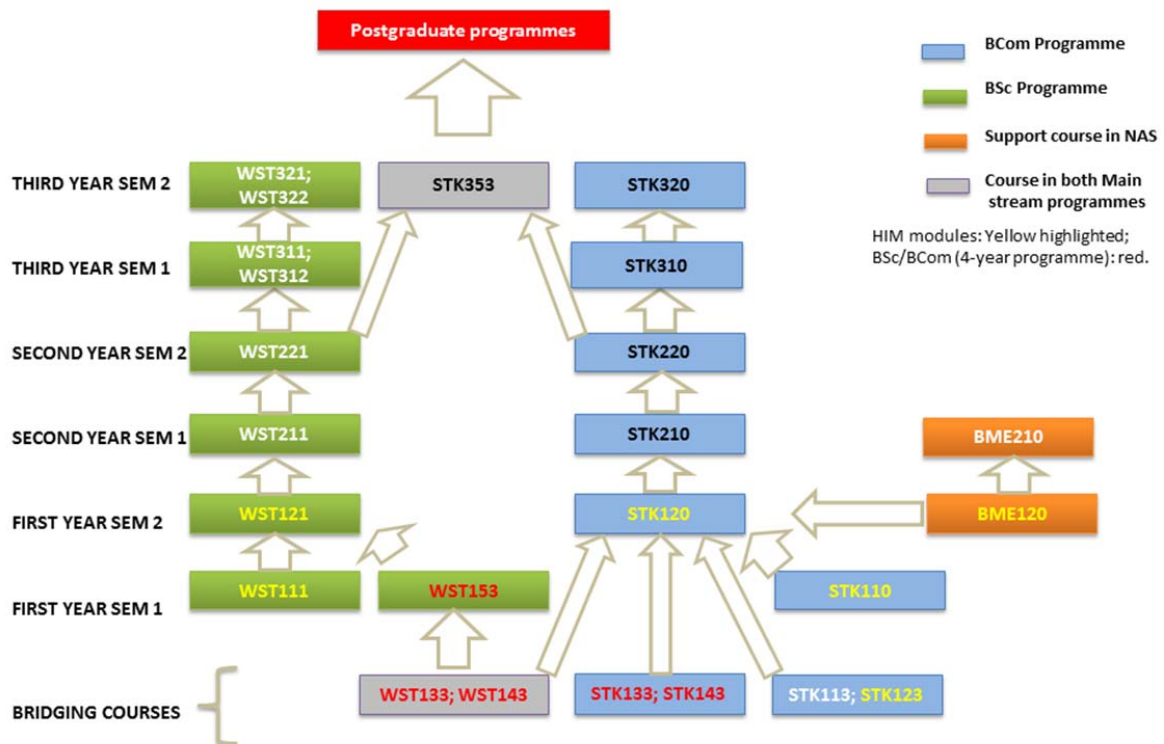


Academic offering: Undergraduate

The figure below presents the modules offered by the department. High-impact modules (HIM) are indicated with yellow letters. Fundamental modules of the BSc/BCom (four-year programme) are presented in red.



Programme activities

- Mainstream Mathematical Statistics:** Mathematical Statistics is presented in the following programmes:
 - BSc (Mathematical Statistics)**
 - BSc (Actuarial and Financial Mathematics)
 - BCom (Econometrics)
 - BSc (four-year programme)
 - BCom (four-year programme)
- Mainstream Statistics:** Statistics is a major subject in the following programmes:
 - BCom (Statistics)**
 - BCom (Economics)
 - BCom (four-year programme).

3. **Four-year programme, BCom and BSc:** Students are admitted to the programme if their Grade 12 Mathematics mark is between level 3 (40-49%) and level 5 (60-69%) respectively? The BSc four-year programme has three different streams, one of which is the Mathematical Sciences Stream where the bridging modules WST133, WST143 and WST153 are compulsory. These students join the mainstream programmes in the second semester after completing the bridging module curriculum. Students taking the modules STK113 and STK123 have Grade 12 Mathematics marks between level 3 (40-49%) and level 5 (60-69%), or at least level 4 (50-59%) for Mathematics Literacy.
4. **Supporting statistics modules for programmes in other disciplines.** The department presents the modules BME120, BME210, BME780, MBS800, STK113, STK123 as essential components of programmes in the Biological Sciences, Health Sciences, Health Care Sciences, and Mathematics and Science Education.
5. Modules are presented on the Hatfield campus and some modules on the Mamelodi and Groenkloof campuses.

Core programmes

An overview of the core compositions of the programmes centred in the department is shown below, focusing mainly on the Statistics and Mathematical Statistical modules in these programmes. For complete information see yearbook.

STUDY PROGRAMME: BSC (MATHEMATICAL STATISTICS)

(Code 02133273) 3 Years Full-time study, NQF Level 7

Admission requirements for this study programme: Matric: Minimum NSC Mathematics level 6 (70-79%) and a minimum APS of 32.

First year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
LST110	Language and study skills 110	6
WST111	Mathematical statistics 111	16
WTW114	Calculus 114 Academic orientation	16
UPO102	Academic orientation 102	
Total credits for compulsory modules		38
First year, second semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
AIM101	Academic information management 101	6
WST121	Mathematical statistics 121	16
WTW124	Mathematics 124	16
UPO102	Academic orientation 102	
Total credits for compulsory modules		38
1 st year: Compulsory credits = (76) Elective credits = (64) Total credits = (140)		

Second year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
WST211	Mathematical statistics 211	24
WTW211	Linear algebra 211	12
WTW218	Calculus 218	12
Total credits for compulsory modules		48
Second year, second semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
WST221	Mathematical statistics 221	24
WTW220	Analysis 220	12
WTW221	Linear algebra 221	12
Total credits for compulsory modules		48
2 nd year: Compulsory credits = (96) Elective credits = (48) Total credits = (144)		
Third year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
WST311	Multivariate analysis 311	18
WST312	Stochastic processes 312	18
Total credits for compulsory modules		36
Third year, second semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
STK353	The science of data analytics 353	25
WST321	Time series analysis 321	18
WST322	Actuarial statistics 322	18
Total credits for compulsory modules		61
3 rd year: Compulsory credits = (97) Elective credits = (47) Total credits = (144)		
A minimum of (428) credits is required to obtain the degree.		

STUDY PROGRAMME: BCom (STATISTICS or MATHEMATICAL STATISTICS)

(Code 07130261) 3 Years Full time study, NQF Level 7

Admission requirements for this study programme: Matric: Minimum NSC Mathematics level 5 (60-69%) and a minimum APS of 32.

First year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
AIM101	Academic information management 101	6
STK110 or WST111	Statistics 110 or Mathematical Statistics 111	13 or 16
EKN110	Economics 110	10
FRK111	Financial Accounting 111	10
OBS114	Business Management 114	10
KOB182	Communication Management 182	5
UPO107	Academic orientation 107	
Total credits for compulsory modules		54 or 57

First year, second semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
ALL124	Academic literacy for EMS 124	6
STK120 or WST121	Statistics 120 or Mathematical Statistics 121	13 or 16
EKN120	Economics 120	10
FRK121 or 122	Financial Accounting 121 or 122	12
OBS124	Business Management 124	10
UPO107	Academic orientation 107	
Total credits for compulsory modules		51 or 54
1 st year: Compulsory credits = (105 or 111) Elective credits = (25 or 20) Total credits = (130 or 131)		
Second year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
STK210 or WST211	Statistics 210 or Mathematical Statistics 211	20 or 24
Total credits for compulsory modules		20 or 24
Second year, second semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
STK220 or WST221	Statistics 220 or Mathematical Statistics 221	20 or 24
Total credits for compulsory modules		20 or 24
2 nd year: Compulsory credits = (40 or 48) Elective credits = (96 or 88) Total credits = (136)		
Third year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
STK310	Statistics 310	25
or	or	or
WST311 and WST312	Multivariate analysis 311 and Stochastic processes 312	18 and 18
Total credits for compulsory modules		25 or 36
Third year, second semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
STK320	Statistics 320	25
or	or	or
WST321 and WST322	Time series 321 and Actuarial Statistics 322	18 and 18
STK353	The science of data analytics 353	25
Total credits for compulsory modules		50 or 61
3 rd year: Compulsory credits = (75 or 97) Elective credits = (55 or 35) Total credits = (130 or 132)		
A minimum of (396 or 399) credits is required to obtain the degree		

STUDY PROGRAMME: BSC FOUR-YEAR PROGRAMME (MATHEMATICAL SCIENCES)

(Code 02130007) 4 Years Full time study, NQF Level 7

Admission requirements for this study programme: Matric: Minimum NSC Mathematics level 5 (60-69%) and a minimum APS of 26.

The first year is presented on the Mamelodi campus. After the first three semesters, the programme is synchronised with the mainstream programmes.

First year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
AIM 111	Academic information management 111	4
LST133	Language, life and study skills 133	8
WST133	Mathematical statistics 133	8
WTW133	Precalculus 133	8
UPO120	Academic orientation 120	1
Total credits for compulsory modules		28
Compulsory credits = (28) Elective credits = (16) Total credits = (44)		
First year, second semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
AIM121	Academic information management 121	4
LST143	Language, life and study skills 143	8
WST143	Mathematical statistics 143	8
WTW143	Calculus 143	8
UPO120	Academic orientation 120	
Total credits for compulsory modules		28
Compulsory credits = (28) Elective credits = (16) Total credits = (44)		
1 st year: Compulsory credits = (56) Elective credits = (32) Total credits = (88)		
Second year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
WST153	Mathematical statistics 153	8
WTW153	Calculus 153	8
Total credits for compulsory modules		16
Compulsory credits = (16) Elective credits = (12) Total credits = (28)		
The rest of the third-semester modules (second year, first semester) and the second-semester prescribed modules must be selected from the normal BSc programme of the student's choice.		

STUDY PROGRAMME: BCOM FOUR-YEAR PROGRAMME

(Code 07139922) 4 Years Full-time study, NQF Level 7

Admission requirements for this study programme: Matric: Minimum NSC Mathematics level 3 (40-49%) and a minimum APS of 26.

Students who want to do a non-numerical BCom degree only do a first-semester course in WTW 133(precalculus), and will not be required to do WTW143 in the second semester. Students who want to continue with a numerical BCom degree programme (e.g. Economics, Econometrics, Accounting Science, Informatics, Financial Sciences and Investment Management) need to have obtained a level 4 or higher in Grade 12 Mathematics and will need to register for WTW 133 and WTW143.

Students who want to do a non-numerical BCom degree programme register for STK133 and STK143.

Students who want to transfer to a numerical; BCom degree must obtain 70% or more for STK133 and STK143 in order to be considered. See more detail information in the yearbook.

Only students who have obtained a level 4 in Grade 12 Mathematics can register for WST133 and WSt143 and mostly follow a numerical BCom degree programme.

First year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
AIM111	Academic information management 111	4
LST133	Language, life and study skills 133	8
WTW133	Precalculus 133	8
FRK133	Financial Accounting 133	8
STK133 or WST133	Statistics 133 or Mathematical Statistics 133	8 or 8
OBS133	Business Management 133	8
UPO120	Academic orientation 120	1
Total credits for compulsory modules		44
Compulsory credits = (44) Elective credits = (0) Total credits = (44)		
First year, second semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
AIM121	Academic information management 121	4
LST143	Language, life and study skills 143	8
WTW143	Precalculus 143	8
FRK143	Financial Accounting 143	8
STK143 or WST143 [#]	Statistics 143 or Mathematical Statistics 143 [#]	8 [#] or 16
OBS143	Business Management	8
UPO120	Academic orientation 120	
Total credits for compulsory modules		44
Compulsory credits = (44) Elective credits = (0) Total credits = (44)		
1 st year: Compulsory credits = (88) Elective credits = (0) Total credits = (88)		
[#] Students who want to do a non-numerical BCom degree only do a first-semester module in WTW133 (Precalculus), and will not be required to do WTW143 in the second semester but replace the credit shortfall of 8 with the additional 8 credits from STK143 (16). Students who want to continue with a numerical BCom degree programme (e.g. Economics, Econometrics, Accounting Science, Informatics, Financial Sciences and Investment Management) have to register for WTW133 and WTW143 along with the WST133 and WST143.		
Second year, first semester:		
<i>Code</i>	<i>Name</i>	<i>Credits</i>
STK120 (non-numerical)	Statistics 120 (anti-semester)	13
or	or	or
WST153 (numerical)	Mathematical Statistics 153	8
The rest of the third-semester modules (second year, first semester) and the second-semester prescribed modules must be selected from the normal BSc programme of the student's choice.		