



# University of Pretoria

## Undergraduate programme information

### 2017

## University of Pretoria campuses and contact information

### Department of Enrolment and Student Administration

Tel +27 (0)12 420 3111  
Email [csc@up.ac.za](mailto:csc@up.ac.za)  
Website [www.up.ac.za](http://www.up.ac.za)

### Location

University of Pretoria, cnr Lynnwood Road and Roper Street, Hatfield, South Africa

### Postal address

University of Pretoria, Private Bag X20, Hatfield 0028, South Africa

### GPS coordinates to our campuses

Hatfield	S25°45' 21" E28°13' 51"
GIBS	S26°07' 46.2" E28°02' 46.788" (56 km from Hatfield Campus)
Groenkloof	S25°46' 10" E28°12' 34" (3.5 km from Hatfield Campus)
UP Sports Campus	S25°45' 10" E28°14' 46" (1.2 km from Hatfield Campus)
Mamelodi	S25°43' 22" E28°23' 56" (12 km from Hatfield Campus)
Onderstepoort	S28°10' 54" E25°38' 52" (22 km from Hatfield Campus)
Prinshof	S25°43' 57" E28°12' 10" (6 km from Hatfield Campus)

## Admission requirements

The statutory minimum requirements for degree studies is a National Senior Certificate (NSC)/ Independent Examination Board – IEB, with a minimum achievement level of 4 (50%–59%) in four recognised NSC 20-credit subjects from the designated subject list below:

- Accounting
- Agricultural Science
- Business Studies
- Consumer Studies
- Dramatic Arts
- Economics
- Engineering Graphics and Design
- Geography
- History
- Information Technology
- Languages\*
- Life Sciences
- Mathematical Literacy
- Mathematics
- Music
- Physical Science
- Religion Studies
- Visual Arts

\*Based on the languages used as medium of instruction at the University of Pretoria, it is advisable that students should have English and/or Afrikaans as a Home Language or as a First Additional Language, together with any other language of choice. Faculties and/or certain programmes may impose additional requirements.

Prospective students in Grade 12 (final school-year) must use their final Grade 11 year mark (promotion mark) to apply and it is used for provisional admission. No Grade 12 marks will be considered for provisional admission. Please note that prospective students who have already left school should use their NSC/IEB\* Certificate to apply. Also refer to Universities South Africa ([www.universitiessa.ac.za](http://www.universitiessa.ac.za)). Additional selection criteria are applicable in applications for selection programmes. Please note that the final Grade 12 results remain the determining factor with regard to admission. Also note that compliance with the minimum requirements does not necessarily guarantee admission to any programme.

The calculation of an Admission Point Score (APS) is based on a candidate's achievement in any SIX recognised NSC 20-credit subjects (including subjects from the non-designated subject list, eg CAT, Tourism, Hospitality Studies and Civil, Electrical & Mechanical Technology, etc), by using the NSC seven-point rating scale. Life Orientation is a 10-credit subject and may not be used for calculating the APS. Life Orientation is also not a faculty-specific subject requirement.

\*Independent Examination Board (IEB)

## Special offer to academic achievers

(New first-year students in 2016)

## National Senior Certificate (NSC) seven-point rating scale

Achievement level	Description	Percentage
7	Outstanding achievement	80–100%
6	Meritorious achievement	70–79%
5	Substantial achievement	60–69%
4	Adequate achievement	50–59%
3	Moderate achievement	40–49%
2	Elementary achievement	30–39%
1	Not achieved	0–29%

### National Benchmark Test (NBT)

The NBT is not compulsory for all programmes. Please refer to the relevant programmes in this information product.

### Contact information

Tel +27 (0)21 650 3523  
Email [nbt@uct.ac.za](mailto:nbt@uct.ac.za)  
Website [www.nbt.ac.za](http://www.nbt.ac.za)

## Application for admission

- Applications open on 1 March of the year preceding the year of study. Application forms must reach the University before the closing dates indicated in red at the bottom of the faculty tables.
- It would not be prudent to indicate a selection programme as second choice on your application form.
- We recommend that you apply online at [www.up.ac.za/apply](http://www.up.ac.za/apply).
- A non-refundable application levy of R300 must accompany every application.
- The following documents must accompany your application:
  - A copy of your final Grade 11 examination report indicating your promotion mark
  - A copy of your ID or your birth certificate
- Faxed, scanned, or emailed application forms will not be accepted.

## Language policy and medium of instruction

In conducting its business, the University uses two official languages, namely English and Afrikaans. In formal education the medium of instruction is either English or Afrikaans, or both of these languages; provided that there is a demand and that it is academically and economically justifiable. Where the University has the capacity, Sepedi is used as an additional language of communication.

## Bursaries, awards and loans (financial aid)

### University-managed bursaries and loans

Apply between 1 August and 30 September of the year preceding studies at [www.up.ac.za/feesfunding](http://www.up.ac.za/feesfunding). Please note that applicants for sports bursaries, should also complete an application form, which can be obtained from the Sports Centre, [sportsinfo@up.ac.za](mailto:sportsinfo@up.ac.za), +27 (0)12 420 6060 or [www.up.ac.za/sport](http://www.up.ac.za/sport).

### University-managed awards

Learners do not apply for these awards. They are awarded automatically after registration. For the specific criteria, please refer to [www.up.ac.za/feesfunding](http://www.up.ac.za/feesfunding).

### Other financial aid options

- EduLoan: [www.eduloan.co.za](http://www.eduloan.co.za)
- The Bursary Register:
  - Tel +27 (0)11 672 6559
  - Email [rlevin@mnet.co.za](mailto:rlevin@mnet.co.za)
  - Website [www.gostudy.mobi](http://www.gostudy.mobi)
- [www.bursary.hcfoundation.co.za](http://www.bursary.hcfoundation.co.za)

ADMISSION (based on the examination results with which you apply)		ACHIEVEMENT AWARDS (based on the final school-year examination results)			RESIDENCE PLACEMENT (based on the examination results with which you apply)	
Qualifying academic average percentage	Admission to study	Qualifying academic average percentage	FACULTIES		Qualifying academic average percentage	Residence placement
			Natural and Agricultural Sciences and Engineering, Built Environment and Information Technology	Health Sciences and Veterinary Sciences		
75%–100%	Guaranteed admission to your first or second choice open programme (not applicable to selection programmes) if your application is received not later than 1 May of the year preceding commencement of studies.	75%–79.99%	R6 400	-	85%–100%	Guaranteed placement in a UP residence if your application is received not later than 30 May of the year preceding commencement of studies and once you are provisionally admitted to a programme.
		80%–84.99%	R16 000	R6 400		
		85%–89.99%	R25 000	R13 000		
		90%–100%	R40 000	R20 000		
				Other faculties		

Please visit [www.up.ac.za/feesfunding](http://www.up.ac.za/feesfunding) for the terms and conditions.

UP banking details

ABSA	Standard Bank
Branch: Hatfield Branch code: 632005 Account number: 214 000 0054 Deposit Reference: Eight-digit student number	Branch: Hatfield Branch code: 011545 Account number: 012 602 604 Deposit Reference: Eight-digit student number
For international transactions: SWIFT CODE: ABSAZAJCPT	

Accommodation

Only a limited number of places are available in the University's residences. Placement in residences is based on academic achievement (APS) in Grade 11 and the date of your application. Please note that the demand for residence accommodation exceeds the availability and admission to a programme can thus not guarantee placement in a residence. Guaranteed placement in a residence only applies to students who meet the minimum requirements of the UP special offer to academic achievers. For more information, please visit [www.up.ac.za/accommodation](http://www.up.ac.za/accommodation).

Security services

Please take note of the contact information for the Department of Security Services.

- 24 hour UP Operational Manager +27 (0)83 654 0476
- 24 hour UP Operational Management Centre +27 (0)12 420 2310/2760
- 24 hour crisis line +27 (0)80 000 6428 (toll-free)

International students

Non-South African citizens will have to submit proof of legal status in South Africa, as well as proof of adequate medical aid cover at the International Students Division before they will be able to register.

Contact information

**Tel** +27 (0)12 420 3111  
**Email** [csc@up.ac.za](mailto:csc@up.ac.za)  
**Website** [www.up.ac.za/ISD](http://www.up.ac.za/ISD)

Supporting documents

- All non-South African citizens will have to show their original documents and submit two photo-copies of each of the documents listed below:
- The International Students Information form, completed and signed
  - A valid passport or an ID (in the case of students with permanent residence in South Africa)
  - A valid study permit endorsed for studies at the University of Pretoria or one of the following:
    - A study visa
    - An asylum-seekers transit visa
    - Refugee – Section 24 permit
    - A diplomatic visa
  - Proof of medical aid cover (medical aid cover must be paid a year in advance, from January to December)

Medical aid cover for study permit-holders

Non-South African citizens who are holders of study permits, or who wish to apply for a study permit must, in terms of South Africa's Immigration Act, have sufficient medical aid cover for the duration of their stay in South Africa.

Universities South Africa

A full or foreign conditional exemption certificate is a prerequisite and applicable to non-South African citizens and to students who do not have a South African National Senior Certificate (NSC) qualification or Independent Examination Board (IEB) qualification and who want to enroll for undergraduate studies at the University of Pretoria. This certificate can only be obtained from Universities South Africa.

Contact information

**Tel** +27 (0)12 591 4401/2  
**Email** [admin@universitiessa.ac.za](mailto:admin@universitiessa.ac.za)  
**Website** [www.universitiessa.ac.za](http://www.universitiessa.ac.za)

Admission Point Score (APS) conversion

The following tables can be used to convert your marks/symbols into an APS when applying for studies at the University of Pretoria.

Admission Point Score Conversion Table

APS (requirement level for subjects as well as overall APS)	NSC/IEB	SC HG M-score	SC SG M-score	HIGCE NSSC HL	AS-Level	IB SL	IGCSE/IGCSE/ NSSC OL/O-Level Grade 11*	IGCSE/IGCSE/ NSSC OL/O-Level Grade 12**
7	7 (80–100%)	A		1	A	7	A	
6	6 (70–79%)	B	A	2	B	6	B	
5	5 (60–69%)	C	B	3	C	5	C	A
4	4 (50–59%)	D	C	3	D	4	C	B
3	3 (40–49%)	E	D	4	E	3	D	C
2	2 (30–39%)	F	E			2	E	D/E
1	1 (0–29%)	G	F			1	F	F/G

\* APS conversion for Grade 11 equivalent qualifications only and for conditional admission and selection purposes  
\*\* APS conversion for Grade 12 equivalent qualifications – not for final admission and must be taken together with Advanced Subsidiary Level and Advanced Level for exemption purposes

Admission Point Score Conversion Table only for Cambridge Advanced Level and IB Higher Level

APS		A-Level	IB HL
Required level for subjects	Required level for overall APS		
7	10	A	7
6	8	B	6
5	7	C	5
4	6	D	4
3	5	E	
2	4		
1	3		

- NSC National Senior Certificate (completed Grade 12 in and after 2008)  
IEB Independent Examination Board  
SC HG Senior Certificate Higher Grade (completed Grade 12 before 2008)  
SC SG Senior Certificate Standard Grade (completed Grade 12 before 2008)  
HIGCSE Higher International General Certificate of Secondary Education  
A-Level Advanced Level  
AS-Level Advanced Subsidiary Level  
IB International Baccalaureate Schools (Higher Levels and Standard Levels)  
IGCSE International General Certificate of Secondary Education  
GCSE General Certificate of Secondary Education  
NSSC Namibia Senior Secondary Certificate  
O-Level Ordinary Level

UP Open Day

**Date** 21 May 2016  
**Time** 08:00–14:00

The following persons should attend the UP Open Day:

- Learners in Grade 12 who already received confirmation that they are provisionally admitted to UP
- Learners in Grade 12 who meet the admission requirements and wish to hand in their application forms
- Learners in Grade 11 who are fairly certain they will apply at UP
- Parents of the above learners

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Comments and queries can be directed to [csc@up.ac.za](mailto:csc@up.ac.za) or Tel +27 (0)12 420 3111.

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**Please note:**  
Closing dates are indicated by means of a footer number that is beside the name of the programme. Refer to the dates at the bottom of the tables on each page.

Economic and Management Sciences

Important information on undergraduate programmes for 2017

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded when calculating the APS.

University of Pretoria website www.up.ac.za/ems  
National Benchmark Test website www.nbt.ac.za

Programme	Minimum requirements for 2017								APS
	Achievement level								
	Afrikaans or English				Mathematics				
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BCom (Accounting Sciences) <sup>3</sup> [3 years]	5	3	C	C	6	2	B	B	34
<b>Careers:</b> First step towards qualifying as chartered accountants and other categories of accountants, financial managers, internal auditors, bookkeepers, bankers, taxation practitioners and advisors, cost and management accountants and credit controllers									
BCom (Investment Management) <sup>3</sup> [3 years]	5	3	C	C	6	2	B	B	34
<b>Careers:</b> Funds manager, investment advisors, financial advisors, management accountants, management consultants, financial managers, investment brokers and investment analysts									
BCom (Financial Sciences) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	32
<b>Careers: Specialisation in financial management:</b> Management accountants, management consultants, performance managers, quality managers, financial advisors, strategy analysts, cost accountants, financial managers, financial planners and business analysts <b>Specialisation in taxation:</b> Tax advisors, tax auditors in public practice, tax policy designers, tax practitioners, tax compliance managers, SARS auditors and tax risk managers <b>Specialisation in internal auditing:</b> Internal auditors, risk officers, forensic auditors, IT auditors, financial auditors, performance auditors, environmental auditors, compliance officers, government auditors and governance auditors									
BCom (Econometrics) <sup>3</sup> [3 years]	5	3	C	C	6	2	B	B	32
<b>Careers:</b> Econometricians are employed by government, the central bank, private and commercial banks, leading stockbrokers and consultancies, both locally and internationally. Positions include analysts, consultants, researchers, traders or brokers, and academics. The work mostly entails statistical analysis (forecasting, structural and policy analysis) of economic and financial markets and interrelationships.									
BCom (Economics) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	32
<b>Careers:</b> Economists may specialise in banking, public finance, international trade and investment or economic development. Economists are employed by government, the central bank, private and commercial banks, stock brokerage firms and consultancies, both locally and internationally. Positions include analysts, consultants, researchers, traders and academics.									
BCom (Law) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	32
<b>Careers:</b> First step towards becoming attorneys, legal advisors, advocates, prosecutors, presiding officers (magistrate or judge) and law academics									
BCom (Statistics) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	32
<b>Careers:</b> Statistical analysts in several industries, researchers, consultants and lecturers									
BCom (Informatics) <sup>3</sup> Focus area: Information Systems [3 years]	5	3	C	C	4	3	D	D	30
<b>Careers:</b> Manager in information technology environment, computer software or hardware supporter, computer systems analyst, financial information systems analyst, business analyst, information facilitator, IT training, systems developer, business systems analyst									
BCom (Agribusiness Management) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Agricultural economist at banks and other agricultural and food-orientated institutions, commodity trader on future markets									
BCom (Recreation and Sports Management) <sup>3</sup> [3 years]	5	3	C	C	4	3	D	D	30
<b>Careers:</b> Sport facility managers, sport event organisers, sport and recreation managers and sport marketing managers									
BCom <sup>3</sup> [3 years]	5	3	C	C	4	3	D	D	30
<b>Careers:</b> The degree does not lead to a specific vocational outcome, but offers opportunities to determine your own career outcome, within limits. Students are able to compile their own curricula with a view to work opportunities in all sectors.									
BCom (Entrepreneurship) <sup>3</sup> [3 years]	5	3	C	C	4	3	D	D	30
<b>Careers:</b> Running of entrepreneurial activities and business, corporate entrepreneur, mentor to an entrepreneur, administrative manager, sales manager, shop manager, entrepreneur, business manager, business owner, retail-trade manager									
BCom (Business Management) <sup>3</sup> [3 years]	5	3	C	C	4	3	D	D	30
<b>Careers:</b> A wide variety of opportunities in administration, finance, marketing and human resource management, including manager, teacher, lecturer, general manager, management consultant									
BCom (Supply Chain Management) <sup>3</sup> [3 years]	5	3	C	C	4	3	D	D	30
<b>Careers:</b> The purpose of this programme is to equip learners of supply chain management with the ability to participate in functional management within an integrated supply chain. This includes the disciplines of supply management, production and operations management, warehousing, transport management and supply chain strategy.									
BCom (Marketing Management) <sup>3</sup> [3 years]	5	3	C	C	4	3	D	D	30
<b>Careers:</b> Product management, customer service management, customer relationship management, strategic marketing, sales management, distribution management, brand management, advertising management, media planning, marketing research management and promotions management									
BCom (Human Resource Management) <sup>3</sup> [3 years]	5	3	C	C	4	3	D	D	30
<b>Careers:</b> Human resource practitioners, personnel consultants, mediators, labour relations specialists, human resource managers, personnel managers, liaison officers, psychometrists and industrial psychologists. In their capacity as human resource practitioners, graduates will be responsible for matters such as developing human resource strategies and policies, human resource planning, recruitment and selection of employees, training and development of staff, labour relations and personnel administration.									
BCom – Extended programme <sup>3</sup> [4 years]	4	3	D	D	3	4	E	E	26
<b>Please note:</b> This programme is only offered in English. The first year of study is presented on the Mamelodi Campus. Admission is subject to selection. <b>Careers:</b> Career opportunities depend on the field of study chosen by students in their second year of study.									
BAdmin (International Relations) <sup>3</sup> [3 years]	5	3	C	C	Mathematics 4 Mathematical Literacy 4	3	D	D	28
<b>Please note:</b> This programme is only offered in English. Students cannot be admitted to a BCom degree via a BAdmin if they do not comply with the admission requirements for a BCom degree. <b>Careers:</b> Diplomats, public servants, political analysts									
BAdmin (Public Management) <sup>3</sup> Focus area: Public Administration [3 years]	5	3	C	C	Mathematics 4 Mathematical Literacy 4	3	D	D	28
<b>Please note:</b> This programme is only offered in English. Students cannot be admitted to a BCom degree via a BAdmin if they do not comply with the admission requirements for a BCom degree. <b>Careers:</b> Managers in the public sector, local government and the private sector, non-governmental organisations, international organisations and embassies. Graduates are often employed in human resource sections, planning divisions and in general administrative divisions.									

Health Sciences

Important information on undergraduate programmes for 2017

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded in the calculation of the APS.
- Grade 11 final examination results, the NBT results as well as a Value-added Questionnaire will be used for the provisional admission of prospective students.
- Admission to Health Sciences programmes is subject to a selection process.
- The applications of international candidates who come from countries that have medical schools will not be considered for placement in the MBChB programme except where intergovernmental agreements are in place.
- For selection purposes the sum of the results in six subjects, including English, Mathematics and Physical Science, is calculated.
- Candidates, please note that your APS may not drop with more than two points in your final school examination results in order to maintain your provisional admission.**
- Please note** that compliance with the minimum admission requirements does not necessarily guarantee admission to any programme in this Faculty.
- Selection queries may be directed to healthapplications@up.ac.za.

University of Pretoria website www.up.ac.za/health  
National Benchmark Test website www.nbt.ac.za

Programme	Minimum requirements for 2017												APS
	Achievement level												
	English				Mathematics				Physical Science				
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
School of Dentistry													
BChD – Bachelor of Dental Surgery <sup>1</sup> [5 years]	5	3	C	C	5	3	C	C	5	3	C	C	35
Selection is based on Grade 11 results, the NBT and the Value-added Questionnaire. <b>Careers:</b> Dentists, specialists, academics and researchers													
BOH – Bachelor of Oral Hygiene <sup>1</sup> [3 years]	4	3	D	D	4	3	D	D	4	3	D	D	25
Selection is based on Grade 11 results and the NBT. <b>Career:</b> Oral hygienists													
School of Healthcare Sciences													
BDietetics – Bachelor of Dietetics <sup>1</sup> [4 years]	4	3	D	D	4	3	D	D	4	3	D	D	25
Selection is based on Grade 11 results, the NBT and the Value-added Questionnaire. <b>Career:</b> Dieticians													
BNurs – Bachelor of Nursing Science <sup>1</sup> [4 years]	4	3	D	D	-				-				28
Selection is based on Grade 11 results, the NBT, the Value-added Questionnaire and an interview. English, Mathematics, Physical Science, Biology or Physiology are not compulsory subjects, but they are recommended subjects. <b>Careers:</b> General nursing, psychiatric nursing, midwifery and community nursing													
BOccTher – Bachelor of Occupational Therapy <sup>1</sup> [4 years]	4	3	D	D	4	3	D	D	4	3	D	D	30
Selection is based on Grade 11 results, the NBT and the Value-added Questionnaire. <b>Careers:</b> Occupational therapists, academics and researchers													
BPhysio – Bachelor of Physiotherapy <sup>1</sup> [4 years]	4	3	D	D	4	3	D	D	4	3	D	D	30
Selection is based on Grade 11 results, the NBT and the Value-added Questionnaire. <b>Careers:</b> Physiotherapists, academics and researchers													
BRad – Bachelor of Radiography <sup>1</sup> [3 years]	4	3	D	D	4	3	D	D	4	3	D	D	25
Selection is based on Grade 11 results, the NBT and the Value-added Questionnaire. Taking Life Sciences and Physiology are recommended for BRad, but these subjects are not compulsory. <b>Careers:</b> Radiographers, academics and researchers													
School of Medicine													
BClinical Medical Practice – Bachelor of Clinical Medical Practice <sup>1</sup> [3 years]	4	3	D	D	4	3	D	D	-				25
Selection is based on Grade 11 results and the Biographical Information Form. Physical Science and Life Sciences are not compulsory subjects, but will be an advantage for selection purposes. <b>Careers:</b> Clinical associates, academics and researchers													
MBChB – Bachelor of Medicine and Surgery <sup>1</sup> [6 years]	5	3	C	C	5	3	C	C	5	3	C	C	35
Selection is based on Grade 11 results, the NBT and the Value-added Questionnaire. <b>Careers:</b> General medical practitioners, specialists (after postgraduate training)													
BSportSci (Sports Science) – Bachelor of Sports Science <sup>1</sup> [3 years]	5	3	C	C	5	3	C	C	Physical Science or Life Sciences				30
									5	3	C	C	
Selection is based on Grade 11 results, the NBT and the Value-added Questionnaire. <b>Please note:</b> At the end of the second year, selection will take place on academic merit and students will branch into the specific Sports Science curriculum or Biokinetics curriculum. Approximately 20 places are available. This programme has a duration of two years and selection is based on academic merit. <b>Careers:</b> Sports Science research and teaching, biokinetics and the sport and exercise industry.													
Higher Certificates in Sports Science:									Afrikaans or English				APS
HCert (Sports Science) (Sport Coaching) <sup>3</sup> [1 year]									NSC/IEB	HIGCSE	AS-Level	A-Level	
HCert (Sports Science) (Education) <sup>3</sup> [1 year]									4	3	D	D	15
Selection is based on Grade 11 results and Grade 12 sporting achievements. Please take note that places for the Higher Certificate in Sports Science are preferentially offered to applicants who are nominated by one of the official UP sports clubs. <b>Careers:</b> Sports coaching, sports and exercise industry													





Humanities

Important information on undergraduate programmes for 2017

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Candidates who comply with the minimum subject requirements and achievement levels as well as the APS requirements of these programmes will be granted placement in the programmes, subject to the availability of space. The abovementioned is not applicable to selection programmes.
- To retain admission, learners will be expected to obtain an APS of at least 28 in Grade 12. Prospective students who have already been granted provisional admission in these programmes, but obtained at least an APS of 27 in Grade 12, will be considered by the Admission Committee should spaces be available. The Admission Committee of the Faculty of Humanities will consider these students once the results of the National Benchmark Test (NBT) are available and depending on the availability of space.
- The Faculty will assess satisfactory performance in the NBT in the light of its commitment to ensure that an appropriate proportion of the applicants will be drawn from the disadvantaged category of the population.
- Applicants who meet the minimum APS requirement, but who do not comply with the subject requirements must write the NBT.
- Life Orientation is excluded when calculating the APS.

University of Pretoria website [www.up.ac.za/gw](http://www.up.ac.za/gw)  
National Benchmark Test website [www.nbt.ac.za](http://www.nbt.ac.za)

BA AND BA – EXTENDED PROGRAMME						
Programme	Minimum requirements for 2017					APS
	Achievement level					
	Afrikaans or English					
BA AND BA – EXTENDED PROGRAMME	NSC/IEB	HIGCSE	AS-Level	A-Level		
BA <sup>3</sup> [3 years]						
BA – Extended programme <sup>3</sup> [4 years]	5	3	C	C	30	
<p>The BA – Extended programme takes place over a period of four years instead of the normal three years. Prospective students cannot apply for this programme. The Faculty's Admission Committee determines which students will be placed in this programme. A limited number of places are available. Grade 12 applicants who have achieved an APS of 26-29 in Grade 11 will be considered for the BA – Extended programme, based on the results of the NBT.</p> <p><b>Careers:</b> Students who complete the BA have access to a wide range of careers. Many of the careers indicated under other programmes can be recommended to students who choose the BA, because it is often possible to choose the same majors and elective modules in this programme as one can in the more structured programmes. Students should approach the academics in the Faculty for advice.</p> <p><b>Please note that students, who wish to follow a career as a psychologist</b> after completion of the BA degree, should complete a BA degree with psychology as a major as well as the BSocSciHons (Psychology) and the MA (Clinical or counselling Psychology).</p> <p><b>Careers:</b> Clinical, counselling (sport and community) and research psychologist, registered counsellor or registered psychometrists</p>						

PROFESSIONAL PROGRAMMES									
Programme	Minimum requirements for 2017								APS
	Achievement level				Any two languages of which Afrikaans or English should be one				
	Mathematics								
SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BA (Speech-Language Pathology)* [4 years]	4	3	D	D	5	3	C	C	30
Departmental selection is based on academic achievement. To retain admission, candidates will be expected to achieve an APS of at least 28 in Grade 12. Only 40 students are admitted. The provisional selection process commences in July of the year preceding the first year of studies. More information can be obtained from the programme organiser. The first study year of Audiology and Speech-Language Pathology is the same. The choice of Life Sciences is strongly recommended. <b>Careers as a speech-language therapist:</b> Work in education and special education, hospitals, clinics, rural communities or in private practices.									
BA (Audiology)* [4 years]	4	3	D	D	5	3	C	C	30
Departmental selection is based on academic achievement. To retain admission, candidates will be expected to achieve an APS of at least 28 in Grade 12. Only 40 students are admitted. The provisional selection process commences in July in the year preceding the first year of studies. More information can be obtained from the programme organiser. The first study year of Audiology and Speech-Language Pathology is the same. The choice of Life Sciences is strongly recommended. <b>Careers as an audiologist:</b> Diagnostic and rehabilitative audiology, audiometry and hearing therapy, work in education, special education, hospitals, clinics, private practice, government, military and academic institutions (teaching, research)									
SOCIAL WORK					Afrikaans or English				APS
					NSC/IEB	HIGCSE	AS-Level	A-Level	
BSW – Bachelor of Social Work <sup>3</sup> [4 years]					5	3	C	C	30
Departmental selection takes place at the end of the first year and is based on academic merit, psychometric tests and an interview. <b>Career:</b> Social worker									
LAW					Afrikaans or English				APS
					NSC/IEB	HIGCSE	AS-Level	A-Level	
BA (Law) <sup>3</sup> [3 years]					5	3	C	C	30
<b>Career:</b> Lawyer (BA (Law) degree plus the LLB degree required)									

SPECIALISED PROGRAMMES						
Programme	Minimum requirements for 2017				APS	
	Achievement level					
	Afrikaans or English					
LANGUAGES	NSC/IEB	HIGCSE	AS-Level	A-Level		
BA (Languages) <sup>3</sup> [3 years]	5	3	C	C	30	
<b>Careers:</b> Advertising, media and communication, copywriting, creative writing, text and document design, editing, language planning, language teaching and training, lexicography (compilation of dictionaries), technical writing, public relations, text design, translation, publishing, diplomatic sector, tourism. It is recommended that in order to follow these career paths (as language practitioners) and to specialise in these fields, students continue with a BA(Hons (Translation and Professional Writing) or a BA(Hons (Applied Language Studies) on completion of the BA (Languages). By continuing with a Postgraduate Certificate in Education, students are equipped to enter the teaching profession.						

SPECIALISED PROGRAMMES										
Programme	Minimum requirements for 2017					APS				
	Achievement level									
	Afrikaans or English									
INDUSTRIAL SOCIOLOGY AND LABOUR STUDIES, HERITAGE AND CULTURAL TOURISM	NSC/IEB	HIGCSE	AS-Level	A-Level						
BSocSci (Industrial Sociology and Labour Studies) <sup>3</sup> [3 years]	5	3	C	C	30					
<b>Careers:</b> Labour relations practice, arbitration, conflict management and resolution, labour administration and research, gender issues and dismissals, work for government institutions, parastatals, private sector and trade union organisations										
BSocSci (Heritage and Cultural Tourism) <sup>3</sup> [3 years]	5	3	C	C	30					
<b>Careers:</b> Archivists, consultants, museum experts (curators, managers), researchers, teachers, tour leaders, tour operators, tour entrepreneurs and heritage resource managers										
PHILOSOPHY, POLITICS AND ECONOMICS [PPE]	Mathematics				Afrikaans or English				APS	
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level		
BSocSci (Philosophy, Politics and Economics) [PPE] <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	32	
<b>Careers:</b> Gives students entrance into a variety of careers related to economic or political policy making, from journalism to careers in the diplomatic service										
POLITICAL SCIENCES					Afrikaans or English				APS	
					NSC/IEB	HIGCSE	AS-Level	A-Level		
BPolSci (International Studies) <sup>3</sup> [3 years]						5	3	C	C	30
<b>Careers:</b> International relations, diplomatic service, political consultation, conflict resolution, policy analysis, strategic intelligence, governance, international political economics and risk analysis										
BPolSci (Political Studies) <sup>3</sup> [3 years]						5	3	C	C	30
<b>Careers:</b> Policy analysis and consultation, political analysis and communication, governance, conflict resolution, strategic intelligence, political development and mobilisation and risk analysis										
SPORT AND LEISURE STUDIES					Afrikaans or English				APS	
					NSC/IEB	HIGCSE	AS-Level	A-Level		
BA (Sport and Leisure Studies) <sup>3</sup> Focus areas (choose one): <ul style="list-style-type: none"><li>• Sport and Recreation Management</li><li>• Sports Psychology</li><li>• Sport and Leisure in Society</li><li>• Sports Coaching Science</li></ul> [3 years]						5	3	C	30	
<b>Careers:</b> Sport, recreation, health and fitness industry, sports marketing, teachers, coaches, sports event managers, sports facility managers, sports developers										
FINE ARTS, INFORMATION DESIGN, VISUAL STUDIES, MUSIC AND DRAMA					Afrikaans or English				APS	
					NSC/IEB	HIGCSE	AS-Level	A-Level		
BA (Fine Arts) <sup>2</sup> [4 years]						5	3	C	C	30
Departmental selection for this degree programme involves a merit selection process and a final selection process, as well as the submission of a questionnaire and a portfolio of at least 20 recent works, which must be submitted to the Department of Visual Arts by 30 June. Detailed information about the selection process and the portfolio requirements can be obtained at <a href="http://www.up.ac.za/visualarts">www.up.ac.za/visualarts</a> . Based on the questionnaire and the portfolio, you will be notified whether you qualify to continue with the final selection process. If your merit selection was successful, you will be invited to attend the final selection process, which consists of visualisation tests, practical tests and an interview. The final selection process takes place during August. You will be notified by end August of the result of the final selection tests. Approximately 100 applicants will be invited to take part in the final selection process.										
BA (Information Design) <sup>2</sup> [4 years]						5	3	C	C	30
Departmental selection for this degree programme involves a merit selection process and a final selection process, as well as the submission of a questionnaire and a portfolio of at least 20 recent works, which must be submitted to the Department of Visual Arts by 30 June. Detailed information about the selection process and the portfolio requirements can be obtained at <a href="http://www.up.ac.za/visualarts">www.up.ac.za/visualarts</a> . Based on the questionnaire and the portfolio, you will be notified whether you qualify to continue with the final selection process. If your merit selection was successful, you will be invited to attend the final selection process, which consists of visualisation tests, practical tests and an interview. The final selection process takes place during August. You will be notified by end August of the result of the final selection tests. Approximately 100 applicants will be invited to take part in the final selection process.										
<b>Careers:</b> Animators, graphic designers, illustrators, interaction designers, communication designers, art directors, media production managers, design managers, designers of animation and movement graphics, design educators, media designers, typographers for advertising and branding agencies; publishing industries; web design companies; broadcast and animation studios; in-house design for large companies, state and parastatal organisations, research and educational institutions; public relations and marketing companies; design consultants; printers and production houses; owners of private studios, or as freelance designers or illustrators										
BA (Visual Studies) <sup>3</sup> [3 years]						5	3	C	C	30
<b>Careers:</b> Art and film critics, visual culture specialists, arts and culture educators, art historians, curators, visual analysts, visual consultants and media analysts										
BA (Music) <sup>2</sup> [3 years]						5	3	C	C	30
Departmental selection: Prospective students must be able to sing or play an instrument on a practical level that is equivalent to approximately Grade V Practical (Unisa/Royal Schools/Trinity) and Theory Grade III. Candidates are tested during an audition.										
<b>Careers:</b> Arts and culture teachers at schools (Grade R–9) or music centres, group music facilitators for community and pre-school learners, music entrepreneurs, song arrangers for school-based instruments, creators of simple backtracks for productions, choreographers for revues and singing games, choir conductors, organisers of community projects, and playing group music instruments, such as African drums, steel drums and marimbas										
BMus <sup>2</sup> [4 years]						5	3	C	C	30
Departmental selection is based on a practical singing or instrument performance of 15 minutes, as well as a theoretical test. Required subjects: Music with at least a 4 (50–59%) as Grade 12 subject, or Grade VII Practical and Grade V Theory (Unisa/Royal Schools/Trinity), as well as knowledge of music notation. Students who have been provisionally selected for BMus must undergo another practical selection test. The date of this selection will take place in consultation with the programme coordinator.										
<b>Careers:</b> Music teachers, music technicians, solo and/or chamber music performers and orchestral musicians										
BDram – Bachelor of Drama <sup>2</sup> [3 years]						5	3	C	C	30
Departmental selection is based on an audition in August of the year preceding students' first year of study.										
<b>Careers:</b> Actors (theatre, film, television and radio), physical theatre artists, theatre critics, radio and television presenters, directors, educational theatre practitioners and educators, community theatre artists and educators, light and sound operators, voice artists, stage and production managers, programme facilitators and managers, performing arts administrators, camera operators, documentary film-makers, digital and new media editors, playwrights, scriptwriters, play devisors, film and theatre researchers										



# Engineering, Built Environment and Information Technology

## Important information on undergraduate programmes for 2017

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded when calculating the APS.
- Grade 11 results are used in the provisional admission of prospective students.
- A valid qualification with admission to degree studies is required.
- Minimum subject and achievement requirements, as set out below, are required. On first-year level a student has a choice between Afrikaans and English as language medium. In certain cases, tuition may be presented in English only, for example in electives, where the lecturer may not speak Afrikaans or in cases where it is not economically or practically viable.
- Provisional admission to the four-year programmes in the School of Engineering is only guaranteed if a prospective student complies with ALL the requirements below.  
**Note:** Candidates who do not comply with the minimum requirements, set out above, but who have obtained a minimum APS of 30, an achievement level of 5 for English or Afrikaans, 6 for Mathematics and 5 for Physical Science, will be considered for provisional admission to either the four-year programme or the ENGAGE programme based on the results of the NBT.
- Admission to ENGAGE in the School of Engineering will be determined by the results of the NBT, NSC results, an achievement level of 5 in Mathematics and 4 in Physical Science, as well as an achievement level of 4 in Afrikaans or English, together with an APS of 25. Students may apply directly to be considered for the ENGAGE programme.

University of Pretoria website [www.up.ac.za/ebit](http://www.up.ac.za/ebit)  
National Benchmark Test website [www.nbt.ac.za](http://www.nbt.ac.za)

Programme	Minimum requirements for 2017													APS
	Achievement level													
	Afrikaans or English				Mathematics				Physical Science					
SCHOOL OF ENGINEERING	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	35	
BEng (Industrial Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*		
<b>Careers:</b> Industrial engineers design, test, implement and manage a wide range of man/machine systems for the delivery of production and services. Organisational matters that require optimisation include site selection and layout of facilities, manufacturing, inventory control, materials handling, supply chain management, quality management, cost control, financial services, maintenance, reliability, computer simulation, information systems, human resources and business law.														
BEng (Chemical Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*	35	
<b>Careers:</b> Chemical engineers are involved in industrial processes that convert raw materials into products with a higher economic value. This is achieved by means of physical, thermal, chemical, biochemical and mechanical changes and processes. Chemical engineers apply their specialised knowledge in the petroleum, food, minerals processing, power generation, and the paper and pulp industries, water and effluent treatment, as well as environmental engineering activities, including air pollution control. Like other engineering disciplines, chemical engineers are involved in research and development, techno-economic evaluation, equipment and plant design, process control and optimisation, construction, commissioning, operation and management and final product marketing and distribution.														
BEng (Civil Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*	35	
<b>Careers:</b> Civil engineers design, build and maintain constructions such as tower blocks and skyscrapers, dams, canals and pipelines, roads, bridges, tunnels, railways, airports, power stations, television towers, water works and outfall installations. They are involved in financial modelling, feasibility studies and the management and rehabilitation of large asset portfolios.														
BEng (Electrical Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*	35	
<b>Careers:</b> Electrical engineers are active in the generation, storage, transmission, distribution and utilisation of electrical energy. There is a brilliant future in renewable energy. Electrical engineers design, supervise the construction, oversee the optimal operation and assure perfect and timely maintenance of all electrical installations for municipalities, residential areas, commercial buildings, factories, mines and industries. Rail transport, water pumping, electrical grids, telecommunications, energy management and smart lighting are all fields of application of electrical engineering.														
BEng (Electronic Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*	35	
<b>Careers:</b> Electronic engineers are active in various fields, such as telecommunications (fixed networks, wireless, satellite, television, radar and radio frequency networks), entertainment and medical (magnetic resonance imaging, X-rays, cardiopulmonary resuscitation, infrared tomography, electroencephalograms (EEG), electrocardiograms (ECG), rehabilitation engineering and biokinetics), integrated circuit design, bioengineering, military (vehicle electronics, smart bombs, night vision, laser systems), transport (e-tags, speed measuring, railway signalling, global positioning system (GPS) and mapping), "smart" dust, safety and security systems (face and speech recognition), banking (ATMs), commerce, robotics, education, environmental management, tourism and many more.														
BEng (Mechanical Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*	35	
<b>Careers:</b> Mechanical and aeronautical engineers are concerned with power-generating machines and systems such as vehicles, ships, air-conditioners, pebble bed nuclear reactors, aeroplanes, engines and turbines, robots and biomedical systems. Areas of specialisation include product design and manufacturing (such as design, testing and improvement of mechanical, electrical, pneumatic and hydraulic systems), marine engineering and naval architecture, biomedical engineering, air-conditioning and refrigeration, aerospace systems and aircraft/misssile engineering, vehicle engineering, maintenance engineering and energy management (gas and steam turbines, nuclear power reactors, petrol engines, cooling towers and renewable energy systems).														
BEng (Metallurgical Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*	35	
Only presented in English from second year <b>Careers:</b> Metallurgical engineers unlock the riches of deposits of metal ores, coal and diamonds and optimise the manufacture of metal components. They work in plants where valuable minerals are recovered from ore, where metals are produced out of the minerals and where the metals are converted into useful materials – such as steel or aluminium. Careers include production engineers, plant managers, consultants and researchers.														
BEng (Computer Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*	35	
<b>Careers:</b> Computer engineers are active in all fields of the information superhighway and the information and communication technology (ICT) world, which include computer systems, software engineering, computer and communications networks, wireless sensor networks, embedded software, electronics, smart control systems and automation, data security, e-commerce, pattern recognition (face and speech recognition), and artificial intelligence. They specialise in combining hardware, software and communication technologies to optimise system performance.														
BEng (Mining Engineering) <sup>1</sup> [4 years]	5	3	C	C	6	2	B	B*	6	2	B	B*	35	
Only presented in English <b>Careers:</b> Mining engineers have a wide range of opportunities, namely mining (mine management, technical management of ventilation, rock mechanics, rock breaking, mineral resources), financial evaluation and management (mine design, mine financial evaluation, mine feasibility studies, mine environmental impact studies), mining and drilling contracting (mining, tunnelling, shaft sinking, mine development, ore evaluation), mining research, mining equipment design and manufacture, mining marketing and mining administration at national, provincial or international level														
Engineering Augmented Degree Programme (ENGAGE) <sup>1</sup> [5 years]														
Candidates who do not comply with the minimum requirements mentioned above, but who do comply with these requirements, must write the NBT.	4	3	D	D	5	3	C	C	4	3	D	D	25	

\*A-Level: C symbols for Mathematics, Physics and Chemistry will be considered for admission providing the required APS has been obtained.

Programme	Minimum requirements for 2017												
SCHOOL FOR THE BUILT ENVIRONMENT	Achievement level												APS
	Afrikaans or English				Mathematics				Physical Science				
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BSc (Architecture) <sup>2</sup> [3 years]	5	3	C	C	4	3	D	D	4	3	D	D	27
Will only be considered as first study choice Selection programme: Selection includes an interview. <b>Careers:</b> The BSc (Architecture) degree programme enables graduates to register with the South African Council for the Architectural Profession (SACAP) as candidate architectural technologists. This qualification is the first step to future registration as a candidate senior architectural technologist or a candidate architect.													
BSc (Interior Architecture) <sup>2</sup> [3 years]	5	3	C	C	4	3	D	D	4	3	D	D	27
Will only be considered as first study choice Selection programme: Selection includes an interview. <b>Careers:</b> The BSc (Interior Architecture) degree programme enables graduates to register with the South African Institute for the Interior Design Professions (IID) as candidate interior designers. This qualification is the first step to future registration as a candidate senior interior designer or a candidate interior architect.													
BSc (Landscape Architecture) <sup>2</sup> [3 years]	5	3	C	C	4	3	D	D	or Geography or Life Sciences				27
									4	3	D	D	
Selection programme: Selection includes an interview. <b>Careers:</b> The BSc (Landscape Architecture) degree programme enables graduates to register with the South African Council for the Landscape Architectural Profession (SACLAP) as candidate landscape architectural technologists. This qualification is the first step to future registration as a candidate landscape architect.													
BSc (Construction Management) <sup>2</sup> [3 years]	5	3	C	C	5	3	C	C	or Accounting				30
									4	3	D	D	
Selection programme <b>Careers:</b> After completing the three-year undergraduate degree programme, graduates could enter careers, in among others, construction site management or subcontract work. On completion of the ensuing two-year honours programme, graduates are able to register as professional construction managers and opportunities become much wider, including project management, property development, portfolio management, commercial marketing and managerial positions in the corporate environment.													
BSc (Real Estate) <sup>2</sup> [3 years]	5	3	C	C	5	3	C	C	or Accounting				30
									4	3	D	D	
Selection programme <b>Careers:</b> Apart from a future in areas such as property investment, property finance and facilities and property management, further studies to obtain an honours degree in real estate can lead to registration as professional property valuers. Career opportunities encompass the whole spectrum of the property sector, whether as entrepreneurs in the private sector or as employees in the private, government or semi-government sectors.													
BSc (Quantity Surveying) <sup>2</sup> [3 years]	5	3	C	C	5	3	C	C	or Accounting				30
									4	3	D	D	
Selection programme <b>Careers:</b> Quantity surveying is the science that delivers specialised financial and contractual services and advice to clients in the building and construction industry, as well as related industries. The three-year undergraduate degree is the first step towards registration as quantity surveyors. The ensuing one-year honours programme leads to registration as candidate professional quantity surveyors. Career opportunities, apart from those in the private, government or semi-government sectors, also exist in the property, banking, mining and manufacturing industries.													
BTPP – Bachelor of Town and Regional Planning <sup>2</sup> [4 years]	5	3	C	C	4	3	D	D	-				27
Selection programme <b>Careers:</b> Town and regional planners, development practitioners, urban managers, real estate analysts and researchers. While most town and regional planners act as private consultants to the public and private sector, they are also employed by all three spheres of government, research agencies such as the Council for Scientific and Industrial Research (CSIR) and the Human Sciences Research Council (HSRC), non-governmental organisations, community-based organisations, major financial institutions and property development groups. The qualification will enable graduates to register as professional town and regional planners with the South African Council for Planners.													

Programme	Minimum requirements for 2017								APS
	Achievement level								
	Afrikaans or English				Mathematics				
SCHOOL OF INFORMATION TECHNOLOGY	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BIT (Bachelor of Information Technology) <sup>1</sup> [4 years]	5	3	C	C	5	3	C	C	30 (26–29 admission based on the NBT)
Should a candidate obtain an APS of 26 to 29, consideration for admission will be based on the results of the NBT, provided the quotas regarding student numbers have not been reached. <b>Careers:</b> Information technologists, programmers, system analysts, computer consultants, and buyers of hardware and software. This programme provides knowledge and understanding of the theory and practice of programming and software engineering; theory and the practice of the adoption and use of information systems in business organisations; aspects of collecting, retrieving, organising, managing and using information; philosophy, language and mathematics. <b>Please note:</b> Accreditation is pending to change the structure of this degree programme to a 3 year BIT (Information Systems) degree, which may be offered from 2017. For the most recent information please consult the Faculty website.									
BSc (Computer Science) <sup>1</sup> [3 years]	5	3	C	C	5	3	C	C	30 (26–29 admission based on the NBT)
Should a candidate obtain an APS of 26 to 29, consideration for admission will be based on the results of the NBT, provided the quotas regarding student numbers have not been reached. <b>Careers:</b> Programmers, systems analysts, systems architects, consultants, database administrators, network analysts and researchers.									
BIS (Multimedia) <sup>1</sup> [3 years]	4	3	D	D	5	3	C	C	30 (26–29 admission based on the NBT)
Should a candidate obtain an APS of 26 to 29, consideration for admission will be based on the results of the NBT, provided the quotas regarding student numbers have not been reached. <b>Careers:</b> Programmers, web designers, animation specialists, video editors, electronic artists. The programme prepares candidates for positions at any of the following content producers: paper publications, television, radio, phone technologies and the web. Graduates can become coders and work for programming companies. They can develop skills in their particular areas of interest, such as digital music or video, programming, graphic, games or web development.									
BSc (Information and Knowledge Systems) <sup>1</sup> [3 years]	4	3	D	D	5	3	C	C	30 (26–29 admission based on the NBT)
Should a candidate obtain an APS of 26 to 29, consideration for admission will be based on the results of the NBT, provided the quotas regarding student numbers have not been reached. <b>Careers:</b> Graduates will differentiate themselves in an application environment by choosing one of the following options: Applied Mathematics, Genetics, Geographical Information Systems, IT and Enterprises, IT and Law, IT and Music, Operational Research, Philosophy, Psychology or Software Development.									



# Engineering, Built Environment and Information Technology (continued)

Programme	Minimum requirements for 2017								
	Achievement level							APS	
	Afrikaans or English				Mathematics				
SCHOOL OF INFORMATION TECHNOLOGY	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BIS (Information Science) <sup>3</sup> [3 years]	4	3	D	D	-	-	-	-	28 (25-27 admission based on the NBT)
Should a candidate obtain an APS of 25 to 27, consideration for admission will be based on the results of the NBT, provided the quotas regarding student numbers have not been reached. If informatics is selected at first-year level, an achievement level of 5 is required in Mathematics. <b>Careers:</b> Information and knowledge managers (manage information and knowledge resources), information or e-commerce specialists (organise, retrieve and add value to information), consultants on information products (services and systems), information brokers (act as infopreneurs and buy and sell information products and services), and system specialists/analysts/technologists (develop information systems).									
BIS (Publishing) <sup>3</sup> [3 years]	5	3	C	C	-	-	-	-	28 (25-27 admission based on the NBT)
Should a candidate obtain an APS of 25 to 27, consideration for admission will be based on the results of the NBT, provided the quotas regarding student numbers have not been reached. <b>Careers:</b> Entry-level job opportunities include assisting specific role-players in the publishing value chain (such as MDs of publishing houses, commissioning editors, editors, and production or marketing managers), market or picture research, copyright negotiations, copy-editing and proofreading, marketing and promotion, distribution and delivery.									
BCom (Informatics) <sup>3</sup> [3 years]	5	3	C	C	4	3	D	D	30
This programme is administered by the Faculty of Economic and Management Sciences.									

## Law

### Important information on undergraduate programmes for 2017

- In order to register for degree programmes, NSC/IEB/Cambridge candidates must comply with the minimum requirements for degree studies as well as the minimum requirements for the relevant programme.
- Life Orientation is excluded when calculating the Admission Point Score (APS).
- The following persons may also be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.  
**Note:** Candidates who obtained a BA (Law) or BCom (Law) degree at UP will not be subjected to a selection process and will automatically be admitted to register for the LLB degree.
- International students must obtain a full exemption certificate from Universities South Africa before they will be considered for admission.
- A conditional exemption certificate is not accepted for admission to LLB studies.
- LLB is a full-time four-year programme. Students are not permitted to obtain full-time employment while registered for LLB.
- Only applicants who comply with all the above-mentioned admission requirements will be considered for admission.

University of Pretoria website [www.up.ac.za/law](http://www.up.ac.za/law)

Programme	Minimum requirements for 2017					APS
	Achievement level					
	Afrikaans or English					
	NSC/IEB	HIGCSE	AS-Level	A-Level		
LLB <sup>3</sup> [4 years]	5	3	C	C	32*	
Faculty selection: A limited number of students are admitted.  *Candidates with an APS of 32 or higher will, on receipt of their applications, be accepted on a continuous basis until 30 September or until all available places have been taken. Candidates with an APS of 38 or higher will be accepted on a continuous basis until registration in January of the next academic year, irrespective of the number of candidates already accepted.  <b>Careers:</b> Advocates, attorneys, prosecutors, magistrates, legal advisors and academics						
BA (Law) <sup>3</sup> [3 years]	<b>Queries relating to LLB applications:</b> Helen van Tonder, Student Administration, Faculty of Law <b>Tel</b> +27 (0)12 420 4265 <b>Fax</b> +27 (0)12 420 2090 <b>Email</b> helen.vantonder@up.ac.za					
Refer to the Faculty of Humanities for requirements and careers.						
<b>For more information on the BA (Law) programme contact:</b> Ms Harriet Klopfer <b>Tel</b> +27 (0)12 420 2260 <b>Email</b> harriet.klopfer@up.ac.za						
BCom (Law) <sup>3</sup> [3 years]	Refer to the Faculty of Economic and Management Sciences for requirements and careers.					
<b>For more information on the BCom (Law) programme contact:</b> Ms Hermie Coetzee <b>Tel</b> +27 (0)12 420 4375 <b>Email</b> hermie.coetzee@up.ac.za						



## Theology

### Important information on undergraduate programmes for 2017

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded in the calculation of the APS.

University of Pretoria website [www.up.ac.za/theology](http://www.up.ac.za/theology)  
National Benchmark Test website [www.nbt.ac.za](http://www.nbt.ac.za)

Programme	Minimum requirements for 2017				
	Achievement level				APS
	Afrikaans and English				
	NSC/IEB	HIGCSE	AS-Level	A-Level	
BDiv – Bachelor of Divinity (for admission to MDiv studies) <sup>3</sup> [4 years]	4	3	D	D	25 (23-24 admission based on the NBT)
<b>Careers:</b> Ministers, pastors, priests, preachers in certain denominations, missionaries and youth counsellors. Other possibilities include ethics consultants to businesses. Theological studies can be enriching for people in various other vocations. If prospective students are interested in ordained ministry, this should also be discussed with their church leadership. This programme is presented in separate groups in only one language (English or Afrikaans). This is the first step to MDiv studies.					
BTh – Bachelor of Theology <sup>3</sup> [3 years]	4	3	D	D	25 (23-24 admission based on the NBT)
<b>Careers:</b> Ministers, pastors, priests, preachers in certain denominations, missionaries and youth counsellors. Other possibilities include ethics consultants to businesses. Theological studies can be enriching for people in various other vocations. If prospective students are interested in ordained ministry, this should also be discussed with their church leadership. This programme is presented in separate groups in only one language (English or Afrikaans).					
DipTh – Diploma in Theology <sup>3</sup> [3 years]	3	4	E	E	22 (20-21 admission based on the NBT)
<b>Careers:</b> Ministers, pastors, priests, lay preachers in certain denominations, missionaries and youth counsellors. Candidates should consult their church leadership on which would suit their aims best. The Diploma in Theology is intended for candidates who have completed Grade 12 (or its equivalent), but without the required university admission. This programme is only presented in English.					

## Education

### Important information on undergraduate programmes for 2017

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded when calculating the APS.
- Prospective students with an APS of 26-29 must write the National Benchmark Test (NBT). Final admission is determined by the Admissions Committee of the Faculty and is based on the results of the NBT.
- As soon as candidates are admitted to the BEd degree, they will be informed that they must register at the University in January of the following year. It is in the interest of prospective students to apply as soon as possible, particularly in respect of financial support and/or residence placement.

University of Pretoria website [www.up.ac.za/education](http://www.up.ac.za/education)  
National Benchmark Test website [www.nbt.ac.za](http://www.nbt.ac.za)

Programme	Minimum requirements for 2017												
	Achievement level												
	Afrikaans or English								APS				
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BEd (Foundation Phase Teaching) – Pre-primary to Grade 3 <sup>3</sup> [4 years]	4	3	D	D	-	-	-	-	-	-	-	-	30 (26-29 admission based on the NBT)
Careers: Teachers and training officials in pre-primary or primary schools													
BEd (Intermediate Phase Teaching) – Grades 4 to 6 <sup>3</sup> [4 years]	4	3	D	D	-	-	-	-	-	-	-	-	30 (26-29 admission based on the NBT)
Careers: Teachers and training officials in primary schools													
BEd (Senior Phase and Further Education and Training Teaching) – Grades 7 to 12 <sup>3</sup> [4 years]	Choose one of the elective packages below.												
Careers: Teachers and training officials in primary or secondary schools													
Elective packages	Minimum requirements for 2017												
	Achievement level												APS
	Afrikaans or English				Mathematics				Physical Science				
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
General package BEd (Senior Phase and Further Education and Training Teaching)	4	3	D	D	-	-	-	-	-	-	-	-	30 (26-29 admission based on the NBT)
Natural Sciences package BEd (Senior Phase and Further Education and Training Teaching)	4	3	D	D	5	3	C	C	5	3	C	C	30 (26-29 admission based on the NBT)
Economic and Management Sciences package BEd (Senior Phase and Further Education and Training Teaching)	4	3	D	D	4	3	D	D	-	-	-	-	30 (26-29 admission based on the NBT)

Natural and Agricultural Sciences

Important information on undergraduate programmes for 2017

- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded in the calculation of the Admission Point Score (APS).
- Grade 11 results are used for the provisional admission of prospective students. Final admission is based on the Grade 12 results.

University of Pretoria website www.up.ac.za/nas  
National Benchmark Test website www.nbt.ac.za

Programme	Minimum requirements for 2017												
	Achievement level												
BIOLOGICAL SCIENCES	Afrikaans or English				Mathematics				Physical Science				APS
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BSc (Biochemistry) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Biochemistry offers virtually unlimited opportunities for exciting and challenging careers in industry (fine chemicals, food and pharmaceutical industry and waste processing firms) and research councils, such as the Medical Research Council (MRC), the Agricultural Research Council (ARC), the Cancer Association of South Africa and the Water Research Commission, as well as institutes, academic institutions, the Council for Scientific Research (CSIR) and forensic and pathology laboratories. Career opportunities include those of researchers, teachers, lecturers and medical representatives. Bioinformatics graduates are comfortable in work environments such as universities, research institutes, pharmaceutical companies, biotechnology companies and related industries.													
BSc (Biological Sciences) <sup>3</sup>	5	3	C	C	5	3	C	C	5	3	C	C	30
This is a generic first-year programme in Biological Sciences. Students, who are not sure which specialisation degree programme to choose, may apply for this programme. Students who intend on applying for admission to MBChB or BChD in the second semester when places become available in those programmes may register in the first semester for BSc (Biological Sciences) modules, replacing Mathematics (WTW134) with Science and World Views (FL 155), People and their Environment (MGW112) and Medical Terminology (MTL180), with the provision that these students, should they not be selected and should they wish to continue with one of the Biological Sciences programmes, must complete Mathematics (WTW134) in the second semester of their first year. <b>Please note:</b> The minimum admission requirement for MGW112 is an APS score of 34 and a minimum of 70% for Grade 12 Mathematics. Students who wish to apply for admission to one of the BScs places that become available in the second semester of the same year may register for the prescribed subjects of Biological Sciences and for MTL 181 in their first semester. These students must register for WTW 134 in the first semester.													
BSc (Biotechnology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Graduates find work mostly as laboratory-based researchers or bio-entrepreneurs using medical, animal, plant or microbe-based technologies to develop products and services. If students combine biotechnology with additional qualifications such as law, they will be equipped for success in careers such as patent law, pharmaceutical sales and marketing, project management, computer programming (natural computation) and science journalism. Please note that the level of training/qualification plays an important role in determining what type of work a qualified biotechnologist can become involved in.													
BSc (Ecology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Environmentally based statutory and private conservation organisations, organisations involved in the direct or indirect use of natural resources, and academic and training institutions													
BSc (Zoology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Graduates of the Department of Zoology and Entomology can look forward to a range of exciting career prospects. They could be employed at nature conservancies, environmental consultancies, conservation planning agencies, medical and veterinary research institutions, biochemical and biotechnology industries, educational institutions, IT-related fields and the corporate sector. Career opportunities include the full spectrum of potential activities involved in modern research, development and training. These range from full-time involvement in the field or laboratory to full-time training activities, and usually include a stimulating combination of analytical work, fieldwork and human resources-related work.													
BSc (Entomology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Employment at nature reserves, environmental consultancies, conservation planning agencies, the biochemical and biotechnology industries, medical and veterinary research, pest management, quarantine and inspection services, museums, educational and research institutions, IT-related fields and the corporate sector. Graduates with expertise in Entomology are particularly highly sought after in the agricultural sector as insect management specialists or researchers.													
BSc (Genetics) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Graduates in Genetics generally choose to work as molecular biologists, medical or clinical geneticists, cytogeneticists, biotechnologists, agricultural scientists, molecular ecologists, forensic scientists, genetic counsellors, bioinformaticists and computational analysts, veterinary scientists, teachers or lecturers at various institutions and in bioscience-related industries. If students combine genetics with additional qualifications such as law, they will be equipped for success in careers such as patent law, pharmaceutical sales and marketing, project management, computer programming (natural computation) and science journalism. Please note that the level of training/qualification plays an important role in determining what type of work a qualified geneticist can become involved in.													
BSc (Human Genetics) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Graduates in Genetics generally choose to work as molecular biologists, medical or clinical geneticists, cytogeneticists, biotechnologists, agricultural scientists, molecular ecologists, forensic scientists, genetic counsellors, bioinformaticists and computational analysts, veterinary scientists, teachers or lecturers at various institutions and in bioscience-related industries. If students combine genetics with additional qualifications such as law, they will be equipped for success in careers such as patent law, pharmaceutical sales and marketing, project management, computer programming (natural computation) and science journalism. Please note that the level of training/qualification plays an important role in determining what type of work a qualified geneticist can become involved in.													
BSc (Human Physiology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Research is performed in cooperation with medical teams in private and government research laboratories (such as the CSIR and the MRC), the SABs, pharmaceutical firms, universities, veterinary and industrial institutions and state departments (for example, the Department of Health). Physiologists are also found in various other fields, such as education (teachers, lecturers and instructors), sport physiology, biostatistics, bioengineering, industrial hygiene, journalism, medical technology and in the industry as representatives of pharmaceutical firms. Graduates with Genetics and Psychology as subjects also have access to postgraduate programmes offered by the departments of Genetics and Psychology (Faculty of Humanities).													
BSc (Medical Sciences) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Postgraduate studies are highly recommended. Honours, master's and doctoral degrees can be obtained in any of the sub disciplines of anatomy, namely neuro-anatomy, clinical anatomy, cell biology, physical and forensic anthropology, histology and embryology. Students who obtain this degree can also continue with postgraduate studies in Physiology, Genetics and Pharmacology. Career opportunities include research in any of the anatomy sub disciplines, academia, forensic sciences and the health science industry. Other careers that can be considered are in the sport sciences, virology, chemical pathology, immunology, health administration or ergonomics. Technical careers, for example, in the anatomy or physiology departments of universities, are also possible. There are only 72 places in the first year of BSc (Medical Sciences). Students who apply for BSc (Medical Sciences) as their first choice before 30 September and who meet the minimum entrance requirements will be admitted until the places are full. Students who indicate it as their second choice and who meet the minimum entrance requirements will be put on a waiting list and will be considered in January of the first year of study, if places are available.													
BSc (Microbiology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Microbiologists can pursue a variety of careers, ranging from practical applications to basic research. Career opportunities are available in the food, dairy, beer, wine and baker's yeast industries, in the fermentation industry, and at mines with regard to corrosion control. Graduates can also follow careers as medical or veterinary microbiologists, as researchers at organisations such as the CSIR, the MRC or the ARC, or as lecturers and researchers at various academic institutions.													

Programme	Minimum requirements for 2017												APS
	Achievement level												
BIOLOGICAL SCIENCES	Afrikaans or English				Mathematics				Physical Science				APS
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BSc (Plant Science) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Careers range from working in a laboratory to studying plants in their natural environment. Employment could be at biotechnology and pharmaceutical firms, South African National Parks, private ecological companies, research institutions such as the CSIR, the ARC, the South African National Biodiversity Institute, etc.													
Candidates who do not comply with the minimum admission requirements for the Biological Sciences programmes above, may be considered for admission to the BSc – Extended programme below. The BSc – Extended programme takes place over a period of four years instead of the normal three years.													
BSc – Extended programme for the Biological and Agricultural Sciences	4	3	D	D	4	3	D	D	4	3	D	D	24
<b>Please note:</b> The BSc (Plant Science), BScAgric (Plant Pathology) and BScAgric (Applied Plant and Soil Sciences) will soon resort under one School. The curriculum may change. For the most recent information, please consult our website at <a href="http://www.up.ac.za/nas">www.up.ac.za/nas</a> .													

Programme	Minimum requirements for 2017												
	Achievement level												
PHYSICAL SCIENCES	Afrikaans or English				Mathematics				Physical Science				APS
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BSc (Chemistry) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	32
<b>Careers:</b> Graduates in Chemistry are employed in most technology based institutions and work in a laboratory environment as part of an industrial, research or academic institution. A chemist must be able to participate in teamwork in a multidisciplinary environment in a wide variety of enterprises in both the private and public sectors. It is important to note that the type of work available to a graduate in chemistry depends on the level of the qualification obtained. Advanced qualifications will eventually lead to positions in research and/or production management and require management skills and financial planning. Many career opportunities are found in the sectors of education, research, journalism, environmental protection, food and beverages, energy, water, health, sport, pharmaceuticals and cosmetics, geology, mining and law enforcement. These include the well-known professions of synthetic chemists, materials scientists, chemical pathologists, forensic chemists, analytical chemists, drug analysts, patent lawyers, environmental chemists, geochemists, food chemists, polymer chemists and soil chemists.													
BSc (Physics) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	32
<b>Careers:</b> University academics, whose duties include lecturing, research and the supervision of postgraduate students, researchers in national laboratories such as the Nuclear Energy Corporation of South Africa (NECSA), the South African Astronomical Observatory or iThemba LABS (Laboratory for Accelerator-based Sciences), researchers in industry such as at the CSIR or Element Six, science advisors for non-governmental organisations, industry or government, radiation scientists, medical and biophysicists, atmospheric scientists and climatologists, developers of renewable energy sources, geophysicists, innovators and entrepreneurs, computational scientists, etc. International collaboration with experts from abroad also takes place.													
BSc (Geography) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	32
<b>Careers:</b> There are three main career fields in geography: teaching, research and the application of geographical knowledge and skills in practice. Geographers can focus on environmental management, urban issues such as squatting, regional and rural development, or environmental issues, including pollution and the destruction of ecosystems through activities such as mining, agriculture and tourism. Geographers in the private sector are generally employed by real estate, research, architecture and engineering firms, banks, tourism organisations, environmental conservation bodies and industry. Government departments involved in forestry, water and land affairs, the environment, tourism and education also employ geography graduates. Parastatal organisations such as the SABs and the CSIR offer career opportunities in the various specialised fields related to the earth and environmental sciences. Many geographers are self-employed. They are mainly involved in areas such as marketing, planning, development, tourism, cartography, geographic information systems (GIS), remote sensing, environmental analysis and environmental auditing. Graduates can also pursue academic careers.													
BSc (Geoinformatics) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	32
<b>Careers:</b> Graduates are employed, among others, in agriculture, mineral exploration, engineering, forestry, water resource management, weather forecasting, environmental impact assessment (EIA), land-use planning, land development, rural community development, transport planning, tourism, market research, crime prevention, vehicle tracking, cartography, GIS technology, environmental planning and analysis, and disaster and environmental management. Graduates can apply for professional registration as GIS technologists with the South African Council for Professional and Technical Surveyors (PLATO).													
BSc (Geology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	32
<b>Careers:</b> Large international mining companies are major employers of geologists and other geoscientists in research, exploration and mining projects. However, employment is increasingly to be found in smaller, entrepreneurial firms ("juniors"). Interesting careers are also offered by the Council for Geosciences, the CSIR, the Council for Mineral Technology (MINTeK), the Department of Water Affairs and at museums, engineering firms and consulting companies. Graduates may even operate as self-employed consultants in their own firms. Laboratory specialists like mineralogists identify and examine minerals using sophisticated instruments and analytical equipment. Environmental and engineering geologists study the interaction between human activities and the geological environment, such as the pollution of soil and groundwater. They investigate geological structures and soil, and rock properties at construction sites, for example, dams, tunnels and mines, in order to provide valuable information prior to construction. They also locate and evaluate suitable construction materials. The task of the hydro geologist is to look for groundwater and monitor the responsible exploitation of that water.													
BSc (Meteorology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	32
<b>Careers:</b> Meteorologists are employed by institutions involved in the study, interpretation and prediction of weather and phenomena relating to the climate. The South African Weather Service (SAWS), the CSIR, some universities, agricultural institutions and general industries employ meteorologists who mainly practise as specialists in the following areas: <ul style="list-style-type: none"><li><b>Researchers:</b> They research all aspects of the weather and climate in order to improve understanding of atmospheric phenomena. Atmospheric modellers use supercomputers to solve complex flow dynamic equations of the atmosphere. The monitoring of air quality and the modelling of the impact of air pollution on society are two important aspects that need to be addressed. Research into climate change is receiving increasing attention.</li><li><b>Weather forecasters:</b> It is the duty of the forecaster to analyse data and predict the weather by using models that are run on supercomputers. Weather forecasts are issued on different time scales, from very short-range forecasting to forecasts valid for months ahead, as well as seasonal forecasts. There are also some private weather forecasting positions, such as presenting the weather on television.</li><li><b>Climatologists:</b> They manage important data sets that contain large volumes of information gathered by the SAWS and other organisations.</li><li><b>Consultants:</b> Some meteorologists who work as consultants in the private sector and at universities provide specialised research services.</li><li><b>Lecturers:</b> A few academic positions are available for meteorologists and climatologists at South African universities. They ensure that the training of meteorologists meets international standards.</li></ul>													
BSc (Environmental Sciences) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	32
<b>Careers:</b> Environmental consultants, air quality managers, environmental impact analysts, environmental protection agents, hazardous material specialists, public health educators, researchers, water quality specialists, natural resource managers, risk managers, environmental educators, wetlands scientists, wildlife conservationists, environmental planners and analysts, wastewater treatment experts, programme and project managers, natural resources experts, researchers													
BSc (Environmental and Engineering Geology) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	32
<b>Careers:</b> Geologists, mineralogists, extraction metallurgists, economic geologists, geochemists, environmental and engineering geologists, geohydrologists, laboratory specialists, consultants													
Candidates who do not comply with the minimum admission requirements for the Physical Sciences programmes above, may be considered for admission to the BSc – Extended programme below. The BSc – Extended programme takes place over a period of four years instead of the normal three years.													
BSc – Extended programme for the Physical Sciences	4	3	D	D	4	3	D	D	4	3	D	D	26
<b>Please note:</b> BSc (Plant Science), BScAgric (Plant Pathology) and BScAgric (Applied Plant and Soil Sciences) will soon resort under one School. The curriculum may change. For the most recent information, please consult our website at <a href="http://www.up.ac.za/nas">www.up.ac.za/nas</a> .													

Programme	Minimum requirements for 2017												
AGRICULTURAL AND FOOD SCIENCES	Afrikaans or English				Mathematics				Physical Science				APS
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	
BSc (Food Management) <sup>3</sup> [4 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Food service managers, quality controllers, teachers, researchers, food product developers, marketers, entrepreneurs, consultants, food journalists, teachers and trainers													
BSc (Food Science) <sup>3</sup> [3 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Food scientists with highly marketable training and professional skills work as food risk investigators, quality and safety assurance managers, food chemists, food microbiologists and biotechnologists, packaging and shelf life specialists, safety auditors, product and process development managers, technical sales and marketing advisors, sensory scientists, food bio-scientists (brew masters, flavourists) in the food, food agro processing and related industries. The work environment of food scientists includes laboratories, food production sites and business premises, training areas, retail, government institutions and research organisations. Food scientists also work in industries and companies that manufacture and supply materials (packaging and food additives, such as colourants and flavourants) for the food industry or that have secondary involvement in food production and sales.													
BSc (Nutrition) <sup>3</sup> [4 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
Students will be able to register as natural scientists with SACNASP and may continue with a research-based MSc in Nutrition. <b>Careers:</b> The need for graduates with training in nutrition is driven by the worldwide recognition that food does not only meet basic nutrition needs, but also plays a key role in the promotion and maintenance of long-term good health. Career opportunities include working in food or related industries (such as pharmaceutical companies), government departments, international organisations (such as the Food and Agricultural Organisation (FAO) and the World Health Organisation (WHO)) or research organisations, and as account managers and advisors in the food, health and consumer sectors.													
BScAgric (Food Science and Technology) <sup>3</sup> [4 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Food scientists with highly marketable training and professional skills work as food risk investigators, quality and safety assurance managers, food chemists, food microbiologists and biotechnologists, packaging and shelf life specialists, safety auditors, product and process development managers, technical sales and marketing advisors, sensory scientists and food bio-scientists (brew masters, flavourists) in the food, food agro-processing and related industries. The work environment of food scientists includes laboratories, food production sites and business premises, training areas, retail, government institutions and research organisations. Food scientists also work in industries and companies that manufacture and supply materials (packaging and food additives, such as colourants and flavourants) for the food industry or that have secondary involvement in food production and sales.													
BScAgric (Agricultural Economics and Agribusiness Management) <sup>3</sup> [4 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Agricultural economists are involved in many different areas of the economy. Some are involved in analysing and understanding consumers' behaviour in terms of their wants, needs and willingness to pay for food and clothing. Other agricultural economists are involved in environmental management and assisting government and businesses to ensure the sustainable use of scarce resources such as water and arable land. Some agricultural economists are traders on global financial markets and work at the Johannesburg Stock Exchange (JSE) in Sandton or at Wall Street in New York. Some other agricultural economists work for banks and in finance, at food processors such as bakers and brewers, while others advise farmers and input suppliers. Some agricultural economists work for the government, advising them on how to ensure that there is enough food for all the people in the country, while other agricultural economists work in commercial banks, advising clients and managers how to manage finance, risk and commodity markets. Agricultural economists also play a vital part in research and development in the agricultural sector. Agricultural economists travel a lot and meet many interesting people. They travel both locally and to most other parts of the world, such as Africa, the USA, China, South America, Australia and Europe. They do this to buy the best inputs to produce food and clothing, but also to identify and understand markets for products. Therefore an agricultural economist is somebody who is interested in people and their culture, in nature, but also in business and management. An agricultural economist needs to be able to interact with people, but also use statistics and mathematics to understand the interaction between people, nature and the economy.													
BScAgric (Animal Science and Pasture Science) <sup>3</sup> [4 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Animal science is a career that makes an important contribution to agriculture in South Africa. This career is focused on the application of the scientific aspects of animal production and quality control of the products to ensure consumer satisfaction. It is a field of science, subject to the most recent research and needs of both animals and humans. There are numerous career opportunities for animal and wildlife scientists in research, commercial farming, the public sector and for professionals in the animal science industry. Animal scientists can work on different levels in these sectors, ranging from researchers, animal nutrition or breeding consultants, technical representatives, game managers and policy-makers. The BScAgric (Animal Science) degree is acknowledged as a professional qualification by the South African Council for Natural Scientists in terms of Act 106 of 1993, and is recognised internationally.													
BScAgric (Plant Pathology) <sup>3</sup> [4 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Seed cultivators, farmers, researchers, lecturers, consultants													
BScAgric (Applied Plant and Soil Sciences) <sup>3</sup> [4 years]	5	3	C	C	5	3	C	C	5	3	C	C	30
<b>Careers:</b> Education and training at schools and academic institutions. Research and management at various public and private institutions • <b>Public sector:</b> The Agricultural Research Council (ARC), Department of Water and Environmental Affairs, Department of Tourism, Department of Agriculture, Forestry and Fisheries, Department of Mineral Resources, Department of Energy, the CSIR, provincial agriculture and nature conservation departments, the South African National Biodiversity Institute, municipalities, South African National Parks, national farming and food production agencies, etc. • <b>Private sector:</b> Companies involved in seed, fertilizer and plant protection research and development, environmental planning and management, nurseries, vegetable, fruit and ornamental cut flower production, irrigation, etc. • <b>Extension services involving knowledge transfer:</b> Nature conservation, national and provincial departments of agriculture and the environment, environmental management and rehabilitation, nurseries, crop, turf grass and weed management, private companies servicing field crops, vegetables, medicinal and aromatic plants, fruit, ornamental and cut flower production, etc. • <b>Entrepreneurial:</b> Consultants in crop, pasture, vegetable, medicinal and aromatic plants, ornamental and cut-flower production systems and landscaping enterprises. Management of own farms and nurseries for extensive (field) or intensive (tunnel/greenhouse) production systems involving various crops. Managing companies specialising in irrigation, reclamation and soil conservation													
Candidates who do not comply with the minimum admission requirements for the Agricultural and Food Sciences programmes above, may be considered for admission to the BSc – Extended programme. The BSc – Extended programme will take one year longer to complete.													
<b>Please note:</b> BSc (Plant Science), BScAgric (Plant Pathology) and BScAgric (Applied Plant and Soil Sciences) will soon resort under one School. The curriculum may change. For the most recent information, please consult our website at <a href="http://www.up.ac.za/nas">www.up.ac.za/nas</a> .													

Programme	Minimum requirements for 2017												
	Achievement level												
	Afrikaans or English				Mathematics				Physical Science				
CONSUMER SCIENCES	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	APS
BConsumer Science (Clothing: Retail Management) <sup>3</sup> [4 years]	5	3	C	C	4	3	D	D					28
<b>Careers:</b> Retail management: Floor or store managers, visual merchandisers, buyers in the fashion industry, fashion advertising, fashion journalists, textile technologists (quality controllers) and entrepreneurs													
BConsumer Science (Foods: Retail Management) <sup>3</sup> [4 years]	5	3	C	C	4	3	D	D					28
<b>Careers:</b> Managers in restaurants, catering, food service, marketing or sales managers, educators and trainers, journalists, consumer consultants, entrepreneurs, and marketing or sales managers													
BConsumer Science (Hospitality Management) <sup>3</sup> [4 years]	5	3	C	C	4	3	D	D					28
<b>Careers:</b> Hotel and restaurant managers, hotel chefs de cuisine (executive chefs), hotel executive housekeepers, marketing, sales or catering managers, educators and trainers, journalists, consumer consultants, entrepreneurs													

Programme	Minimum requirements for 2017												APS
	Achievement level												
	Afrikaans or English				Mathematics								
MATHEMATICAL SCIENCES	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level					
BSc (Actuarial and Financial Mathematics) <sup>3</sup> [3 years]	5	3	C	C	7	1	A	A	34				
<b>Careers:</b> Actuarial and financial mathematics is a popular field, with career opportunities in the business market and at investment institutions like banks and insurance companies. The skills of mathematicians are essential in portfolio management and the modelling of financial risk. This programme prepares students for professional careers as actuaries or financial engineers. For actuaries or actuarial technicians, activities include long-term capital projects, designing the benefits of medical schemes, the management of pension funds, the determination of contributions and financial management on a sound long-term basis, the evaluation of investments in shares, property and other transactions, and the determination of the premiums and reserves for outstanding claims of insurers. Financial engineers can be employed by banks and financial institutions, brokerage firms and investment institutions. The mathematical skills of financial engineers are essential in portfolio and risk management. Activities include asset management (trading in bonds, futures and derivative instruments such as options), designing new financial products, and devising strategies to control credit risk.													
BSc (Mathematics) <sup>3</sup> [3 years]	5	3	C	C	6	2	B	B	32				
<b>Careers:</b> Graduates in mathematics and applied mathematics are employed by research institutions, educational bodies (universities and schools), the public sector (government, medical institutions, etc) and the private sector (engineering companies, financial institutions, the computer industry, etc). These graduates' training in abstract, analytical and computational thinking provides them with the background to easily adjust to changing circumstances in the professional environment and to construct mathematical models of natural, technological and financial phenomena. Mathematicians and applied mathematicians apply, evaluate and adapt existing problem solving techniques or develop new techniques to solve problems.													
BSc (Mathematical Statistics) <sup>3</sup> [3 years]	5	3	C	C	6	2	B	B	32				
<b>Careers:</b> <ul style="list-style-type: none"><li><b>Financial institutions:</b> Statisticians specialising in economic applications of statistics (econometrics) deal with aspects such as national production and expenditure, international economic relations, employment, public finance and related issues. In the insurance business, statisticians are employed in areas such as actuarial work, marketing, share investments and property investments. Market research organisations play an indispensable role in the gathering of information that is used to improve the quality of decision-making in various industries.</li><li><b>Industry:</b> Statisticians are increasingly employed in industries such as mining and production, and government corporations, for example, Eskom, Sasol, AECI, and the pharmaceutical industry in general. Organised agriculture is another vitally important industry where sophisticated statistical techniques are used to meet the growing demand for food and services.</li><li><b>Research councils:</b> Research councils and educational institutions are well-known large employers of scientists of diverse disciplines and employ statisticians to ensure scientifically founded research outputs. These include the MRC, the CSIR, the ARC and the HSRC. Statisticians are also involved in the training of students at universities. The challenges of modern education and good research are of great relevance, especially in South Africa.</li><li><b>The public sector:</b> The government employs statistically proficient people in many of its departments, the most prominent being Statistics South Africa. This department is responsible for the five-yearly population census and the calculation of well-known economic indicators like the inflation rate.</li></ul>													
Candidates who do not comply with the minimum admission requirements for the Mathematical Sciences programmes above, may be considered for admission to the BSc – Extended programme below. The BSc – Extended programme takes place over a period of four years instead of the normal three years.													
BSc – Extended programme for Mathematical Sciences	4	3	D	D	5	3	C	C	26				
<b>BSc (Actuarial and Financial Mathematics):</b> 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 percentage of at least 60% as well as a minimum percentage of 60% for WTW143 and WTW153.													

## Veterinary Science

### Important information on undergraduate programmes for 2017

- All programmes in this Faculty include selection procedures, which are based on academic merit, the results of the National Benchmark Test (NBT) and a Value-added Questionnaire, among others. Applicants, who indicate BVSc (Bachelor of Veterinary Science) or the Diploma in Veterinary Nursing as their first choice, will be given preference. In order to retain provisional admission candidates should comply with the minimum subject and Admission Point Score (APS) requirements based on their final school-year Examination results.
- The following persons will be considered for admission: a candidate who is in possession of a certificate that is deemed by the University to be equivalent to the required Grade 12 certificate with university endorsement; a candidate who is a graduate from another tertiary institution or has been granted the status of a graduate of such an institution; and a candidate who is a graduate of another faculty at the University of Pretoria.
- Life Orientation is excluded when calculating the APS.

**University of Pretoria website** [www.veterinary.up.ac.za](http://www.veterinary.up.ac.za)  
**National Benchmark Test website** [www.nbt.ac.za](http://www.nbt.ac.za)

Programme	Minimum requirements for 2017													APS			
	Achievement level																
	English				Mathematics				Life Sciences				Physical Science				
	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB	HIGCSE	AS-Level	A-Level	NSC/IEB		HIGCSE	AS-Level	A-Level
BVSc (Bachelor of Veterinary Science) <sup>1</sup> [6 years]	5	3	C	C	5	3	C	C	-				5	3	C	C	32
The NBT and the Value-added Questionnaire are compulsory components of the selection process. Applicants with an APS between 30 and 32 will be considered for access into the BSc – Extended programme for the Biological and Agricultural Sciences. Candidates in this category are admitted into the second semester of the first year of BVSc, after successful completion of the first three semesters of the BSc – Extended programme. <b>Careers:</b> Veterinarians in private practice, research, academia or state veterinary services. Veterinarians can also work in the following fields: diagnostic laboratories, veterinary public health (milk and meat hygiene, control of transfer of disease), technical services, research and product development in pharmaceutical and food industries, consultancy, laboratory animal management, wildlife management, poultry and pig production and animal welfare.																	
Diploma in Veterinary Nursing <sup>1</sup> [2 years]	4	3	D	D	4	3	D	D	4	3	D	D	4	3	D	D	24
The NBT and the Value-added Questionnaire are compulsory components of the selection process. <b>Careers:</b> Veterinary nurses can be employed by the following institutions: private veterinary practices, veterinary academic hospitals, the pharmaceutical industry, the animal food industry, animal welfare societies, zoological gardens, game parks, laboratory animal units, rehabilitation centres, research centres, animal boarding establishments, organised agriculture, dairies and farming operations. <b>Please note:</b> The University plans to offer a three-year Veterinary Nursing degree, which may be introduced in 2017 (pending CHE accreditation).																	

