

# University of Pretoria Yearbook 2017

## Contemporary research techniques 784 (ZEN 784)

**Qualification** Postgraduate

**Faculty** [Faculty of Natural and Agricultural Sciences](#)

**Module credits** 13.00

**Programmes** [BScHons Entomology](#)

[BScHons Zoology](#)

**Prerequisites** No prerequisites.

**Contact time** 4 discussion classes per week

**Language of tuition** Module is presented in English

**Academic organisation** Zoology and Entomology

**Period of presentation** Semester 2

### Module content

Stable isotope ecology – applications of stable isotope-based techniques in zoological research, including (i) tracking animal movements, (ii) dietary reconstruction, (iii) delineation of trophic levels, (iv) tracing nutrient allocation to reproduction, (v) forensic applications, and (vi) doubly-labelled water and water tracer applications. Stress hormones – the spectrum of stress molecules, how they are regulated, what their impacts are, and how they are measured to reflect acute and chronic stress. Photogrammetry – (i) appropriate equipment for photogrammetry, (ii) photographic techniques for photogrammetric use, (iii) photogrammetry software, (iv) building three-dimensional models, (v) measuring models. Applications of molecular biology to conservation genetics, infectious disease epidemiology and ecology, forensics (host and pathogen-based) and diagnostics.

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