



University of Pretoria Yearbook 2019

Plant ecophysiology 356 (BOT 356)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	18.00
Programmes	BSc Biochemistry BSc Biotechnology BSc Ecology BSc Genetics BSc Microbiology BSc Plant Science BSc Zoology BScAgric Applied Plant and Soil Sciences BScAgric Plant Pathology
Service modules	Faculty of Education
Prerequisites	BOT 161 or permission from head of department
Contact time	2 lectures per week, 1 practical per week
Language of tuition	Separate classes for Afrikaans and English
Department	Department of Plant and Soil Sciences
Period of presentation	Semester 1

Module content

The emphasis is on the efficiency of the mechanisms whereby C3-, C4 and CAM-plants bind CO₂ and how it impacted upon by environmental factors. The mechanisms and factors which determine the respiratory conversion of carbon skeletons and how production is affected thereby will be discussed. Insight into the ecological distribution and manipulation of plants for increased production is gained by discussing the internal mechanisms whereby carbon allocation, hormone production, growth, flowering and fruitset are influenced by external factors. To understand the functioning of plants in diverse environments, the relevant structural properties of plants, and the impact of soil composition, water flow in the soil-plant air continuum and long distance transport of assimilates will be discussed. Various important techniques will be used in the practicals to investigate aspects such as water-use efficiency, photosynthesis and respiration of plants.

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