



THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

Department of Forestry and Wood Technology

FWT 319 – Principles of Forest Management

COURSE PARTICULARS

Course Code: FWT 319

Course Title: Principles of Forest Management

No. of Units: 2

Course Duration: Two hours of theory per week for 15 weeks.

Status: Compulsory

Course Email Address: fwt319@futa.edu.ng

Course Webpage:

Prerequisite: NIL

COURSE INSTRUCTORS

Prof. J.C. Onyekwelu

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COURSE DESCRIPTION

Principles of Forest Management (FWT 319) is a compulsory course designed for undergraduate students in the forestry and wood technology degree programme, to provide them opportunity to learn basic concepts and techniques related to making decisions in managing both natural and plantation forests to achieve variety of management objectives. Specific topics to be covered in this course include: Definition and importance of forest management; History of forest management in Nigeria; Introduction to the characteristics of forest ecosystem types – Natural forest, plantation forests, even-aged forest, uneven-aged forests; Forest Management goals; Forest Management tools/techniques, to include application of linear programming as decision tools in forest management; Management alternatives to meet various forest objectives; Economic, social and environmental objectives; Forest management decision-making problems; Annual Allowable Cut, sustained yield and rotation age; Conflicts in forest management; Preparation of forest management plans and corresponding business reports.

COURSE OBJECTIVES

The objectives of this course are to:

- provide students an overview of the relevance of forest management in the context of global and local scenarios
- review the history of forest management in Nigeria

- provide opportunities for students to develop basic skills necessary for sustainable forest management
- learn to develop forest management plans for varying management objectives and scenarios

COURSE LEARNING OUTCOMES / COMPETENCIES

By the end of this course, students should be able to:

(Knowledge based)

- demonstrate an in-depth understanding of the fundamental issues related to forest management in both local and global context;
- understand to particularly how forest management decisions making tools can be applied to obtain a balance among varying multiple objectives, especially management for economic production and provision of socially valuable ecosystem goods and services;
- develop the personal ability to prepare a forest management plan and corresponding business reports taking cognisance of the costs and benefits, opportunities and constraints, and conflicts of interests against a set of management actions.

(Skills)

- apply different forest management and decision making tools/ techniques, particularly, linear programming as a decision making tool in forest management.
- gain technical skills in developing forest management plans and associated business reports
- gain other generic skills, including organizational skills, group participation and management, problem analysis and prioritization, time schedule and project implementation.

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Class Attendance	10%
Report	10%
Mid-Semester Test	20%
<u>Final Examination</u>	<u>60%</u>
<u>TOTAL</u>	<u>100%</u>

GENERAL INSTRUCTIONS

Attendance: Every student is expected to be in class for lectures. Attendance records will be kept and used to determine each person's qualification to sit for the final examination. Any student who has less than 70% attendance will be disqualified from writing 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 an assignment as at when due will earn you zero for that assignment.

Code of Conduct in Lecture Rooms: 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 also prohibited during lecture.

READING LIST

¹ Günter, S. Weber, M., Stimm, B. and Mosandl, R.. (eds), 2011. *Silviculture in the tropics*. Springer Dordrecht, The Netherlands, 559 pp.

Fujimori T. (2001): *Ecological and Silvicultural Strategies for Sustainable Forest Management*. Elsevier Science, Amsterdam, 413pp.

² Buongiorno, J. and Gilles, K. (2003): *Decision Methods for Forest Resource Management*. Academic Press. Amsterdam, Boston u.a.

³ Bettinger, P., Boston, K., Siry, J. and Grebner, D.L.(2010): *Forest Management and Planning*. Academic Press, 360pp.

^{4,3} Klaus von Gadow, Timo Pukkala, Margarida Tomé Eds (2001): *Sustainable Forest Management (Managing Forest Ecosystems)*, Kluwer Academic Publishers, Dordrecht, 387pp

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.

CLASS SCHEDULE

Week	Topic	Remarks
1	Definition and importance of forest management	The lecture will provide an overview of the definitions and importance of forest management. Students' expectations from the course will be noted in this first class.
2	History of forest management in Nigeria	Students will be familiarized with past forest management scenarios in Nigeria, and learn about the success and limitations of some forest management protocols.
3	Concept and principles of SFM (sustainable forest management).	Criteria and indicators for sustainable forest management will be highlighted. Elements and process of forest certification schemes in SFM will be discussed.
4	Introduction to the characteristics of forest ecosystem types: <ul style="list-style-type: none"> • Natural forest • plantation forests • even-aged forest • uneven-aged forests 	Students will learn to distinguish various forest types and land-use systems based on their inherent characteristics.
5	Forest Management goals	The lecture will highlight various goals and objectives of forest management, considering the current local and global trends.
6	Management alternatives to meet various forest objectives: Economic, social and environmental objectives	An interactive session will be opened for students to contribute to the identification of management alternatives for different forest types.
7	Concepts of Normal forest and Sustained Yield	Lecture will describe the concepts, and demonstrate to students the management steps to achieve sustained yield.
8	Rotation in forest management	Students will learn concepts and types of rotation, choice and length of rotation, and methods of determining rotation age.
		MID-SEMESTER TEST

9	Forest management decision-making problems	Problems associated with decision making in forest management will be identified, and possible options to overcome them will be considered
10,11 & 12	Decision making tools/ techniques in forest management	Various decision making tools in forest management will be discussed and key emphasis will be laid on the application of linear programming to forest management at stand level
13	Conflicts in forest management	Emphasis will be on identification of possible conflicts of interests in the management of forest for multiple objectives
14 & 15	Preparation of forest management plans and corresponding business reports	The lecture will discuss the definitions, guiding principles and components of forest management plans and business reports; data collection and preparation of management plans, and the limitations of forest management plans. Group of students will be required to prepare specific forest management plan for submission as part of continuous assessment for this course.
15	REVISION	This entails the general revision of all the topics in this course and evaluation of the students to assess how far the students' expectations for the course have been met.