it down; use of increment borer, whorls and circumference methods	Exercises will be given to students on tree age determination and calculations using growth factor developed by international society of Arboriculture (ISA)
6 & 7	Maturity determination: financial, biology age and maturity assessment CAI, MAI & PMAI	Students will be taken through exercises on CAI, MAI and PMAI.
		MID-SEMESTER TEST
8	<ul style="list-style-type: none"> Harvesting tools: manual and mechanical 	Slides on different types of harvesting tools and equipment will be shown
9	<ul style="list-style-type: none"> Harvesting operations: Felling techniques, notches, de-limbing, bucking 	Students will be taught safety practices in felling operation and felling exercises will be conducted using chain saw in the plantation
10	Transportation: Animal, manual, tractor and cable	Students will be taught safety practices associated with transportation methods. Accident points and how to prevent them
11	Major transportation: Road rail and water	
12	Legal requirements for felling	Knowledge of forest law concerning harvesting as prerequisite for logging exercises will be discussed
13	Logging personal/ loading and off loading	This is the week preceding the final examination. At this time, evaluation will be done to assess how far the students' expectations for the course have been met.
14 & 15	Revision	