



University of Pretoria Yearbook 2022

Plant ecophysiology 356 (BOT 356)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	18.00
NQF Level	07
Programmes	BSc (Biochemistry) BSc (Biotechnology) BSc (Chemistry) BSc (Ecology) BSc (Entomology) BSc (Genetics) BSc (Geography and Environmental Science) BSc (Human Physiology) BSc (Microbiology) BSc (Plant Science) BSc (Zoology) BScAgric (Applied Plant and Soil Sciences) BScAgric (Plant Pathology)
Service modules	Faculty of Education
Prerequisites	BOT 161
Contact time	1 practical per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Department of Plant and Soil Sciences
Period of presentation	Semester 1



Module content

Introduction to plant ecophysiology and plants response to environmental stress. Understanding how various biotic and abiotic factors affect plant metabolic processes, including photosynthesis and respiration. Emphasis is placed on the efficiency of the mechanisms whereby C3-, C4 and CAM-plants bind CO₂ and how they are impacted by the environment. To understand the functioning of plants in diverse environments, the relevant structural properties of plants, the impact of soil composition, water flow in the soil-plant air continuum and long distance transport of assimilates will be discussed. Students will research a topic relevant to plant ecophysiology and present this in the form of an oral presentation. Students will conduct a practical project to study the effects of environmental factors on C3 and C4 plant growth and physiology. Students will present the report in a written format according to the guidelines of a relevant scientific journal. Relevant readings will be used to highlight the alignment of the module with the Sustainable Development Goals, with emphasis placed on climate action.

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