



THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

Department of Forestry and Wood Technology

FWT 315 – Forest Pests and Diseases

COURSE PARTICULARS

Course Code: FWT 315

Course Title: Forest Pests and Diseases

No. of Units: 2

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

Status: Compulsory

Course Email Address: fwt204@gmail.com

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

Prerequisite: NIL

COURSE INSTRUCTORS

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COURSE DESCRIPTION

The major pests and diseases of forest trees. Taxonomy, biology and method of control of these diseases of forest, major pests and disease of forest trees. Brief outline of shortcomings and advantages of different pest assessment and control methods.

COURSE OBJECTIVES

Specific objectives are to:

- Understand concepts of ecology with emphasis on insect systems
- Learn where to look for insects and how to collect them safely
- Learn how to preserve and label insects specimens for scientific study
- Learn types of diseases that attack forest tree species
- Management of Forest pest and diseases

COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course the students will be able to

1. Collect, preserve, process, and present insect specimens in accordance with scientific standards.
2. Identify 50 adult insects to the order level and 20 adult insects to the Family level using taxonomic keys and microscopic technique
3. Recognize by genus and species selected harmful and beneficial insects associated with commercial tree species
4. Describe the biology and ecology of insects in general and selected harmful and beneficial species
5. Identification of different type of diseases on the field.
6. Identify the pathogen involved in the case of infectious diseases.
7. How to effectively manage pest and diseases of plantation trees species.

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Class Attendance	10%
Assignments	10%
Test(s)	10%
Practical	20%
<u>Final Examination</u>	<u>50%</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 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

Elizinga, R. J. *Fundamental of Entomology*. 2nd Edition Call. No. 1463.E48 (FUTA Main Library)

Youdeowell, A. *A laboratory Manual of Entomology*. Call No. Q1464.Y68 (FUTA Main Library)

Ross, H. H. *A Textbook of Entomology*. Call No. QL463.R67

Thresh, J. M. *The role of weed and wild plants in the ecology of crop pest and diseases*. Call No. SB599.P47 (FUTA Main Library)

Bland R. G. *How to know the Insects* 3rd Edition Call No. QL463.B642 (FUTA -Reference)

These materials are available in the University and Departmental/School Libraries, on the Internet, as Personal Collection and in local bookshops.

COURSE OUTLINE

Week	Topic	Remarks
1	Introduction to the course: course overview	During this first class, the expectation of the students from the course will also be documented.
2	<ul style="list-style-type: none"> • Reasons why research in Forest Pest and Diseases are not given attention in Developing countries. • Nursery Pest and diseases • Specific examples of Nursery pest and disease pathogens 	<p>Student will be thought why research in forest pest and diseases are not given attention in developing country.</p> <p>Economic Importance of some nursery disease will be discussed e.g. Root rot; Damping-off; Top wilt; foliage blights and shoot dieback. Specific examples of nursery pest will be treated.</p>
3 & 4	Insect Classification of Phylum Arthropoda	Student should be able to identify and differentiate different class of Phylum Arthropoda.
5	Insects life cycles	Life cycles of Insect pest will be thought e.g. <i>Anaphe venata</i> , <i>Hypisphyla robusta</i> , <i>Phytolyma lata</i> and <i>Haritalodes derogate</i> ,
6 & 7	Economics Classification of insects: <ul style="list-style-type: none"> • Principles in applied entomology • Regulation of insect population-roles of biotic and abiotic factors. 	Students will be introduced to methods of insect collection/sampling
8 & 9	<ul style="list-style-type: none"> • Insect pest-categories and causes for outbreak <ul style="list-style-type: none"> -Classification based on season and locality -Classification based on intensity of infestation Classification based on damage potential • Causes for outbreak of pests Losses caused by pests	<p>Various pest categories will be discussed during the lecture. Causes of outbreak of pest will be explained in class.</p> <hr/> <p style="text-align: center;">MID-SEMESTER TEST</p>
10 & 11	<ul style="list-style-type: none"> • Pest Management and its components <ul style="list-style-type: none"> -Prophylactic or preventive methods -Curative or direct methods 	Economic importance of some of Plantation pest will be discussed e.g. <i>Amblypelta cocophaga</i> (shoot feeding bug), <i>Crossotarsus extemedentatus</i> F. (Ambrosia beetle), <i>Hybelaeu puera</i> C. (Teak defoliator); <i>Hypisila robusta</i> M. (shoot boring caterpillar); <i>Ips</i> sp. (Bark beetles); <i>Platypus gerstackeri</i> C. (Ambrosia beetle)

12	-Integrated pest management (-the decision process, -the action process, -integration of new technology, -integration of pest management system.)	
13	Plantation diseases	Pathogens of some diseases of plantation species will be discussed. E.g <i>Armillaria spp</i> of <i>Pinus spp</i> ; <i>Allescheriella crocea</i> M. of <i>Gmelina</i> sp; <i>Auricularia polytricha</i> M. of <i>Cordia alliodora</i> ; <i>cercospora catappae</i> H. of <i>Terminalia</i> sp;
14	Term paper	Students will be grouped for term paper presentation and score will be awarded for each group member.
15	Revision	