

Course Outline

Department of Biological Sciences

Course Title:	Microbial Ecology (MCB 311)
Curriculum:	Microbiology
Credit Hours:	3 Contact Hours
Date of Revision:	Jan 24 2010
Instructors:	Dr. Janet Olaitan and Dr. Sunday Akinde
Prerequisite(s):	None

Required Books

Microbial Ecology, fundamentals and applications, by R.M. Atlas and R. Bartha.

GENERAL GUIDELINES

Class attendance is compulsory.

Taking notes will help you focus on the key concepts and essentials.

Late coming will not be tolerated.

COURSE OBJECTIVES:

This course will introduce student to some of the principles that have developed over the past 30 years in microbial Ecology. The course is designed to introduce student to some principles and methods that are used by microbial ecologists in the field.

Student is expected to understand microbiological and ecological phenomena and concepts, and be able to express such topics in a larger biological frame of reference. This will include, but not be limited to, extrapolating microbiological events to macro biological consequences.

Week 1:

Overview & Scope: Microbes and ecological theory.

Week 2:

Physiological, morphological and genetic adaptations of microorganisms to their environment.

Week 3:

Physiological, morphological and genetic adaptations of microorganisms to their environment.

Week 4:

Microbial interactions

Week 5:

Interaction and Continuous Assessment:

Week 6:

Microorganisms in natural ecosystems.

Week 7:

The life of microorganisms in air.

Week 8:

The life of microorganisms in springs, rivers, lakes and seas.

Week 9:

Interaction and 2nd continuous Assessment:

Week 10:

Cycling of elements in water and sediments.

Week 11:

Microbial bioconversions in nature

Week 12:

Biofueling.

Week 13:

Revision week