



# THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

## *Department of Forestry and Wood Technology*

### **FWT 310 – Principles of Forest Economics**

#### **COURSE PARTICULARS**

**Course Code:** FWT 310

**Course Title:** Principles of Forest Economics

**No. of Units:** 2

**Course Duration:** Two hours of theory and one hour of tutorials per week for 15 weeks.

**Status:** Compulsory

**Course Email Address:** fwt310@gmail.com

#### **COURSE INSTRUCTOR**

**Dr. O. V. Oyerinde**

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#### **COURSE DESCRIPTION**

This course is to give a clear picture of the economic environment within which forestry operates, to help the students in understanding the many economic relationship which exist in forestry. The course is aimed at introducing students to the concept and practices of forest economics. The course is to establish the economic basis for forestry and to furnish the students with tools and methods of financial analysis in coping with economic problems as they arise in natural resource management. The course is designed to expose students to the classification of forest goods and services as well as review of economics principles in relation to forest resources. The course will start by reviewing important principles of microeconomic theory applicable to forest/natural resources. After establishing this solid foundation of microeconomic view of forestry, we will focus on studying timber supply and demand models, financial analysis and economic impact analysis, timber/ecosystem valuation and multiple-criteria decision making tools to aid better decision making in natural resource management.

#### **COURSE OBJECTIVES**

The objectives of this course are to:

- expose students to the classification of forest goods and services;
- expose students to methods and tools involved in economic analysis in relation to forest resources; and
- understand how to apply economic tools/methods as part of a decision-making framework in the areas of resource management, business and policy-making.

## COURSE LEARNING OUTCOMES / COMPETENCIES

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

- understand the various classifications of forest goods and services
- explain the concept of forest economics and theories of forestry investment
- understand the economics principles in relation to forest resources
- know the criteria used for the selection of projects in forestry

## GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Class Attendance and participation	5%
Assignments	15%
Test(s)	20%
<u>Final Examination</u>	<u>60%</u>
<b><u>TOTAL</u></b>	<b><u>100%</u></b>

## 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 an assignment as at when due will earn you zero for that 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

<sup>3</sup>FAO, (2010). Global Forest Resource Assessment. Main Report. FAO Forestry Paper 163. FAO, Rome. <http://www.fao.org/docrep/013/i1757e/i1757e.pdf>. 340 pp

<sup>3</sup>Jukka Muukkonen, (2009). Classification of forests. 14th Meeting of the London Group on Environmental Accounting Canberra, 27 – 30 April 2009. [http://unstats.un.org/unsd/envaccounting/londongroup/meeting14/LG14\\_11a.pdf](http://unstats.un.org/unsd/envaccounting/londongroup/meeting14/LG14_11a.pdf)

<sup>1</sup>Lipsey, R.G. and Chrystal, K.A., (1999). Principles of Economics. 9th edition. Oxford University press. pp. 14-32.

<sup>1</sup>Wenger, K.F. (1984). Forestry Handbook. 2nd edition. Wiley Interscience Publication. New York. 133 pp. ISBN 0-471-06227-8

<sup>3</sup>Elevitch, C.R. and Wilkinson, K.M. (2000). Economics of farm forestry: Financial evaluation for land owners. Agroforestry guide for Pacific Islands #7. [www.agroforestry.net/afg/](http://www.agroforestry.net/afg/). 31 pp

<sup>4</sup>Klemperer, W.D. 1996. Forest resource economics and finance. McGraw Hill, New York. 551pp.

<sup>4</sup>Pearse, P. 1990. Introduction to forest economics. University of British Columbia Press, Vancouver. 226pp.

### Legend

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

## COURSE OUTLINE

Week	Topic	Remarks
1	Introduction and Course Overview <ul style="list-style-type: none"> <li>• Forestry's Economic Perspective</li> <li>• Forests as Economic Resources</li> <li>• Forestry as Applied Science and Applied Economics; and</li> <li>• Economic Decision-making</li> </ul>	During this first class, the expectation of the students from the course will also be documented.
2 & 3	Review of basic economic theories on forest resource utilisation <ul style="list-style-type: none"> <li>• Microeconomics and macroeconomics theories</li> </ul>	

	<ul style="list-style-type: none"> <li>• Forest goods and services</li> <li>• Scarcity and choice</li> <li>• Opportunity Costs;</li> <li>• Factor allocation among Uses</li> </ul>	
4 &5	<p>Economic Principles</p> <ul style="list-style-type: none"> <li>• Theory of production;</li> <li>• Demand and Supply;</li> <li>• Equilibrium and Disequilibrium;</li> <li>• Elasticity;</li> <li>• Diminishing returns; and</li> <li>• Economic models.</li> </ul>	
6 & 7	<p>Economic Decision making</p> <ul style="list-style-type: none"> <li>• Issues in Forest Economics;</li> <li>• Characteristics and classification of natural resources</li> <li>• Characteristics and classification of forest resources</li> <li>• Unique aspects of forest resource economics; and</li> <li>• Decision making in forest management</li> </ul>	
8	<p>Basic concepts in forest resource economics</p> <ul style="list-style-type: none"> <li>• Market Failures in Forestry;</li> <li>• Market Failures and Government Intervention</li> <li>• Economic analysis of forest resources and environmental problems</li> </ul>	MID-SEMESTER TEST
9&10	<p>Introduction to Forest Investment Analysis/Capital budgeting</p> <ul style="list-style-type: none"> <li>• Payback period;</li> <li>• Net Present Value (NPV);</li> <li>• Internal Rate of Return (IRR); and</li> <li>• Benefit Cost Ratio (B/C)</li> </ul>	
11	<p>Pricing of forest resources</p> <ul style="list-style-type: none"> <li>• Concept of price determination</li> <li>• Methods of pricing</li> <li>• Appraisal of methods of pricing</li> </ul>	
12&13	<p>Introduction to economic and environmental role of forest resources</p> <ul style="list-style-type: none"> <li>• Externalities;</li> <li>• Valuation of forest/natural resources</li> <li>• Non-market values</li> <li>• Payment for ecosystem services</li> <li>• Carbon trading</li> </ul>	
14	<p>Market Structure</p> <ul style="list-style-type: none"> <li>• Types; and</li> <li>• Attributes/characteristics</li> </ul>	
15	REVISION	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
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