

# University of Pretoria Yearbook 2016

## Advanced population genetics 353 (GTS 353)

**Qualification** Undergraduate

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

**Module credits** 18.00

**Service modules** Faculty of Engineering, Built Environment and Information Technology

**Prerequisites** GTS 251 GS and GTS 261 GS

**Contact time** 1 practical per week, 2 lectures per week

**Language of tuition** English

**Academic organisation** Genetics

**Period of presentation** Semester 1

### Module content

Genetic variation and mating systems. Allele frequency change: genetic drift, natural and kin selection, mutation and migration. Molecular evolution: nucleotide substitutions to multigene families, and the neutral theory. Quantitative genetics: analysis of genetic variation, heritability, natural selection and artificial selection of quantitative traits. Identification of quantitative trait loci (QTLs).

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