

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 Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Biological and Chemical Sciences

[Print](#)