

## COURSE DETAIL

### TROPICAL CROP ECOLOGY

**Country**

Barbados

**Host Institution**

University of the West Indies

**Program(s)**

University of the West Indies

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Biological Sciences Agricultural Sciences

**UCEAP Course Number**

163

**UCEAP Course Suffix****UCEAP Official Title**

TROPICAL CROP ECOLOGY

**UCEAP Transcript Title**

TROPIC CROP ECOLOGY

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course examines the study of the interactions between crop plants and their abiotic and biotic environments within the tropical agroecosystem. In this course, the focus is on the environmental relations of individual crop species (autecology). Characteristics of the crop production system will be studied along with human and environmental influences on the provision of ecosystem services, resource use efficiency, crop yield, and sustainability. Crop evolution, breeding and distribution will be explored using selected crop examples and taking into account propagation issues, environmental influences and crop production goals. Physical factors of particular interest include solar irradiance, temperature, water supply, atmospheric conditions, and soil characteristics (including mineral nutrient supply). The balance of carbon, energy, water, and mineral nutrients in crop ecosystems is also relevant for the analysis of input use efficiency. Biotic factors of interest include cropping system features, plant density, weeds, pests, diseases, and beneficial organisms. Biotic and abiotic stress factors will be identified along with the nature of plant stress injuries and adaptations/manipulations that favor growth and production in suboptimal environments. Integrated approaches for the management of abiotic and biotic constraints to crop production will be considered.

### Language(s) of Instruction

English

### Host Institution Course Number

ECOL3463

### Host Institution Course Title

TROPICAL CROP ECOLOGY

### Host Institution Course Details

### Host Institution Campus

### Host Institution Faculty

<b>Host Institution Degree</b>
<b>Host Institution Department</b> Biological and Chemical Sciences
<b>Course Last Reviewed</b> 2022-2023

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