



University of Pretoria Yearbook 2021

Bioinformatics theory and applications 701 (BIF 701)

| | |
|-------------------------------|--|
| Qualification | Postgraduate |
| Faculty | Faculty of Natural and Agricultural Sciences |
| Module credits | 30.00 |
| NQF Level | 08 |
| Programmes | BScHons Bioinformatics |
| Prerequisites | No prerequisites. |
| Contact time | 2 lectures per week, 2 practicals per week |
| Language of tuition | Module is presented in English |
| Department | Biochemistry, Genetics and Microbiology |
| Period of presentation | Year |

Module content

General concepts in bioinformatics; sequence motifs and features; sequence databases; common bioinformatics tools; programming in Python; the bioinformatics toolkit for Python; pairwise and multiple sequence alignments; genome analysis; data visualisation; specialised statistics for bioinformatics; specialised algorithms for bioinformatics; nucleic acid modelling; transcription analysis; microarray data analysis; genome annotation; phylogenetics; mapping and markers; structural modelling.

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.