University of Pretoria Yearbook 2020

BSc Extended programme - Mathematical Sciences (02130016)

Minimum duration of study	4 years
Total credits	144
NQF level	07

Admission requirements

Candidates who do not comply with the minimum admission requirements of programmes in the Department of Mathematical Sciences, may be considered for admission to the BSc – Extended programme for the Mathematical Sciences. The BSc – Extended programme takes a year longer than the normal programmes to complete.

BSc – Extended programme -- Mathematical Sciences Minimum requirements				
Achievement level				
English Home Language or English First Additional Language		**Mathematics**		**APS**
NSC/IEB	AS Level	NSC/IEB	AS Level	
4	D	5	C	**28**

Admissions from the BSc - Extended programmes to the BSc (Actuarial and Financial Mathematics) programmes will only be considered if students have passed all their first-year modules with an average of at least 60%, passed IAS 111 and achieved a minimum percentage of 60% for WTW 143 and WTW 153.

Additional requirements

a. Students who are admitted to one of the BSc extended programmes register for one specific programme. Three extended programmes are available:

- BSc (extended programme) – Mathematical Sciences
- BSc (extended programme) – Biological and Agricultural Sciences
- BSc (extended programme) – Physical Sciences

b. These programmes are followed by students who, as a result of exceptional circumstances, will benefit from an extended programme.

c. Students who do not comply with the normal three-year BSc entrance requirements for study in the Faculty of Natural and Agricultural Sciences, may nevertheless be admitted to the Faculty by being placed on the BSc (extended programme). Generally the BSc (extended programme) means that the first study year in Mathematics, Physics, Biology and Chemistry is extended to take two years. After completing the BSc (extended programme) successfully, students join the second year of the normal BSc programme to complete

their degrees. The possibility of switching over to other faculties such as Engineering, Built Environment and Information Technology, Veterinary Science and Health Sciences, after one or two years in the extended programme, exists. This depends on selection rules and other conditions stipulated by the other faculties.

d. Students who wish to follow one of the BSc extended programmes will be subjected to an Institutional Proficiency Test and will be considered for admission by the Admissions Committee. Information in this regard is available at the Client Services Centre.
e. Applications for admission to the BSc (extended programme) should be submitted before 30 September each year. Details are obtainable from the Student Administration at the Faculty of Natural and Agricultural Sciences.
f. The rules and regulations applicable to the normal study programmes apply mutatis mutandis to the BSc (extended programme), with exceptions as indicated in the regulations pertaining to the BSc (extended programme). For instance, students placed in the BSc (extended programme) must have a National Senior Certificate with admission for degree purposes.
g. An admissions committee considers applications for the BSc (extended programme) annually. Regarding subject choices, admitted students are individually placed on the BSc (extended programme) according to their prospective field of study. Students may NOT change this placement without the permission of the Chairperson of the admissions committee.

Other programme-specific information

The Dean may, on the recommendation of the programme manager, approve deviations with regard to the composition of the study programme.

Please note: Where elective modules are not specified, these may be chosen from any modules appearing in the list of modules.

It remains the student's responsibility to acertain, prior to registration, whether they comply with the prerequisites of the modules they want to register for.

The prerequisites are listed in the alphabetical list of modules.

Promotion to next study year

Academic promotion requirements
It is expected of students who register for the first year of the BSc (extended programme) to pass all the prescribed modules of the first year.
It is expected of students accepted into the BSc (extended programme) to finish a complete corresponding BSc first year within the two years of enrolment in the BSc (extended programme). Students who do not show progress during the first semester of the first year will be referred to the Admissions Committee of the Faculty.

Curriculum: Year 1

Minimum credits: 88

Minimum credits:

Fundamental = 24

Core = 32

Elective = 32

Additional information:

Students register for either one of the following elective combinations

- First semester PHY133 and CMY133, second semester PHY143 and CMY143
- First semester FRK133 and OBS133, second semester FRK143 and OBS143.

NB Students may register for an extended module only once.

Admissions from the BSc -- Extended programmes to the BSc (Actuarial and Financial Mathematics) programmes will only be considered if students have passed all their first-year modules with an average of at least 60%, passed IAS 111 and achieved a minimum percentage of 60% for WTW 143 and WTW 153.

Fundamental modules

Academic information management 111 (AIM 111) - Credits: 4.00
Academic information management 121 (AIM 121) - Credits: 4.00
Language, life and study skills 133 (LST 133) - Credits: 8.00
Language, life and study skills 143 (LST 143) - Credits: 8.00
Academic orientation 120 (UPO 120) - Credits: 0.00

Core modules

Mathematical statistics 133 (WST 133) - Credits: 8.00
Mathematical statistics 143 (WST 143) - Credits: 8.00
Precalculus 133 (WTW 133) - Credits: 8.00
Calculus 143 (WTW 143) - Credits: 8.00

Elective modules

Chemistry 133 (CMY 133) - Credits: 8.00
Chemistry 143 (CMY 143) - Credits: 8.00
Financial accounting 133 (FRK 133) - Credits: 8.00
Financial accounting 143 (FRK 143) - Credits: 8.00
Business management 133 (OBS 133) - Credits: 8.00
Business management 143 (OBS 143) - Credits: 8.00
Physics 133 (PHY 133) - Credits: 8.00
Physics 143 (PHY 143) - Credits: 8.00

Curriculum: Year 2

Minimum credits: 28

Minimum credits:

Core = 16

Elective = According to BSc programme of choice

Additional information:

Possible third semester electives: CMY 154, PHY 153

Students must register for the applicable third-semester modules(second year, first semester) and the second-semester, modules must be selected from the normal BSc programme of the student's choice.

Equivalent modules:

Chemistry extended modules: CMY 133, CMY 143 and CMY 154: Equivalent to BSc module CMY 117

Physics extended modules: PHY 133, PHY 143 and PHY 153: Equivalent to BSc module PHY 114

Mathematics extended modules: WTW 133, WTW 143 and WTW 153: Equivalent to BSc module WTW 114

Mathematical Statistics extended modules: WST 133, WST 143 and WST 153: Equivalent to BSc module WST 111

Core modules

Mathematical statistics 153 (WST 153) - Credits: 8.00
Calculus 153 (WTW 153) - Credits: 8.00

Elective modules

Chemistry 154 (CMY 154) - Credits: 8.00
Program design: Introduction 110 (COS 110) - Credits: 16.00
Economics 110 (EKN 110) - Credits: 10.00
Economics 113 (EKN 113) - Credits: 15.00
Economics 120 (EKN 120) - Credits: 10.00
Economics 123 (EKN 123) - Credits: 15.00
Financial management 112 (FBS 112) - Credits: 10.00
Financial management 122 (FBS 122) - Credits: 10.00
Financial accounting 111 (FRK 111) - Credits: 10.00
Physics 153 (PHY 153) - Credits: 8.00
Mathematical statistics 121 (WST 121) - Credits: 16.00
Discrete structures 115 (WTW 115) - Credits: 8.00
Numerical analysis 123 (WTW 123) - Credits: 8.00
Mathematics 124 (WTW 124) - Credits: 16.00
Mathematical modelling 152 (WTW 152) - Credits: 8.00
Dynamical processes 162 (WTW 162) - Credits: 8.00

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.