

# COURSE COMPACT

**College:** CSE

**Department:** Biological Sciences

**Programme:** Microbiology

**Course Code:** MCB 413

**Units:** 3

**Course Title:** Food Microbiology

**Course Lecturers:** Ndako, J.A and Mrs. T.A. Adelani-Akande

**Semester:** Alpha

**Time of Lecture:** Mondays 12 noon- 2pm, Fridays 12 noon- 2pm.

**Location:** Biology Lab

## **Brief Overview**

### **A. Course Objective/ Goals**

Students should be able to:

- a. Understand the history and development of food microbiology.
- b. Mentions various groups of organisms associated with food and give examples.
- c. Explain how intrinsic and extrinsic factors can affect the quality of food.
- d. Define fermentation, state the various types and their end products.
- e. Elaborate of non-dairy and dairy fermented foods giving appropriate examples.
- f. Discuss on food contamination and spoilage.
- g. State practical methods of preserving food from microbial spoilage.
- h. Food borne illness.
- i. Food infections
- j. Food poisoning and intoxication.
- k. Preventive measures for food infection.
- l. General revisions

### **B. Method of Lecture Delivery / Teaching**

Lectures

Practical sessions

### C. Course Outline

Module	Title	Aim and Objectives
1	Introduction and history of food microbiology	Students will be introduced to: <ol style="list-style-type: none"> <li>The scope of food microbiology.</li> <li>The beginnings of food microbiology and developments made till date.</li> <li>Contributions of various scientists to the study of food microbiology.</li> </ol>
2	Microorganisms associated with food	To expose students to: <ol style="list-style-type: none"> <li>Organisms associated with foods.</li> <li>The role of these organisms in food.</li> </ol>
4	Foods produced by microorganisms	To enlighten on <ol style="list-style-type: none"> <li>The involvement of microorganisms in the production of food.</li> <li>Lactic Acid Bacteria (LAB) and their role in non-dairy fermentation.</li> <li>Nigerian fermented food and the microorganisms involved in their production.</li> <li>Fermented foods produced in other countries.</li> </ol>
5	Factors affecting microbial growth in food	To examine in details <ol style="list-style-type: none"> <li>Intrinsic factors that affect microbial growth.</li> <li>Extrinsic factors that affect microbial growth.</li> </ol>
6	Contamination, spoilage and preservation of food	To broaden the understanding of students on : <ol style="list-style-type: none"> <li>The roles played by microorganisms in the spoilage of food products.</li> <li>Factors that can lead to the -----</li> </ol>
7	Food borne illness	To further elucidate the factors behind infections and intoxications resulting in disease condition
8	Food poisoning	This would expand the student's know-how on the various cause of food poisoning and the preventive measures.
9	Viral, Bacteria and Parasitic agents of food borne illness	This would assist the students to understand the basic organisms responsible for food borne infections responsible for diseased condition.
10	Measures at preventing food borne illness	Diverse measures at total prevention of food borne illnesses and the causative agents.
11	General revision	A general review of the course will take place at this point.

**Note:** Each module will last for a week except for modules 4 and 6 that will last for two weeks each.

**D. Tutorials :** This will be given as required by the class.

**E. Structure of Programme/ Method of Grading**

Fourteen (14) weeks of lecture

Continuous assessment: 30%

Alpha semester exams: 70%

**F. Ground Rules and Regulation**

1. University requirements for attendance would be strictly followed.
2. Students should comport themselves as royalties during lectures.
3. Lateness to lectures will not be tolerated.

**G. Topic for Term Paper/ Assignment**

This will be given were necessary.

**H. Alignment with Goals and Vision of Landmark University**

This course will awaken innovative thinking in the students leading to the development of new technologies that will improve food quality in Nigeria thus making them ground breakers and giants in the food industry.

**I. Contemporary Issues / Industry Relevance**

Food is a basic need of all humans hence the study of food microbiology will equip students with relevant skills to address food contamination, food spoilage as well as food processing using microorganisms. Students will on graduation be able to make use of knowledge acquired to serve in local, national and international companies involved in food processing, storage and control.

**J. Recommended Reading**

1. Modern Food Microbiology. James M. Jay, Aspen Publishers, Maryland.
2. Some Nigerian Fermented Foods: Production, Technology, Uses and Storage (2012).  
Aderiye J. B. I and Adebayo C.O