COURSE DETAIL

PLANT AND PLANET
Country United Kingdom - England
Host Institution University of Bristol
Program(s) University of Bristol
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences
UCEAP Course Number 123
UCEAP Course Suffix
UCEAP Official Title PLANT AND PLANET
UCEAP Transcript Title PLANT & PLANET
UCEAP Quarter Units 8.00
UCEAP Semester Units 5.30

Course Description

This course illustrates the exciting array of developmental adaptations displayed by plants, how plants interact with beneficial and pathogenic organisms, and the importance of plants to life on earth. Teaching progresses through cellular, whole plant, and ecosystem scales. The course starts at the genetic level by explaining the molecular signalling processes through which plants acquire their basic needs of light, CO2, water, and nutrients, highlighting threats to these resources from global change. This section concludes with discussion of the root rhizosphere, thereby introducing the beneficial interactions between plants and microorganisms. The second section explores harmful interactions between plants and microorganisms. Students are introduced to the different types of crop disease and associated pathogen biology. The molecular mechanisms through which plants detect and resist pathogens are explored, before cultural, chemical, and GM approaches to disease mitigation. The final section of the course considers the importance of plants within ecosystems. This starts with plant interactions with animals, exploring plant-herbivore interactions, plant-pollinator interactions, and seed dispersal strategies. Students explore the impacts of crop production on biodiversity and the importance of and challenges faced by specific ecosystems such as forests. The course concludes with topical examples of how plant science research is addressing global challenges and future research directions.

Language(s) of Instruction
English

Host Institution Course Number
BIOL20021

Host Institution Course Title
PLANT AND PLANET

Host Institution Course Details
https://www.bris.ac.uk/unit-programme-catalogue/UnitDetails.jsa?ayrCode=21%2F22...

Host Institution Campus Bristol
Host Institution Faculty
Host Institution Degree bachelors
Host Institution Department Biological Sciences
Course Last Reviewed 2021-2022

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