



University of Pretoria Yearbook 2019

Evolutionary physiology 354 (ZEN 354)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	18.00
Programmes	BSc Biochemistry BSc Entomology BSc Genetics BSc Zoology
Service modules	Faculty of Education
Prerequisites	No prerequisites.
Contact time	4 lectures per week, 2 practicals per week
Language of tuition	Module is presented in English
Department	Zoology and Entomology
Period of presentation	Quarter 2

Module content

This module focuses on the integration of physiological systems in the context of animal form and function, and the ways in which evolution shapes the physiological processes that determine the energy, water and nutrient fluxes between animals and their environments. Topics covered include: (i) circulation, gas exchange and excretion; (ii) nutritional ecology; (iii) osmoregulation and thermoregulation; and (iv) reproductive physiology. The major focus of this module is to understand the major sources of physiological diversity, namely scaling, phylogenetic inertia, adaptation and phenotypic plasticity, and applying this knowledge to conceptually link physiological processes at the cellular level to macrophysiological patterns at a global scale.

The information published here is subject to change and may be amended after the publication of this information. The [General Regulations \(G Regulations\)](#) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the [General Rules](#) section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.