**Lead City University**
**Faculty of Basic Medical and Applied Sciences**
**Department of Microbiology**

**COURSE PARTICULARS**
**Course code: BOT 213**
**Course Title: ETHNOBOTANY**
**No. of Units: 2**
**Status: Elective**

**LECTURER'S DETAILS**
**Name: Prof. Allan Femi Lana**
**Qualifications: B.Sc. (Madison, Wisconsin), M.Sc., Ph.D. (Amherst, Massachusetts)**
**Phone: 08126262172/07086864641**
**Email: allanfemilana@yahoo.co.uk**
**Area of Specialization: Virology/Integrated Pest Management/Natural Science**

**COURSE DESCRIPTION**
The course describes the uses of plants in all ramifications. It entails both the medicinal and non medicinal uses of plants with the view of developing plants' economic importance for self sustenance and national development. The huge and usage of plants have therefore made their preservation and conservation in this course.

**COURSE OBJECTIVE**
- To intrude students to Ethnobotany
- To make students understand the valuable use of various plants in the use of medicine, agriculture and cosmetic use

**TEACHING PLAN**
Week 1 – Ethnobotany definition and source for information
Week 2 - Reasons for ethnobotical research
Week 3 – Sweetner of plant origin and Importance
Week 4 – Natural Spices and beverages
Week 5 - Essential oil sources and importance
Week 6 – Fibre plants

Week 7 – 8: Natural Pesticides

Week 9 – 10 Commonly used Medicinal plants in humans
Week 11 – Plant exudates
Week 12 – Wild edible fruits
Week 13 – 14 – Ethnoveterinary medicine
Week 15 – Plant conservation strategies

**Assessment**
**Assignment/Continuous Assessment – 30%**
**Examination – 70%**
**Total – 100%**
**Reading list**
**Botany for Students By Dutta. Sixth edition**

**Tutorial Questions**

1. What is ethnobotany? Discuss changes in its definition over time.
2. How can you source for ethnobotical information? State the importance of ethnobotanical research.
3. Write short notes on the following: i). natural sweetners ii). Beverages iii). Spices iv). Plant exudates
4. Distinguish between fixed oil and essential oil stating their usages
5. Differentiate between herbal and western medicine
6. Discuss ethnoverterinary medicine stating their importance
7. What are fibre plants and how can they be classified?
8. What are natural pesticides? Discuss the need for molluscides giving examples of five plant molluscicides.
9. In a tabular form, list 10 wild edible fruits stating their scientific names, common names, families and edible part(s).
10. Write short notes on the following and arrange them in their degree of severity: a) extinct b) endangered c) rare d) threatened
11. Stating examples, distinguish between in situ and ex situ conservation
12. Discuss various measures of preserving plant biodiversity
13. What are volatile oils? Discuss different methods by which they can be extracted?
14. What are medicinal plants? State 10 commonly used antimicrobial plants stating their families and part used.
15. Discuss why eighty percent of Africans use herbal plants.

**MARKING GUIDE (SECOND SEMESTER 2017/2018)**

1. Definition of enthobotany 10marks
   Changes in interpretation 10 marks
   Total 20 marks

2. At least five methods of obtaining information on ethnobotanic research 2marks each = 10 marks
   At least five importance of ethnobotinacal research 2mark each = 10 marks
   Total 20 marks
3. Short notes sweetners, beverages, spices and plant exudates 5 marks each =
   Total 20 marks
4. Fixed oil description 5 marks
   Essential oil description 5 marks
   Usage of each 5 marks each =10marks
   Total 20 marks
5. At least five key for each of herbal and western medicine 2 x 5 = 10 marks for each
   Total 20 marks
6. Ethnoveterinary discussion 15 marks
   Importance 5 marks
   Total 20 marks
7. The description of fibre plants 10 marks
   Their various classification 10 marks
   Total 20 marks
8. Types of natural pesticides 10marks
   Need for molluscicdes 5 marks
   Five examples of molluscicides 5 marks
   Total 20 marks
9. Half marks for each of wild edible fruit scientific names, common names, families and edible parts = 2 marks eack
   For 10 plants = 20 marks

10. Description of each of the four terms is 4 marks x 4 = 16 marks
    Correction order of arrangement id 4 marks

11. In situ conversations description 5 marks
    Ex situ 5 marks
    Examples of each 5 marks x 2 = 10 marks
    Total 20 marks
12. Discuss on various measures on biodiversity conservation 20 marks

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**COURSE PARTICULARS**
**Course code: BOT 311**
**Course Title: Introduction to Plant Diseases**
**No. of Units: 3**
**Status: Compulsory**

**LECTURER'S DETAILS**
**Name: Prof. Allan Femi Lana**
**Qualifications: B.Sc. (Madison, Wisconsin), M.Sc., Ph.D. (Amherst, Massachusetts)**
**Phone: 08126262172/07086864641**
**Email: allanfemilana@yahoo.co.uk**
**Area of Specialization: Virology/Integrated Pest Management/Natural Science**

**LECTURER'S DETAILS**
**Name: Dr. Bukola Bamkefa**
**Qualifications: B.Sc. M.Sc., Ph.D. (Ibadan)**
**Phone: 08126262172/07086864641**
**Email: b.bamkefa@gmail.com**
**Area of Specialization: Phythopathology/Nematology**

## COURSE DESCRIPTION

This is an introductory course aimed at preparing students to understand the impact of plant diseases on social, financial and environmental activities. Plant pathology is defined as the study of the organisms and environmental conditions that cause diseases in plants (effect on plant growth, yield and quality), and the methods of managing or controlling plant disease including concepts of Integrated Post Management (IPM). It also interfaces knowlwgde from other scientific fields such as mycology, microbiology, virology, biochemistry, etc. the course will (subject to availability of time and equipments) cover the practical aspects of plants disease identification.

### COURSE OBJECTIVE

- To discuss concepts in plant pathology, history and social economic impact of plant diseases in Agriculture, Medicine and Industries.
- To explain concepts of disease triangle and causes of diseases
- To explain terminologies in plant pathology including pathogen, parasites, pathogenesis, pathogenicity, KOCH, postulates (and recent amendments), biotic and abiotic agents of diseases, types of variations in symptoms
- Classification of agents of diseases – fungi, bacteria, nematodes, virusu, mycoplasma, prions, weeds, edaphic/ environmental agents
- Brief discuss on infection process – attack and defensive mechanicms and host –parasite interaction
- Methods of plant disease control – using Nigeria examples – cultural, chemical, biological and Integrated Pest Management

### ASSESSMENT

- Class Attendance and participation – 10 marks
- Tests and Assignments – 30 marks
- Final Examination. – 60 marks

**LECTURE PLAN**

Week 1 & 2 – History of plant pathology; socio-economic impact of plant diseases

Week 3 & 4 - Concepts in Plant Pathology: disease agents, pathogenesis , pathogenicity, biotic and abiotic of disease,

Week 6 & 7 – Types of infectious and symtomatology

Week 8 & 10 – Agents of plant disease – fungi, bacteria, nematodes

Week 11 & 12 – Bacteria, viruses, virioids, mycophasna, insects, weeds, environmental factors

Week 13 & 14: Plant Disease Control

i. Cultural Control
ii. Chemical control
iii. Biological control
iv. Integrated Pest Management

Week 15 Revision: Tutorials

# TUTORIALS

## Section A

1. Explain the following terminologies
   i. Plant pathology
   ii. Epidemiology
   iii. Pathogenesis
   iv. Pathogencity
   v. Abiotic Disease Agent
2. Why has it been difficult to control plant virus diseases in general with chemicals?
3. How do pathogens attogens attack plants? How do plants defend themselves?
4. What is Intergrated Pest Management and its relevance to agriculture, industry and environment?
5. Name 2 plant diseases of your choice. For each indicate the following
   i. Name of crop and diseases – 5
   ii. Casual Agent
   iii. Symptoms
   iv. Control method
6. What is the diffence between pairs of terminologies:
   i. Cultural and biological control
   ii. Bacteria and virus
   iii. Disease triangle and disease cycle
7. What factors are responsible for epidemiology of plant disease.

## Section B

8. Write short notes on the following
   i. Bacteria scabs
   ii. Bacteria soft rot
   iii. Bacteria vascular wilt
   iv. Blight & soft
9. Describe how you will carry out the following procedure/test
   i. Hypersensitive test
   ii. Pathogenicity test
10. Discuss how yams get infected with dry rot disease and infected and root-knots. Also state the characteristic symptoms of these diseases.
11. Discuss extensively at least four methods by which you can control nematodes on your farm or plant
12. How does bacteria infection gets disseminated in plants
    b. Discuss how you will control bacteria diseases on your plant.