

BScHons in Bioinformatics and Computational Biology

Programme Code

14166 – 778 (120)

Specific Admission Requirements

- An applicable BSc degree in either Bioinformatics, Genetics, Biochemistry, Molecular Biology, Computer Science or Mathematics or any other, related BSc degree approved by the Postgraduate Committee of the Centre for Bioinformatics and Computational Biology.
- An average final mark of at least 60% for the applicable third-year modules.
- Proficiency in both written and spoken English.
- The Postgraduate Committee may prescribe supplementary studies depending on your previous training and experience.

Closing Date for Applications

Apply online at <http://www0.sun.ac.za/pgstudies/> by 31 October of the previous year and submit all supporting documents where applicable. Late applications can be submitted until 30 November. In exceptional cases, if there are any spaces available, applications will be considered until the beginning of the academic year.

If you are not an SU student, please note that your application may take longer to process due to the verification of qualifications. Therefore apply early.

Programme Structure

The honours programme in Bioinformatics and Computational Biology is compiled annually and consists of a compulsory research project (721(50)) supervised by a member or associate member of the Centre for Bioinformatics and Computational Biology; a seminar (715(5)); a facilitated group discussion of relevant classic and current publications in bioinformatics (713(5)); and lectures and practical sessions on Algorithms in Bioinformatics (716(5)), Machine Learning in Bioinformatics (717(5)) and a range of topics in Advanced Bioinformatics (714(40)) currently relevant to the field, including statistics, databases, genomics and functional genomics, sequence analysis of RNA/DNA and proteins, genomes and disease, evolution and phylogenetics, structural bioinformatics, networks and pathways, and microbiomes.

Depending on your training and experience, one elective module, either Scientific Computing in Bioinformatics 711(10) or Cell Biology in Bioinformatics 712(10), must be chosen. This choice has to be approved by the Postgraduate Committee of the Centre for Bioinformatics and Computational Biology.

Duration of Programme

The duration of the programme usually is one year, but under exceptional circumstances, and at the discretion of the Postgraduate Committee of the Centre for Bioinformatics and Computational Biology, it is possible to repeat a module. The programme begins one week prior to the general start of classes.

Programme Content

The following modules are used to compile the honours programme annually.

Compulsory Modules

(credits = 110)

Subject Number	Module Code	Credits	Module Name	Semester
14234	713	5	Current Topics in Bioinformatics	1
14235	714	40	Advanced Bioinformatics	1
14236	715	5	Bioinformatics Seminar	1
14237	716	5	Algorithms in Bioinformatics	1
14238	717	5	Machine Learning in Bioinformatics	1
14240	721	50	Project in Bioinformatics	2

plus

Elective Module

Choose one of the following modules.

Subject Number	Module Code	Credits	Module Name	Semester
14241	711	10	Scientific Computing in Bioinformatics	1
14242	712	10	Cell Biology in Bioinformatics	1

Assessment and Examination

The programme is assessed by means of flexible assessment. The research project is assessed by means of a research report and an oral presentation. The performance mark is calculated as a weighted mark according to the credit values of each module. To obtain this honours degree, a performance mark of at least 50% must be achieved in each module.