

University of Pretoria Yearbook 2016

Plant ecophysiology 356 (BOT 356)

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| Qualification | Undergraduate |
| Faculty | Faculty of Natural and Agricultural Sciences |
| Module credits | 18.00 |
| Programmes | BSc Biochemistry |
| | BSc Biotechnology |
| | BSc Chemistry |
| | BSc Ecology |
| | BSc Environmental Sciences |
| | BSc Genetics |
| | BSc Geography |
| | BSc Geoinformatics |
| | BSc Human Physiology |
| | BSc Meteorology |
| | BSc Microbiology |
| | BSc Plant Science |
| | BScAgric Option: Applied Plant and Soil Sciences |
| | BScAgric Plant Pathology |
| Service modules | Faculty of Education |
| Prerequisites | BOT 161 or TDH |
| Contact time | 1 practical per week, 2 lectures per week |
| Language of tuition | Both Afr and Eng |
| Academic organisation | 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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