

BScHons in Physical and Mathematical Analysis

Programme Code

56855 – 797 (128)

Specific Admission Requirements

- A BSc degree with suitable majors from the Mathematical Sciences as approved by the Physical and Mathematical Analysis programme committee, with an average of at least 60% in the applicable third-year modules.

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 places 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.

Duration of Programme

The normal duration of the programme is one year, but under exceptional circumstances and at the discretion of the department, it is possible to repeat a module. The programme begins with the start of the academic year.

Programme Content

Depending on student numbers and the availability of modules, the Physical and Mathematical Analysis programme committee may, in consultation with the relevant departments, substitute suitable alternatives for those listed below.

Stream A: Numerical Analysis and Complex Systems (credits = 128)

Compulsory Modules (credits = 72)

Physics

Subject Number	Module Code	Credits	Module Name	Semester
63274	741	32	Physics Project	2
10702	721	16	Statistical Physics B (Introduction to Interacting and Non-equilibrium Systems)	2

Applied Mathematics

Subject Number	Module Code	Credits	Module Name	Semester
62812	773	16	Numerical Modelling	Both

Mathematics

Subject Number	Module Code	Credits	Module Name	Semester
20405	749	8	Wavelet analysis	2

plus

Elective Modules

(credits = 56)

You can take any honours modules offered in Computer Science, Mathematics, Applied Mathematics or Physics, in consultation with the programme committee and subject to specific prerequisites.

Stream B: Data Security (credits = 128)

Compulsory Modules (credits = 112)

Physics

Subject Number	Module Code	Credits	Module Name	Semester
63274	741	32	Physics Project	2

Computer Science

Subject Number	Module Code	Credits	Module Name	Semester
64947	712	16	Advanced Algorithms	1

or

Subject Number	Module Code	Credits	Module Name	Semester
64971	716	16	Advanced Topics in Computer Science 1	2

Applied Mathematics

Subject Number	Module Code	Credits	Module Name	Semester
62782	784	16	Coding Theory	Both

Mathematics

Subject Number	Module Code	Credits	Module Name	Semester
10378	711	16	Algebra	1
62871	714	16	Set Theory and Topology	1
10379	747	8	Algebraic Number Theory	2
62995	748	8	Computational Algebra	2

plus

Elective modules

(credits = 16)

You can take any honours modules offered in Computer Science, Mathematics, Applied Mathematics or Physics, in consultation with the programme committee and subject to specific prerequisites.