



University of Pretoria Yearbook 2019

Genome evolution and phylogenetics 354 (GTS 354)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	18.00
Programmes	BSc Information and Knowledge Systems BSc Biochemistry BSc Biotechnology BSc Genetics BSc Human Genetics BSc Human Physiology BSc Human Physiology, Genetics and Psychology BSc Medical Sciences BSc Microbiology BSc Plant Science BSc Zoology
Service modules	Faculty of Engineering, Built Environment and Information Technology
Prerequisites	GTS 251 GS and GTS 261 GS
Contact time	1 practical/tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Biochemistry, Genetics and Microbiology
Period of presentation	Semester 1

Module content

Mechanisms involved in the evolution of genes, genomes and phenotypes. Comparison of the molecular organisation of viral, archaea, bacterial and eukaryotic genomes. Genome project design, DNA sequencing methods and annotation. Molecular evolution. Phylogenetic inference. Applications of phylogenetics and evolutionary genomics research, including relevance to sustainable development goals for food security, good health and the biosphere.



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