University of Pretoria Yearbook 2020

BScHons Mathematics and Mathematics Education Differential Equations and Modelling (02240185)

Minimum duration of study	1 year
Total credits	137
NQF level	08

Programme information

The programme consists of seven honours modules (five modules of 15 credits each from the Department of Mathematics and Applied Mathematics and two modules of 16 credits each from the Department of Science, Mathematics and Technology Education) as well as the compulsory research project (30 credits). Elective modules should be selected according to the prerequisites of these modules.
Candidates are required to familiarise themselves with the General Regulations regarding the maximum period of registration and other requirements for honours degrees.

Admission requirements

- An appropriate bachelor's degree
- At least a final grade point average of 60% at final-year level for all mathematics/applied mathematics modules
- Required that the candidate has completed at least four of the following final-year modules or the equivalent:
  - Partial differential equations
  - Dynamical systems (ordinary differential equations)
  - Real analysis
  - Complex analysis
  - Numerical analysis
  - Continuum mechanics
- Complete preceding degree will be considered for selection.

Promotion to next study year

The progress of all honours candidates is monitored biannually by the postgraduate coordinator/head of department. A candidate's study may be terminated if the progress is unsatisfactory or if the candidate is unable to finish his/her studies during the prescribed period.

Pass with distinction

The BScHons degree is awarded with distinction to a candidate who obtains a weighted average of at least 75% in all the prescribed modules and a minimum of 65% in any one module.

Curriculum: Final year

Minimum credits: 137

Select any two electives offered in the BScHons (Mathematics) or BScHons (Applied Mathematics) programmes, provided that the prerequisites are met with.

Fundamental modules

Project 795 (WTW 795) - Credits: 30.00

Core modules

Mathematics and mathematical literacy education 730 (MCE 730) - Credits: 16.00
Educational research methodology 745 (NMQ 745) - Credits: 16.00
Numerical analysis 733 (WTW 733) - Credits: 15.00
Main principles of analysis in application 735 (WTW 735) - Credits: 15.00
Mathematical optimisation 750 (WTW 750) - Credits: 15.00
Partial differential equations of mathematical physics 776 (WTW 776) - Credits: 15.00

Elective modules

Special topics 727 (WTW 727) - Credits: 15.00
Measure theory and probability 734 (WTW 734) - Credits: 15.00
Finite element method 763 (WTW 763) - Credits: 15.00
Stochastic calculus 764 (WTW 764) - Credits: 15.00
Mathematical methods and models 772 (WTW 772) - Credits: 15.00

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.