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# University of Pretoria Yearbook 2021

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## Bioinformatics theory and applications 701 (BIF 701)

<b>Qualification</b>	Postgraduate
<b>Faculty</b>	<a href="#">Faculty of Natural and Agricultural Sciences</a>
<b>Module credits</b>	30.00
<b>NQF Level</b>	08
<b>Programmes</b>	<a href="#">BScHons Bioinformatics</a>
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	2 lectures per week, 2 practicals per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Biochemistry, Genetics and Microbiology
<b>Period of presentation</b>	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.

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