Undergraduate Faculty Brochure

2027

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en Inligtingtegnologie / Lefapha la Boetšenere, Tikologo ya Kago le Theknolotši ya Tshedimošo

Make today matter

www.up.ac.za

MESSAGE FROM THE DEAN

Welcome to the University of Pretoria's Faculty of Engineering, Built Environment and Information Technology

Prof Wynand JvdM Steyn, Dean: Faculty of Engineering, Built Environment and Information Technology, University of Pretoria

Finding innovative solutions that lead to real-world change is at the heart of the University of Pretoria's Faculty of Engineering, Built Environment and Information Technology (EBIT). We are home to a generation of leaders and innovators who are dedicated to making a difference.

Our students and researchers aim to make a positive impact on society by tackling topics that address global challenges. Through innovative research and collaborative community engagement, we work to create the change we want to see in the world.

From first year to graduation, our students are encouraged to do more than simply qualify for a profession. We nurture graduates to become engineers who solve future challenges, built environment practitioners who create sustainable solutions for society, and IT specialists who harness the disruptive technologies of the Fourth Industrial Revolution for the benefit of people everywhere.

Our academic community is deeply concerned about the future of humanity, especially when it comes to global challenges such as energy, food, infrastructure and data security. To tackle these, we combine knowledge from different fields—engineering, IT and the built environment—so that our solutions are more effective and impactful. Our work is inspired by the idea of Society 5.0, a vision of the future where technology such as AI, robotics and digital systems is used in a human-centred way. The goal is to create solutions that are sustainable not only for industry, but for everyday life as well, helping people live more comfortably and in harmony with technology.

A degree from the EBIT Faculty at the University of Pretoria equips students to become industry professionals who go beyond traditional concepts—finding solutions such as improving dams and sewerage systems to enhance water security, or designing sensors to monitor water quality.

Our graduates become built environment practitioners who design and plan spaces that improve daily life—for example, clinics and schools that are accessible to rural communities, housing close to job opportunities and infrastructure that enables efficient transport. They also become IT specialists who ensure access to secure data and develop ICT solutions that support health, education and food security. Our goal is to innovate while staying relevant to today's challenges.

ACCREDITATION

The various programmes in the School of Engineering are accredited by the Engineering Council of South Africa (ECSA), and the degrees meet the requirements for professional engineers in South Africa.

All the programmes in the School for the Built Environment are internationally recognised and accredited by their respective statutory councils, allowing students to register as members of their chosen professions. All the degree offerings in the School of Information Technology (SIT) are highly sought after in the IT industry with a focus on industry-related trends. The curriculum conforms to the highest international standards. We are very proud to be a member of the iSchools Organisation.

EBIT IS ORGANISED INTO FOUR SCHOOLS

- School of Engineering
- School for the Built Environment
- School of Information Technology
- Graduate School of Technology Management

CONTENT

** Possible name change to: Bachelor of Information Science specialising in Interactive Technology*

Produced by the Department of Enrolment and Student Administration in December 2025.
Comments and queries may be directed to ssc@up.ac.za or tel: +27 (0)12 420 3111.

FACULTY WEBSITE:

POSTGRADUATE WEBSITE:

FACULTY OF ENGINEERING, BUILT ENVIRONMENT AND INFORMATION TECHNOLOGY AT A GLANCE

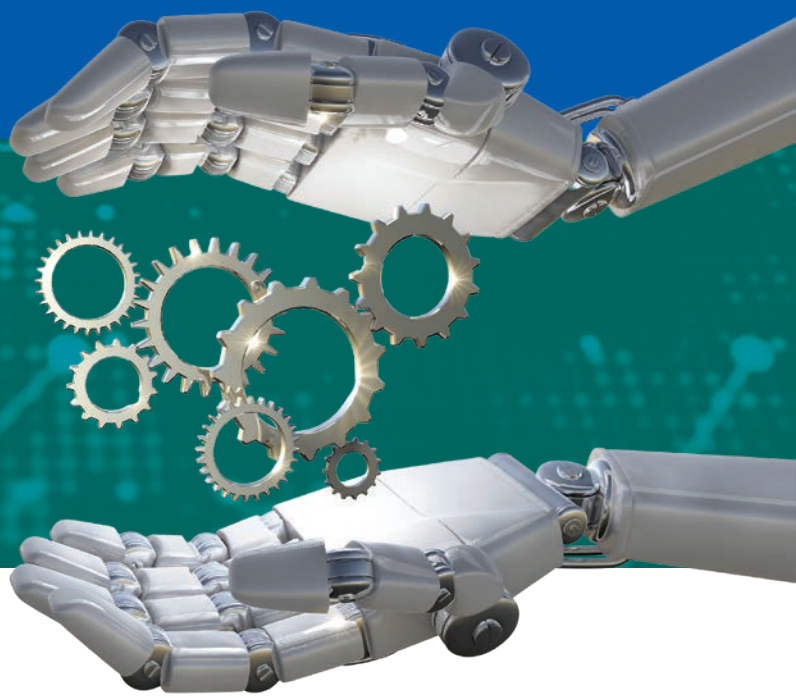
No. 1 in South Africa
for mechanical engineering (Shanghai Rankings; QS Rankings)

No. 1 in South Africa
for metallurgical engineering (Minerals Education Trust Fund)

Top 41 in the world
for mineral and mining engineering (QS Rankings)

72%
of academic staff members have doctorates

100
NRF-rated researchers



Offers 14
specialised academic departments spread across four schools including; School of Engineering, School for the Built Environment, School of Information Technology and Graduate School of Technology Management

Offers 22
accredited undergraduate degree programmes and 116 postgraduate programmes.

ABOUT THE FACULTY

TOP 384

EBIT is a source of locally relevant and internationally competitive programmes, and home to some of the University's exceptional researchers. We are one of the few academic faculties in Africa ranked among the top 750 in six different engineering and technology subject areas.*

- Minerals & Mining Engineering
- Chemical Engineering
- Mechanical & Aeronautical Engineering
- Electrical & Electronic Engineering
- Computer Science & Information Systems
- Material Science

WE HAVE WHAT YOU ARE LOOKING FOR

22	37	57	24	90+
Undergraduate programmes	Honours programmes	Master's programmes	Doctoral programmes	Academic laboratories

** Rankings based on 2025 QS World University Rankings*

Why #ChooseUP?

As one of the country's oldest and most prestigious universities, the University of Pretoria produces sought-after graduates, who become well-rounded, socially responsible citizens. The Faculty of Engineering, Built Environment and Information Technology (EBIT) is the largest of the University's nine faculties. The University strives to instill in its students, graduates and staff a realisation that every action in the present shapes the future, and encourages them to **make today matter.**

UP *AT A GLANCE*

UP has achieved top subject rankings in South Africa: for example, in the 2025 Times Higher Education Subject Rankings it is No. 1 in SA in Accounting & Finance; Architecture; Electrical & Electronic Engineering; Law; Sport Science; and Veterinary Science. UP is globally competitive: in the 2025 Quacquarelli Symonds (QS) Subject Rankings, it ranks in the top 50 for several subjects (e.g., Agriculture & Forestry, Biological Sciences, Engineering & Technology).

UP is the only university in South Africa with a **Faculty of Veterinary Science**—and that faculty is ranked best in Africa.

UP secured a **100% pass rate in the SAICA** first professional exam (now called IAC) for the third year in a row.

The University of Pretoria is ranked **number one in South Africa for Law** in the 2025 Times Higher Education Subject Rankings.

Life beyond academics matters at UP: the university highlights its culture of 'more than study'—arts, culture, sports, student societies.

Faculty of Economic and Management Sciences

#1	in SA and Top 201-250 globally in Accounting & Finance
#1	in SA and Top 101-150 globally in Economics
8	academic departments, and School of Public Management and Administration
64%	of academic staff hold doctoral degrees

Faculty of Education

82%	academic staff hold doctoral degrees
20	NRF-rated researchers
5	academic departments
Top 351-400	Ranked among Top 351-400 Education faculties globally
Top 5	Ranked among Top 5 Education faculties in South Africa

Faculty of Health Sciences

68%	of academic staff hold doctoral degrees
52	NRF-rated researchers
6	research chairs
43	specialised academic departments
Top 312	globally for Life Sciences and Medicine

Faculty of Humanities

71%	of academic staff hold doctoral degrees
67	NRF-rated researchers
25	international partnerships and agreements
23	specialised undergraduate degree programmes
12	academic programmes

Faculty of Law

72%	of academic staff hold doctoral degrees
23	NRF-rated researchers
Largest	Law of Africa collection in the world
10	advanced Human Rights courses
#1	Law faculty in Africa since 2017, and #125 globally

Faculty of Natural and Agricultural Sciences

#1	in Africa for Ecology and Top 75 globally
13	specialised academic departments
92%	of academic staff hold doctoral degrees
216	NRF-rated researchers
9	research centres and institutes

Faculty of Theology and Religion

#1	in SA and #76 globally for Theology, Divinity and Religion
92%	placement rate for graduates
100%	academic staff hold doctoral degrees
23	NRF-rated researchers
11	international partnerships and agreements

Faculty of Veterinary Science

98%	undergraduate pass rate
Top 51-100	in QS world University Subject Rankings for 2025
51%	of academic staff hold doctoral degrees
35	NRF-rated researchers
100%	Responsible for 100% of all South African veterinary science degrees

ADMISSION REGULATIONS

General admission regulations that apply to all prospective students

1. The admission requirements and general information provided in this Faculty brochure are applicable to students who apply for admission to the University of Pretoria with a National Senior Certificate (NSC) or an Independent Examination Board (IEB) qualification.
2. The following persons will be considered for admission to a first bachelor's degree at the University of Pretoria:
   - Candidates who have a certificate that is deemed by the University to be equivalent to the required National Senior Certificate (NSC) with bachelor's degree endorsement;
   - Candidates who are graduates from another tertiary institution or have been granted the status of a graduate of such an institution; and
   - Candidates who are graduates of another faculty at the University of Pretoria.
3. Grade 11 results are used for the conditional admission of prospective students, but final admission will depend on the NSC (or equivalent) qualification and results.
4. Candidates must also comply with the specific subject and achievement level requirements and the minimum Admission Point Score (APS) for their chosen degree programmes.
5. The APS calculation is done by using the NSC 1 to 7 scale of achievement. It is based on a candidate's achievement in six recognised 20-credit subjects. The highest APS that can be achieved is 42. Life Orientation is a 10-credit subject and is excluded from the calculation when determining the APS. The following subject rating scores are used for calculating the APS for NSC/IEB:

Admission Point Score (APS) Conversion

Rating code	Rating	Marks %
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%

NSC – National Senior Certificate (completed Grade 12 in or after 2008)
IEB – Independent Examination Board

6. Except in cases where modules or programmes require the use of a language other than English, all modules will be presented in English, which is the University's official language of tuition, communication and correspondence.
7. Minimum requirements for admission to the relevant programmes are set out in the minimum admission requirements table in this brochure.
8. Meeting the minimum admission requirements does not guarantee admission into a programme.
9. Applicants with qualifications other than NSC and IEB should refer to the following publication:
   - *International Undergraduate Prospectus 2027: Applicants with a school leaving certificate not issued by Umalusi* (South Africa)*, available at www.up.ac.za/programmes > Undergraduate > Admission information.
10. **School of Tomorrow** (SOT), **Accelerated Christian Education** (ACE) and **General Education Development** (GED): These qualifications are not accepted at the University of Pretoria.
11. **National Certificate (Vocational)** (NCV) Level 4: The University of Pretoria may consider NCV candidates, provided they meet the exemption for bachelor's status criteria and the programme requirements.

* **Umalusi** accredits South African private providers of education and training as well as private assessment bodies to offer tuition and/or assessment for qualification(s) on the General and Further Education and Training Qualifications Sub-Framework (GFETQSF). Contact Umalusi at info@umalusi.org.za or +27 (0)12 349 1510.

Note: Refer to the General Academic Regulations and Student Rules at www.up.ac.za/yearbooks/home, click on 'General Rules and Regulations'.

APPLICATION AND CLOSING DATES:
- Applications open on 1 April. All study programmes at the University of Pretoria are number-limited. You are encouraged to submit your application as soon as possible after 1 April.
- The closing date for applications for all UP study programmes is 30 June. This excludes the programmes in the Faculty of Veterinary Science which close on 31 May.

APPLICATION STATUS:
- Apply with your final Grade 11 (or equivalent) results.
- Applicants can expect feedback by September at the latest.
- Please check your application status and communication regularly on the UP Student Portal at www1.up.ac.za.
- Final admission will be based on the applicant's final school-year NSC or equivalent results.

ADMISSION REGULATIONS

Faculty-specific admission regulations

- Conditional admission to a four-year Engineering degree programme is only considered if a student meets all the requirements in the undergraduate minimum admission requirements table.
- Admission to the five-year Bachelor of Engineering programme [previously called ENGAGE] in the School of Engineering is based on NSC results, with a minimum of 65% in English, 65% in Mathematics, 65% in Physical Sciences and an Admission Point Score (APS) of 33.
- Students can apply directly for the five-year Bachelor of Engineering programme for any engineering discipline.
- If a prospective student meets the APS requirements but is not accepted into their first-choice programme, they may be considered for their second-choice programme.

University of Pretoria website www.up.ac.za/ebit

Application requirements

- The closing date for applications for programmes in this faculty is 30 June.
- Meeting the minimum admission requirements does not guarantee admission into a programme.

University of Pretoria programme qualification verification

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.

SCHOOL OF ENGINEERING

Programmes	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Engineering in Chemical Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics				
Careers: Refer to 'Career Opportunities' section on page 13.				
Bachelor of Engineering in Civil Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics, Bachelor of Science in Physics, Bachelor of Science in Construction Management and Bachelor of Science in Quantity Surveying				
Careers: Refer to 'Career Opportunities' section on page 15.				
Bachelor of Engineering in Computer Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics, Bachelor of Science in Physics and Bachelor of Information Technology in Information Systems				
Careers: Refer to 'Career Opportunities' section on page 21.				
Bachelor of Engineering in Electrical Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics				
Careers: Refer to 'Career Opportunities' section on page 18.				
Bachelor of Engineering in Electronic Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics				
Careers: Refer to 'Career Opportunities' section on page 19.				
Bachelor of Engineering in Industrial Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics, Bachelor of Science in Physics and Bachelor of Information Technology in Information Systems				
Careers: Refer to 'Career Opportunities' section on page 24.				
Bachelor of Engineering in Mechanical Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics				
Careers: Refer to 'Career Opportunities' section on page 28.				

**Please apply for your second-choice programme if your APS and subject requirements of your first-choice programme are not obtained.*

UNDERGRADUATE PROGRAMMES

Programmes	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Engineering in Metallurgical Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics				
Careers: Refer to 'Career Opportunities' section on page 25.				
Bachelor of Engineering in Mining Engineering [4 years]	5	6	6	**35**
Suggested second-choice programmes*: Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics				
Careers: Refer to 'Career Opportunities' section on page 29.				
Bachelor of Engineering [5 years] This is a five-year programme for all Engineering disciplines. *Previously called ENGAGE*	65%	65%	65%	**33**
For advice on a second-choice programme, please consult a student advisor. To make an appointment, send an email to carol.bosch@up.ac.za.				
Note: The admission requirements above are relevant to prospective students who will commence their studies in 2027. Admission to the five-year programme in the School of Engineering will be determined by the NSC results.				

SCHOOL FOR THE BUILT ENVIRONMENT

Programmes	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Science in Architecture [3 years]	5	4	4	**30**
Will only be considered as first study choice. Selection programme: Selection includes an interview.				
Careers: Refer to 'Career Opportunities' section on page 36.				
Bachelor of Science in Construction Management [3 years]	5	5	or Accounting 4	**30**
Suggested second-choice programme*: Bachelor of Science in Real Estate				
Careers: Refer to 'Career Opportunities' section on page 37.				
Bachelor of Science in Real Estate [3 years]	5	5	or Accounting 4	**30**
Suggested second-choice programme*: Bachelor of Commerce in Investment Management				
Careers: Refer to 'Career Opportunities' section on page 41.				
Bachelor of Science in Quantity Surveying [3 years]	5	5	or Accounting 4	**30**
Suggested second-choice programmes*: Bachelor of Science in Construction Management and Bachelor of Science in Real Estate				
Careers: Refer to 'Career Opportunities' section on page 39.				
Bachelor of Town and Regional Planning [4 years]	5	4	-	**30**
For advice on a second-choice programme, please consult a Student Advisor. To make an appointment, send an email to carol.bosch@up.ac.za.				
Careers: Refer to 'Career Opportunities' section on page 44.				

**Please apply for your second-choice programme if your APS and subject requirements of your first-choice programme are not obtained.*

UNDERGRADUATE PROGRAMMES

SCHOOL OF INFORMATION TECHNOLOGY

Programmes	Application requirements for NSC/IEB for 2027		
	Achievement level		APS
	English Home Language or English First Additional Language	Mathematics	
Bachelor of Commerce specialising in Information Systems [3 years]	5	5	**30**
This programme is administered by the Faculty of Economic and Management Sciences. **Suggested second-choice programme*:** Bachelor of Information Technology in Information Systems			
Careers: Refer to 'Career Opportunities' section on page 50.			
Bachelor of Information Science [3 years]	4	-	**28**
Suggested second-choice programmes*: Bachelor of Information Science specialising in Publishing and Bachelor of Arts			
If specialising in Information Systems is selected as a subject at the first-year level, an achievement level of 5 is required in Mathematics. **Careers:** Refer to 'Career Opportunities' section on page 53.			
Bachelor of Information Science specialising in Publishing [3 years]	5	-	**28**
Suggested second-choice programmes*: Bachelor of Information Science, Bachelor of Arts specialising in Languages and Bachelor of Arts			
Careers: Refer to 'Career Opportunities' section on page 54.			
Bachelor of Information Science specialising in Multimedia** [3 years]	4	5	**30**
Suggested second-choice programmes*: Bachelor of Information Science, Bachelor of Information Science specialising in Publishing, Bachelor of Science in Information Technology in Information and Knowledge Systems and Bachelor of Information Technology in Information Systems			
Careers: Refer to 'Career Opportunities' section on page 52.			
Bachelor of Information Technology in Information Systems [3 years]	5	5	**30**
Suggested second-choice programme*: Bachelor of Information Science			
Careers: Refer to 'Career Opportunities' section on page 49.			
Bachelor of Science in Computer Science [3 years]	5	6	**30**
Suggested second-choice programmes*: Bachelor of Science in Information Technology in Information and Knowledge Systems and Bachelor of Commerce specialising in Information Systems			
Careers: Refer to 'Career Opportunities' section on page 47.			
Bachelor of Science in Information Technology in Information and Knowledge Systems [3 years]	4	6	**30**
Suggested second-choice programme*: Bachelor of Technology in Information Systems			
Careers: Graduates will differentiate themselves in an application environment by choosing one of the following options: data science, genetics, geographical information systems, IT and enterprises, IT and law, IT and music or software development.			

** Please apply for your second-choice programme if your APS and subject requirements of your first-choice programme are not obtained.*
*** Possible name change to: Bachelor of Information Science specialising in Interactive Technology*

TAKING TEACHING AND LEARNING TO THE NEXT LEVEL

The Faculty of Engineering, Built Environment and Information Technology (EBIT) at the University of Pretoria attracts students who want to make the world a better place. These are individuals who want to contribute to global challenges by developing solutions that support life in every conceivable discipline. They are focused on the bigger picture: contributing to the world economy and job creation, food security, energy security and sustainable development.

The University's approach to teaching and learning combines inquiry-based, hybrid and community-based learning.

Building on this, the Faculty has developed a progressive teaching and learning strategy aimed at improving pass rates, helping students complete their degrees on time and ensuring they excel in their studies.

This strategy is rooted in a culture of excellence and transformation, while also guiding the Faculty's use of the University's hybrid teaching model. Through these practices, EBIT continues to strengthen its international reputation for teaching and learning.

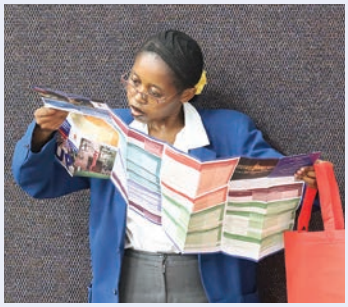
Lecturers in the Faculty are encouraged to use creative and innovative teaching methods that not only improve academic performance but also prepare students for the Future of Work. The goal is to graduate professionals who are both highly qualified and equipped with empathy and people skills to make a meaningful contribution in their workplaces.

To achieve this, the Faculty has embraced immersive learning—an approach that gives students real-world project experience in a safe environment, where they can test ideas and explore multiple solutions.

The Faculty also stays up to date with new technologies, such as ChatGPT, making students aware of potential risks while also exploring how such tools can enhance learning, comprehension and critical thinking. At its core, the Faculty believes that shaping tomorrow begins with adopting innovation today.

LOOK OUT FOR OUR **TEAM** AT EXPOS, EXHIBITS, CAREER DAYS AND SCHOOL VISITS.









EBIT WEEK

JOIN US FOR EBIT WEEK 5-9 JULY 2026

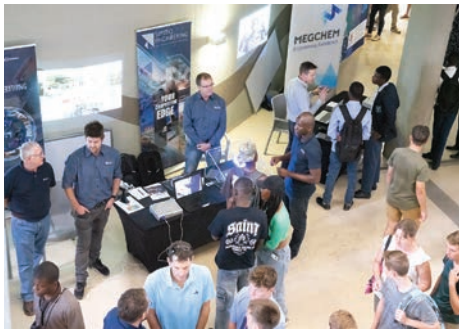
Do you want to experience first-hand what it is like to be a student in the Faculty of Engineering, Built Environment and Information Technology (EBIT) at the University of Pretoria? Attending our EBIT Week gives you the perfect opportunity.

EBIT Week is a four-day holiday programme presented twice a year to learners in Grade 9, 10 and 11. It provides prospective students with a hands-on opportunity to gain information about all the disciplines offered in the School of Engineering, the School for the Built Environment and the School of Information Technology.

Learners are introduced to both the practical and theoretical aspects of the programmes in these schools to help them make informed career choices. They also obtain industry exposure on-site or off-campus.

CONNECT WITH US

YOU ARE INVITED TO THE **NEXTGEN OPEN DAY** ON 7 MARCH 2026



CONNECT WITH US

MEET YOUR LEADERS AT ORIENTATION WEEK, FROM 2-5 FEBRUARY

EBIT HOUSE

Nomvula Shingange
Chairperson

Tintswalo Masinge
Vice Chairperson

Lesego Letsie
Internal Culture

Boitshepo Mokaila
Industrial

Celeste Ndzinisa
Treasurer

Simphiwe Khoza
Academics

Kamogelo Mothapo
Community Outreach

Resego Mthowagae
External Culture

Viwe Kaptein
Sports

Sphe Mhlongo
Transformation & Post-Grad

Siboongile Sibeko
Sub House

STUDENT SUPPORT AND STUDENT LIFE

The Faculty of Engineering, Built Environment and Information Technology (EBIT) at the University of Pretoria emphasises the importance of solid student support systems to ensure that students can complete their qualifications in the minimum prescribed time.

Through effective academic support, students have a firm foundation from which to launch their future careers. At the same time, they become aware of the importance of contributing their time and skills to communities that do not have the same advantages they do.

STUDENT LIFE

While the Faculty expects total commitment from its students with regard to individual and group work, it also encourages them to actively participate in student life. This supports the development of well-rounded future leaders.

The University hosts a wide range of student life activities through campus organisations like the Student Representative Council (SRC), Student Culture (STUKU), the Student Sport Committee (SSC) and University's student charity organisation, RAG (Reach Out and Give).

The Faculty's students automatically become part of EBIT House, a student structure that forms part of the SRC sub-structure. EBIT House represents students and acts as a communication channel between the Faculty and its students. EBIT House offers academic, professional and personal development opportunities.

Within EBIT House, students can find a variety of discipline-specific subhouses through which they can become involved in more specialised student activities.

STUDENT SUPPORT

The Foundation Programme
The University's Foundation Programme focuses on providing educational pathways into science, technology, engineering and mathematics (STEM) fields. Presented on the Mamelodi Campus, qualifying students complete their first year through this programme before entering a mainstream programme.

Bachelor of Engineering [5-year programme]
This is a carefully structured five-year curriculum that is offered in all engineering disciplines. The volume of work is gradually increased over a period of three years. The students work in parallel with the mainstream students, but in smaller groups. They join the mainstream programme from their second academic year of study.

Academic success coaches
EBIT's academic success coaches provide assistance with study and examination skills, time management and support with other co-curricular issues. Academic success coaches teach students life skills through development interventions so that they can become well-rounded individuals, employers or employees and responsible citizens. The advisors are all professional counsellors, who can identify issues that may require additional professional support.

Read more:
www.up.ac.za/ebit-academic-success-coaches

COMMUNITY ENGAGEMENT

EBIT students strengthen their ability to work in complex, multicultural environments through the Faculty's focus on community engagement. A key part of this is the Community-based Project module (JCP), which forms part of every undergraduate programme. In this module, students spend 40 hours planning and carrying out a community project, giving their time and skills to serve others.

By working with communities different from their own, students develop not only technical skills but also important life skills such as communication, teamwork, leadership and cultural awareness.

Read more: www.up.ac.za/community-project-module

SCHOOL OF ENGINEERING

SCHOOL OF ENGINEERING DEPARTMENTS

DISCOVER THE CAREER BENEFITS OF A POSTGRADUATE QUALIFICATION:
FIND SPECIALISATIONS

The School of Engineering presents programmes in all the major engineering disciplines, with many specialisations offered at postgraduate level. It is ranked 384TH out of more than 10 000 engineering schools in the field of engineering and technology.

The Engineering Council of South Africa (ECSA) has granted accreditation to all programmes offered by the School of Engineering at the University of Pretoria. The School is one of the largest of its kind in the country in terms of student numbers, graduates and research contributions.

Through the relevant, cutting-edge research undertaken in the engineering departments, we provide our students with the necessary training to enable them to make a considerable contribution to engineering in South Africa and abroad.

The School maintains close ties with industry through several research chairs in all its departments. It also pursues innovation in its research centres and institutes.

MAKE AN IMPACT

EBIT focuses its research on impacting global challenges. The School of Engineering actively contributes to research in the following Sustainable Development Goals (SDGs) of the United Nations:

- **SDG 7:** Affordable and Clean Energy
- **SDG 9:** Industry, Innovation and Infrastructure
- **SDG 12:** Responsible Consumption and Production
- **SDG 13:** Climate Action

SCHOOL OF ENGINEERING

Department of Chemical Engineering

Bachelor of Engineering in Chemical Engineering

A chemical engineer, also known as a process engineer, finds ways to convert cheap raw materials into more valuable products. Theoretical knowledge of chemistry is required, but the field mostly focuses on the application of intense mathematics to make processes as efficient as possible.

What does the programme entail?

The programme provides students with the necessary foundation to ensure that once they have graduated, they will be able to make creative contributions to the world's ever-increasing needs by:

- Converting natural resources into efficient and useable forms of energy
- Developing more durable, lighter and renewable materials
- Designing more efficient, environmentally friendly processing plants
- Applying biotechnology to convert raw materials into products in a sustainable way
- Designing processes to ensure that limited natural resources, such as water, can be reused
- Leaving a clean and sustainable environment behind for future generations

The programme builds a strong foundation in chemistry, physics, mathematics and biology, together with the principles of mass, energy and momentum conservation. Students then apply these concepts alongside economic principles to design equipment and processes that are efficient and profitable, supporting industrial and economic growth. The goal is to produce graduates who can create new and innovative processes to meet future needs.

Who is the ideal candidate?

The ideal candidate should:

- Have a passion for mathematics
- Enjoy problem solving
- Enjoy challenges
- Be hard-working
- Be creative and an independent thinker
- Have drive and ambition
- Be a team player

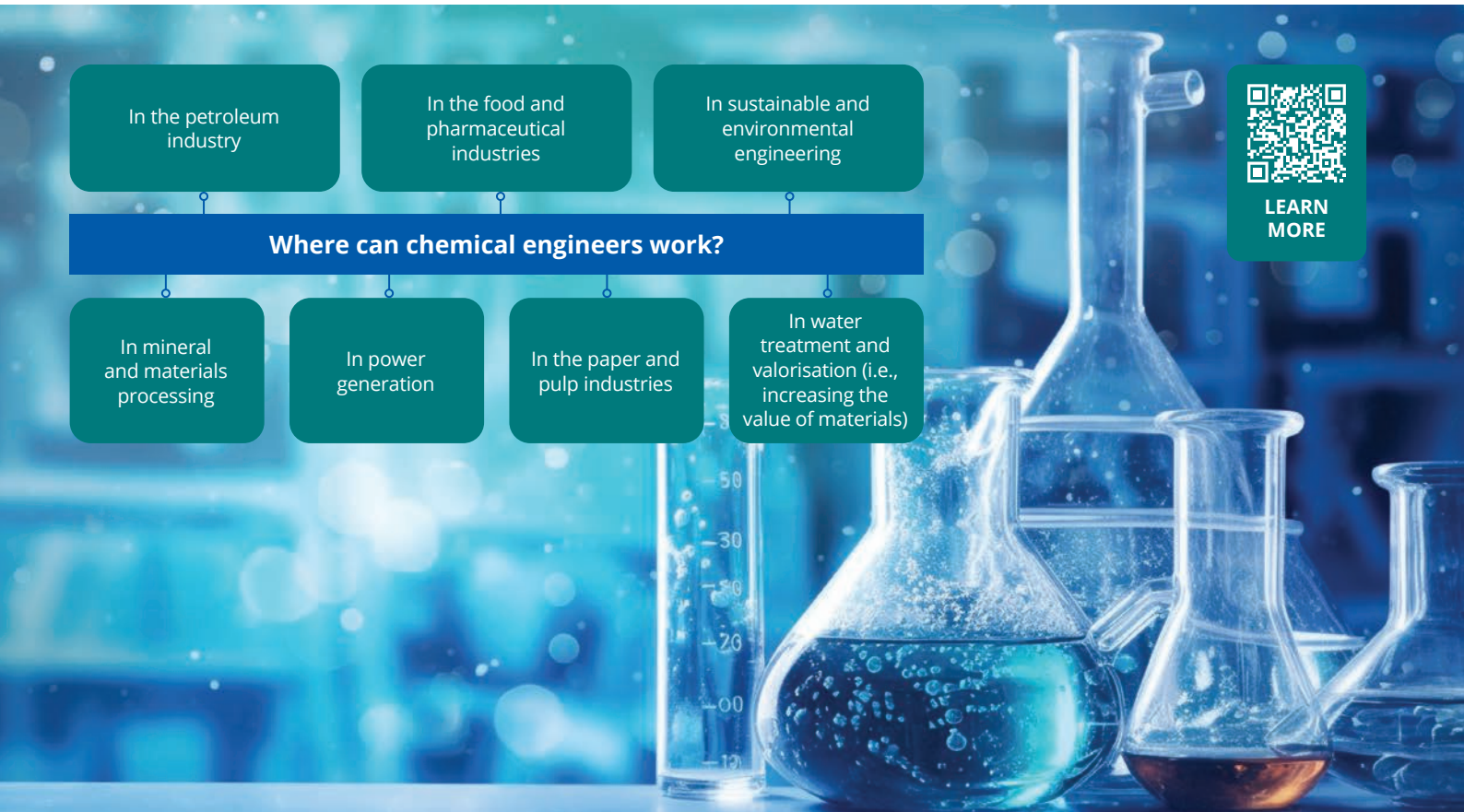
This discipline is welcoming to both men and women, and the number of female students continues to grow. In the past three years, women have made up 40% of the Department's graduates.

Career opportunities

Chemical engineers work in industrial processes that turn raw materials into higher-value products.

They apply knowledge in fields such as petroleum, food, minerals processing, power generation, paper and pulp, water and effluent treatment and environmental engineering (e.g., air pollution control).

They are involved in research and development, process design and optimisation, equipment and plant design, construction, commissioning, operation and management. They may also work in marketing and distribution of products.



SCHOOL OF ENGINEERING

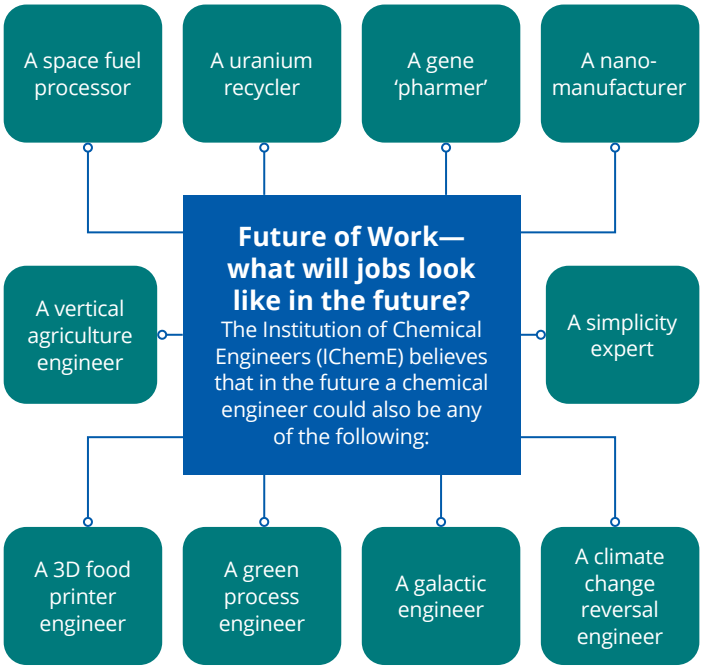
Bachelor of Engineering in Chemical Engineering *(continued)*

Which companies employ our graduates?

Chemical engineers in South Africa may work in companies such as:
Sasol, Golder/WSP, Veolia Water, Appropriate Process Technologies (APT), Hoechst South Africa, Afrox, Bayer, Sucrochem, Shell Chemicals, BASF, Engen Petroleum, Silicates & Chemicals Africa, ICI, Rohm & Haas, Omnia, Chemserve Systems, Fine Chemicals Corporation, Noriscel, Henkel, Revertex Chemicals, CH Chemicals, ChemPro, Carbon Trust, McKinsey & Company and Kimberly-Clark.

Postgraduate studies

At the postgraduate level, the Department of Chemical Engineering focuses on the following research themes:
- Sustainable environment and water utilisation processes
- Sustainable and efficient energy processes
- Advanced and applied materials
- Process modelling, control and optimisation
(www.up.ac.za/ebit-postgraduate)



Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Engineering in Chemical Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Chemical Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics if your APS and subject requirements of your first-choice programme are not obtained.

Contact information **Tel** +27 (0)12 420 3011 | **Email** chemeng@up.ac.za
Websites www.up.ac.za/chemical-engineering | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

SCHOOL OF ENGINEERING

Department of Civil Engineering

Bachelor of Engineering in Civil Engineering

Civil engineers create facilities that improve people's lives and the environment. Their work includes research, planning, design, construction and ongoing maintenance of various structures.

Civil engineers design, build and maintain:
- Tower blocks and skyscrapers
- Dams, canals and pipelines
- Roads, bridges and tunnels
- Railway lines and airports
- Power stations and towers
- Waterworks and outfall installations

Because these facilities have long lifespans and affect communities and the environment, civil engineers are trained to:
- Handle analytical design tasks
- Consult directly with communities and stakeholders
- Ensure projects are cost-effective and beneficial to society

Modern information technology and computer software have changed civil engineering by enabling continuous data collection, mathematical modelling and more efficient design. As a result, civil engineers can focus on the fundamental aspects of developmental work and design.

Environmental engineering and management are now key parts of training, providing graduates with a broad-based qualification that offers challenging and adaptable career opportunities over a career span of 40–50 years.

In 2020, the Department opened its Engineering 4.0 facility, featuring state-of-the-art laboratories and training facilities to support the engineers of the future.

What makes this programme unique?

Our programmes in the School of Engineering are accredited by the Engineering Council of South Africa (ECSA), and our degrees meet the requirements for professional engineers in South Africa.

Who is the ideal candidate?

The ideal candidate is someone with:
- A passion for continuous learning
- People-management skills
- Good planning skills
- Problem-solving skills

Career opportunities

To build smart cities, future civil engineers need advanced skills in robotics, artificial intelligence, the Internet of Things (IoT) and satellite technology. They must combine fundamental knowledge in materials science, engineering mechanics, and dynamics with an understanding of the environment and how it affects materials.

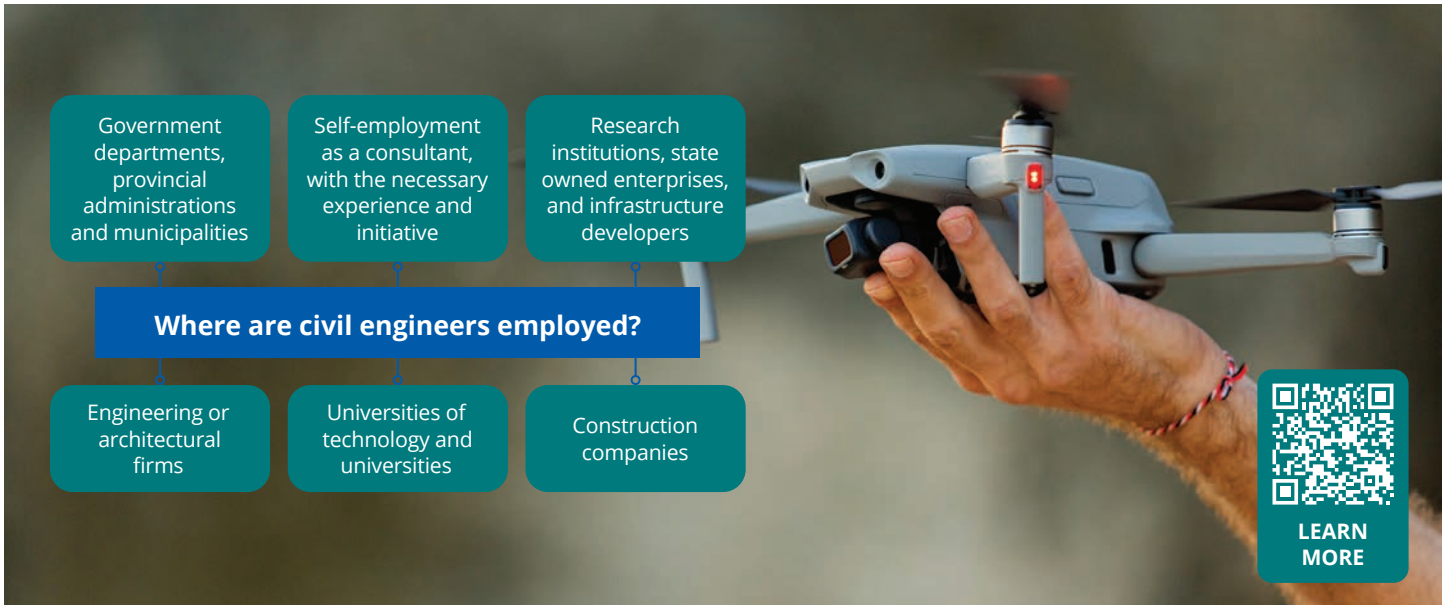
Civil engineers also need the ability to use data and models to analyse interactions between materials, traffic and the environment. For example, advances in autonomous vehicles, nanotechnology, and traffic patterns may change road design, materials and pavement surfaces.

For more information visit: www.up.ac.za/eng4

Which companies employ our graduates?

A civil engineer can find work in any company involved in development, design, construction and management of infrastructure and related services.

For more information visit:
www.careerexplorer.com/careers/civil-engineer.



SCHOOL OF ENGINEERING

Bachelor of Engineering in Civil Engineering *(continued)*

The Chair in Railway Engineering in the Department of Civil Engineering at the University of Pretoria was established in 1996 when Spoornet (now Transnet Freight Rail) initiated a partnership between industry and the university. This partnership revolves around three major aspects: graduate training, continuing education courses for industry and railway research. At the graduate level, students in Civil Engineering are taught the basics of railway engineering as part of their transportation studies. The Chair currently offers 16 short courses delivered by local and international experts in a wide range of railway engineering fields. All courses are registered with ECSA for Continuing Professional Development (CPD) credits, and some are also credit-bearing, such as the coursework honours in transportation engineering.

READ THE FULL STORY

The University of Pretoria (UP), in collaboration with Anglo American, recently established a top-of-the-range mobile soils testing laboratory for the purposes of assessing the strength of samples of mining waste—known as mine tailings or slimes—on site. The laboratory, housed in an eight-ton truck, will enable sensitive soil samples to be subjected to a range of sophisticated tests in the vicinity of the area in which they are recovered. The use of this mobile facility will prevent sample disturbance associated with long-distance transport to laboratories.

READ THE FULL STORY

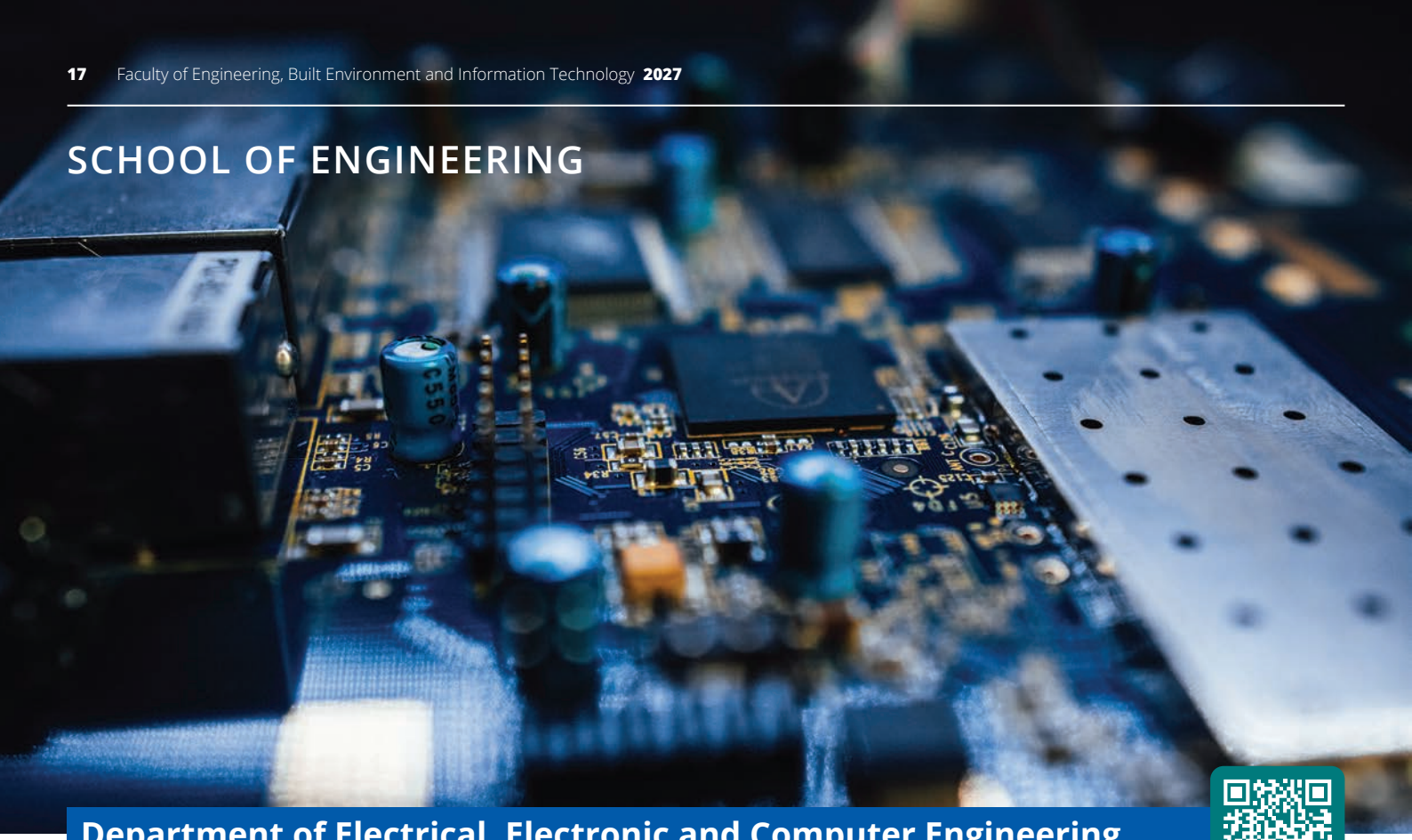
Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	**English Home Language or English First Additional Language**	**Mathematics**	**Physical Sciences**	
Bachelor of Engineering in Civil Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Civil Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics, Bachelor of Science in Physics, Bachelor of Science in Construction Management and Bachelor of Science in Quantity Surveying if your APS and subject requirements of your first-choice programme are not obtained.

Contact information Ms Hayley Boks | **Tel** +27 (0)12 420 2925 | **Email** hayley.boks@up.ac.za
Websites www.up.ac.za/civil-engineering | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

SCHOOL OF ENGINEERING



Department of Electrical, Electronic and Computer Engineering

Bachelor of Engineering in Electrical Engineering

Electrical engineering is one of the main branches of engineering, along with electronic and computer engineering. This programme focuses on how energy is generated, distributed and used. Almost all modern technology depends on electrical power. Electrical engineers play a key role in finding new ways to bring alternative and renewable energy, such as solar, wind, water and nuclear power, into daily life.

In South Africa, for example, pumped storage systems are widely used, and new energy systems are being developed. Electrical engineers also work on making energy use more efficient, designing everything from machines to geysers and lighting to save power.

There is a worldwide shortage of qualified electrical engineers, which makes this career in high demand. Students in this programme gain a solid foundation in science, along with both theory and practical training in design, installation and maintenance.

Who is the ideal candidate?

The ideal candidate is someone with:

- Critical thinking skills
- Problem solving skills
- Critical thinking skills
- Innovative thinking skills
- Analytical skills

What makes this programme unique?

Our programmes are internationally accredited by the Engineering Council of South Africa (ECSA).

Which companies employ our graduates?

Electrical engineering graduates have access to a wide range of job opportunities. The advances in electrical energy generation and distribution create tremendous opportunities for entrepreneurs in South Africa and in the rest of the world.

Research and development opportunities are available locally at institutions such as Denel, Eskom, the Council for Scientific and Industrial Research (CSIR) and Transnet.

Where are electrical engineers employed?

- Electricity utility companies
- Mining houses
- Municipalities
- Consulting engineering firms
- Transportation (rail and sea) companies
- Research organisations, locally and abroad

Due to the current worldwide energy crisis, there is an urgent need for environmentally friendly ways to generate power and energy. There is a bright future in renewable energy.

LEARN MORE

SCHOOL OF ENGINEERING

Bachelor of Engineering in Electrical Engineering *(continued)*

Career opportunities

Electrical engineering is prevalent in almost all application fields and technologies where electrical energy is consumed. Every known piece of equipment requires a source of energy—powered by mains, batteries or photovoltaic (PV) cells—and needs the skill of an electrical engineer.

The transport and manufacturing industries are excellent examples of industries in which electrical engineers use their superior skills to design, develop and maintain electrical machines (motors and generators) with control systems for optimal performance. Most ships and trains are electrically powered.

Electrical engineers also work on power supply systems in cities, townships, malls and factories. They design and manage lighting for both indoor and outdoor spaces, such as sports stadiums, streets, offices and even security and entertainment areas.

No matter the field—whether it is medicine, the military, entertainment, sports or education—electrical engineers play a role in providing the energy and control systems that keep things running. The goal of electrical engineering is to find new and sustainable ways to generate, transmit and use energy to improve the world.

Examples of subsystems that are part of larger electrical systems include:

- Electrical machines of all sizes and shapes
- Power electronics
- Control systems
- Power system components
- Power quality and network stability
- Lamps and lighting
- Power supplies
- Photovoltaic (PV) cells
- Solar geysers
- Space systems
- Robotics and energy management systems

Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Engineering in Electrical Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Electrical Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics if your APS and subject requirements of your first-choice programme are not obtained.

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Websites www.up.ac.za/eece | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

SCHOOL OF ENGINEERING

Department of Electrical, Electronic and Computer Engineering

Bachelor of Engineering in Electronic Engineering

Electronic engineering is a fast-growing field that shapes almost every part of modern life. Nearly all technology today depends on electronics in some way. Electronic engineers play a key role in creating new technologies and improving existing ones.

To do this work, they need a strong foundation in science as well as both theoretical knowledge and practical skills, such as design. With the rapid growth of new electronic systems around the world, electronic engineers must be ready to adapt and meet industry needs.

Electronic engineering is an exciting field that is always changing. Because technologies like microelectronics and photonics improve so quickly, new advances happen about every two-and-a-half years.

The goal of electronic engineering is to make things work faster, cost less, be smaller in size and give better control. Typical subsystems that form part of larger electronic systems include:

- Amplifiers
- Transmitters and receivers
- Control and sensor systems
- Antennas
- Power supplies
- Radio frequency (RF) subsystems
- Micro and nanoelectronics and microprocessors
- Digital signal processors (DSPs)

What makes this programme unique?

The academic programme at the University of Pretoria prepares students to become leaders in the field of electronic engineering—with excellent financial rewards and professional satisfaction. This programme is internationally accredited.

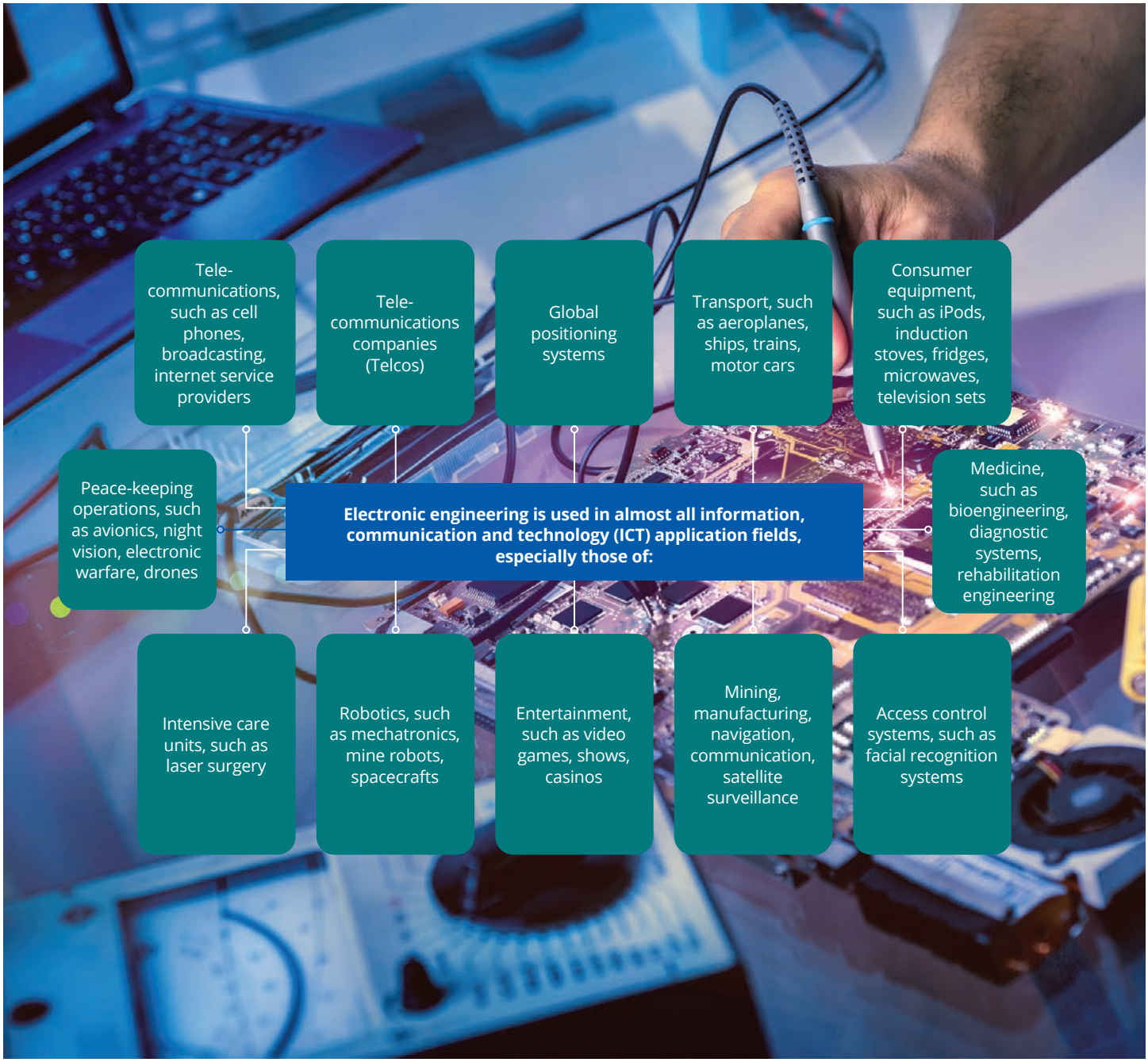
Career opportunities

Electronic engineering graduates have access to a wide range of job opportunities, which include working for companies (large or small) anywhere in the world as employees, or being entrepreneurs or self-employed. Research and development opportunities are available at South African electronics and microelectronics companies and research institutes (such as the CSIR), and at universities all over the world. Graduates in electronic engineering have the opportunity to be innovative, e.g. to identify real-life problems and to come up with solutions, which they might be able to patent.

From 2026, three options for specialisation are presented for a postgraduate qualification: Biomedical Engineering, Robotics and Automation.

SCHOOL OF ENGINEERING

Bachelor of Engineering in Electronic Engineering *(continued)*



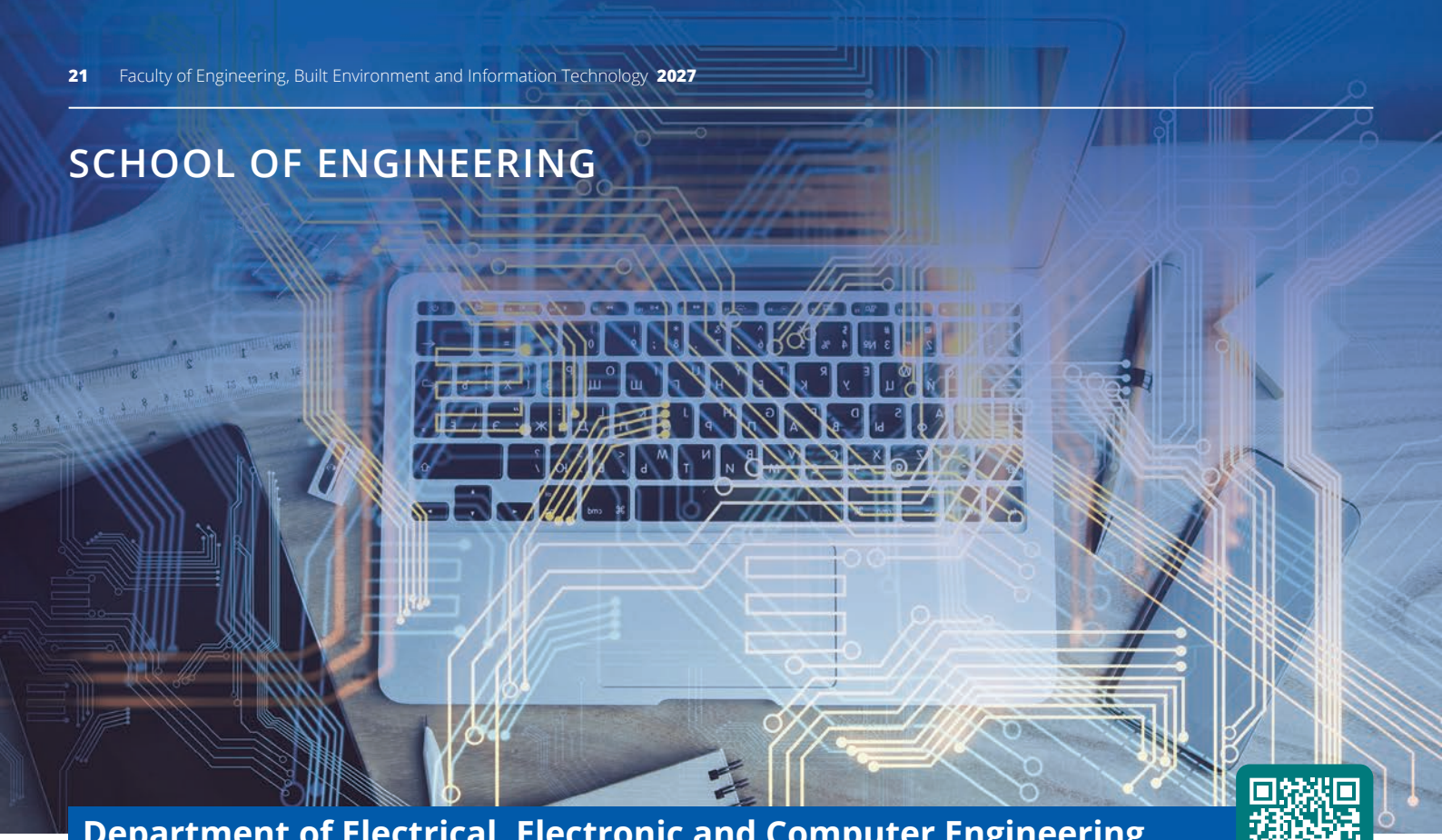
Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	**English Home Language or English First Additional Language**	**Mathematics**	**Physical Sciences**	
Bachelor of Engineering in Electronic Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Electronic Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics if your APS and subject requirements of your first-choice programme are not obtained.

Contact information Prof Herman Myburgh | **Tel** +27 (0)12 420 4540 | **Email** eerc@up.ac.za
Websites www.up.ac.za/eece | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

SCHOOL OF ENGINEERING



Department of Electrical, Electronic and Computer Engineering

Bachelor of Engineering in Computer Engineering

Computer engineering is one of the fastest-growing engineering fields within information and communication technology (ICT). Almost every modern system in the world depends on it. This field combines electronics, computer hardware and software and communication systems. A computer engineer is someone who improves electronic systems by adding computing power and control software. Their work ranges from small microcontroller networks to the worldwide web.

Computer engineers need a strong foundation in science and a solid education in both theory and practice. This includes electronics, digital systems, computer systems and control software. With today's rapid growth in computing power and storage, and the drop in cost and size of technology, computer engineering now plays a role in nearly every modern system.

Examples of computer engineering include cell phone technology, car-control computers for engine management, entertainment systems, security systems, air-conditioning systems, active suspension and anti-lock braking systems (ABSs), which all use the principles of sensing, computing and actuation under optimised software control. This is the fastest-growing new discipline in engineering, and job opportunities for graduates exist all over the world.

Who is the ideal candidate?

The ideal candidate needs the following skills:
- A sound understanding of basic sciences
- A talent for optimising electronic systems and control software
- A problem-solving mind

Career opportunities

Computer engineering is used in the following fields:
- Telecommunications
- Computer networking
- Cell phone operations
- Computer system companies
- Military technologies (avionics, night vision, electronic warfare, drones)
- Transport technologies
- Internet banking
- Security systems
- Consumer equipment
- Modems, hand-held scanners
- Voting
- Medical systems (portable and remote diagnostic recorders)
- Robotics
- Entertainment equipment
- Global positioning system (GPS)
- Navigation
- Measurement and control software
- Fibre-optic (self-healing) networks

Computer engineering graduates have access to a wide range of job opportunities, which include working for a company (large or small) anywhere in the world as an employee, being an entrepreneur or being self-employed. Research and development opportunities are available in the fields of communication, computer systems, networking and peace-keeping operations, and in medical, transportation, software and electronics companies in South Africa and all over the world. This provides opportunities for innovation: thinking of a problem to be solved and coming up with a solution and even possibly patenting the idea. The academic programme at the University of Pretoria prepares students to become leaders in the field of computer engineering—with excellent financial rewards and professional satisfaction.

From 2026, three options for specialisation are presented: Biomedical Engineering, Robotics and e-Business and Network Securtiy.

SCHOOL OF ENGINEERING

Bachelor of Engineering in Computer Engineering *(continued)*

UP GRADUATE'S RESEARCH AIMS TO RESTORE MOBILITY FOR PARAPLEGICS

A breakthrough in rehabilitation for paraplegics may be just around the corner, thanks to Dian Meintjes, a University of Pretoria (UP) graduate of the Faculty of Engineering, Built Environment and Information Technology.

For his final-year research project, Meintjes – who graduated with a Bachelor of Engineering in Computer Engineering during UP's recent autumn graduation session – focused on improving the quality of life for individuals who have lower-limb mobility difficulties, specifically paraplegics.

'My motivation for my research stemmed from my desire to use engineering to improve the quality of life for individuals with spinal cord injuries', Meintjes says. 'My undergraduate journey was eventful; I learnt all about electronics and software. All the bits and pieces contributed to my final-year project.'

His project involved the development of a functional electrical stimulation (FES) system. 'This system has feedback control to assist paraplegic individuals to stand and walk', Meintjes explains. 'This project required learning about Kalman filtering and biomedical signal processing.'

The Kalman filter is an algorithm that can take noisy measurements and use them to create accurate estimates of unknown variables. The research also required Meintjes to design and manufacture unique parts so that the system could perform optimally.

'The Kalman filter significantly improved the system's joint angle estimation accuracy when compared to raw sensor data', he says.

Meintjes also found a reliable, low-voltage method to deliver stable electric currents through electrodes attached to the surface of the skin.

'This, in turn, contributed to the system being able to generate sit-to-stand gait patterns that could be tracked and modified in real-time.' He hopes his research will contribute to the development of affordable, safe and effective FES systems that can restore partial mobility in paraplegic patients.

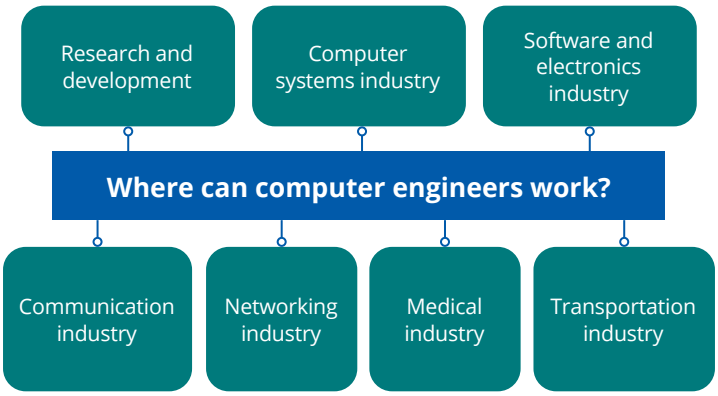
'Ideally, my research could support future clinical implementations and form the foundation for advanced rehabilitation devices that use real-time feedback for personalised therapy', Meintjes adds.

The importance of his research became apparent to him during the research and development phase of the project.

'I observed the accuracy of the gait controller and stimulation circuits, and saw how it could mimic natural movement. Another important finding was my observation of how the use of human movement modelling can assist surgeons prior to surgery. Ultimately, my project aims to address limitations in existing FES systems by improving their adaptability and reducing their complexity, which will make them more accessible and available for broader use for rehabilitation purposes.'

Meintjes is pursuing a career as a junior embedded software engineer, and is considering doing a master's degree in Biomedical Engineering.

'I would like to explore advanced rehabilitation technologies or AI-assisted movement prediction and control', he says. 'I am also considering the possibility of taking courses that will expand my knowledge of biomedical, electronic and embedded software engineering.'



Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Engineering in Computer Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Computer Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics, Bachelor of Information Technology in Information Systems and Bachelor of Science in Physics if your APS and subject requirements of your first-choice programme are not obtained.

Contact information Prof Herman Myburgh | **Tel** +27 (0)12 420 4540 | **Email** eerc@up.ac.za
Websites www.up.ac.za/eece | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

SCHOOL OF ENGINEERING

Department of Industrial and Systems Engineering

Bachelor of Engineering in Industrial Engineering

Industrial engineers focus on improving productivity by designing, testing, planning and managing systems that bring together people, equipment, materials, information and energy. They work to make these systems more efficient and effective. Industrial engineers also combine the work of other engineering fields to create a final product or service that is both functional and marketable. The demand for industrial engineers currently exceeds the supply, and graduates are virtually assured of employment.

What industrial engineers do:

- Design and manage production processes and equipment
- Improve factory and workplace layouts
- Make business processes more effective
- Create and use information systems
- Set and apply performance standards
- Help with decision-making
- Plan and schedule work activities
- Analyse systems using maths and simulations
- Compare costs and benefits of different options
- Fit new systems into existing ones

Who is the ideal candidate?

The ideal candidate is someone with:

- Problem-solving skills
- Critical thinking skills
- Project management skills
- Communication and organisation skills

Are these the types of questions you want to get the answers to?

How do we get products to the customer **faster** and **cheaper**?

How do we get passengers to their destination **safely** and **on time**?

What data do we need for **effective** decision making, and how can we source it?

How do we turn this data into actionable information that helps us make **tough decisions**?

How should we manage inventory levels of products in a warehouse or store to **minimise cost**?

What is the **best** factory layout and handling system for the movement of parts in a factory?

How can we best route vehicles through a city to **minimise** travel time?

SCHOOL OF ENGINEERING

Bachelor of Engineering in Industrial Engineering *(continued)*

It's all about efficiency

Balancing man, money and machine

Structure of the programme

- General Engineering (e.g. Manufacturing and Design, Statistics, Mechanics)
- Industrial Engineering (e.g. Simulation Modelling, Logistics, Information Systems Design, Facilities Planning)
- Mathematics (e.g. Calculus, Linear Algebra, Numerical Methods)
- Sciences (e.g. Physics, Chemistry, Social Sciences)
- Programming
- Financial Management and Management Accounting
- Labour Relations and Business Law
- Workshop Practice and Practical Training

Why choose the University of Pretoria

- The Department of Industrial and Systems Engineering is the first and still the **largest** industrial engineering school in South Africa.
- The School of Engineering has been ranked **among the top in Africa** by the US News and World Report.
- The University was ranked in the top **384 universities worldwide** for engineering and technology in the QS World University Rankings.
- UP's School of Engineering programmes are accredited by the Engineering Council of South Africa (ECSA), and our degrees meet the requirements for professional engineers in South Africa.

Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Engineering in Industrial Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Industrial Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics, Bachelor of Information Technology in Information Systems and Bachelor of Science in Physics if your APS and subject requirements of your first-choice programme are not obtained.

Careers: Industrial engineers design, test, implement and manage a wide range of man/machine systems for production and the delivery of 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.

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SCHOOL OF ENGINEERING

Department of Materials Science and Metallurgical Engineering

Bachelor of Engineering in Metallurgical Engineering

South Africa is rich in minerals, with the world's largest deposits of platinum, chromium and manganese, as well as significant reserves of gold, iron, copper, nickel, coal, vanadium and diamonds.

The minerals industry is a major part of the economy, contributing nearly half of the country's exports and providing a wide range of job opportunities. Metallurgical engineers play a key role in turning these raw materials into useful metals and products. Their work supports both local and international markets and ensures that metal-based products, from cars to electronics, work safely and effectively in everyday life.

Career opportunities

Careers in this field include roles such as production engineers, plant managers, consultants, researchers and specialists in areas such as materials, corrosion, welding, nuclear and forensic engineering. Other specialisation opportunities include minerals processing, extractive metallurgy, materials performance and advanced manufacturing.

The three main fields of specialisation in metallurgical engineering

Minerals processing
Processing the ore to release and concentrate the valuable minerals contained in it.

Extractive metallurgy
The processing of mineral concentrates to metals through pyrometallurgy (including smelting) or hydrometallurgy (including leaching) as refining steps.

Materials production, performance and integrity
This field involves developing new metal alloys and turning raw metals into useful products. Metals can be shaped through casting, 3D printing (using lasers or wire arc methods) and welding. An important part of the work is investigating why materials fail—such as when a metal component cracks, breaks or doesn't perform as expected—to prevent problems in real products.

What makes this programme unique?

As the leading metallurgical engineering department in South Africa, the Department of Materials Science and Metallurgical Engineering at the University of Pretoria currently plays a prominent role in the education of metallurgical engineers for the South African metallurgical and mining industries. These graduates are highly sought after both in local and international industries.

The Department also attracts professionals from other engineering disciplines who seek to enhance their skills and knowledge in this field. As a result, many professionals enrol in the department's postgraduate programmes to enhance their skills in the thriving local and international minerals and materials industries. One such option is the BScHons Applied Science (Metallurgy): Welding Technology, a one-year degree that builds advanced expertise in welding processes, metallurgy, fabrication and welded structure design. By combining coursework with a research project, it prepares graduates for specialist careers in the welding and materials industries.

The Department's undergraduate programme is fully accredited by the Engineering Council of South Africa (ECSA), ensuring top-quality teaching and international recognition of the degree. Through close ties with local and international industries via consulting and research projects, staff are constantly updating teaching and research to meet the latest industry standards. Sophisticated research equipment is available in the department and in the Industrial Metals and Minerals Research Institute (IMMRI), which is situated within the department, including specialised hydrogen testing facilities.

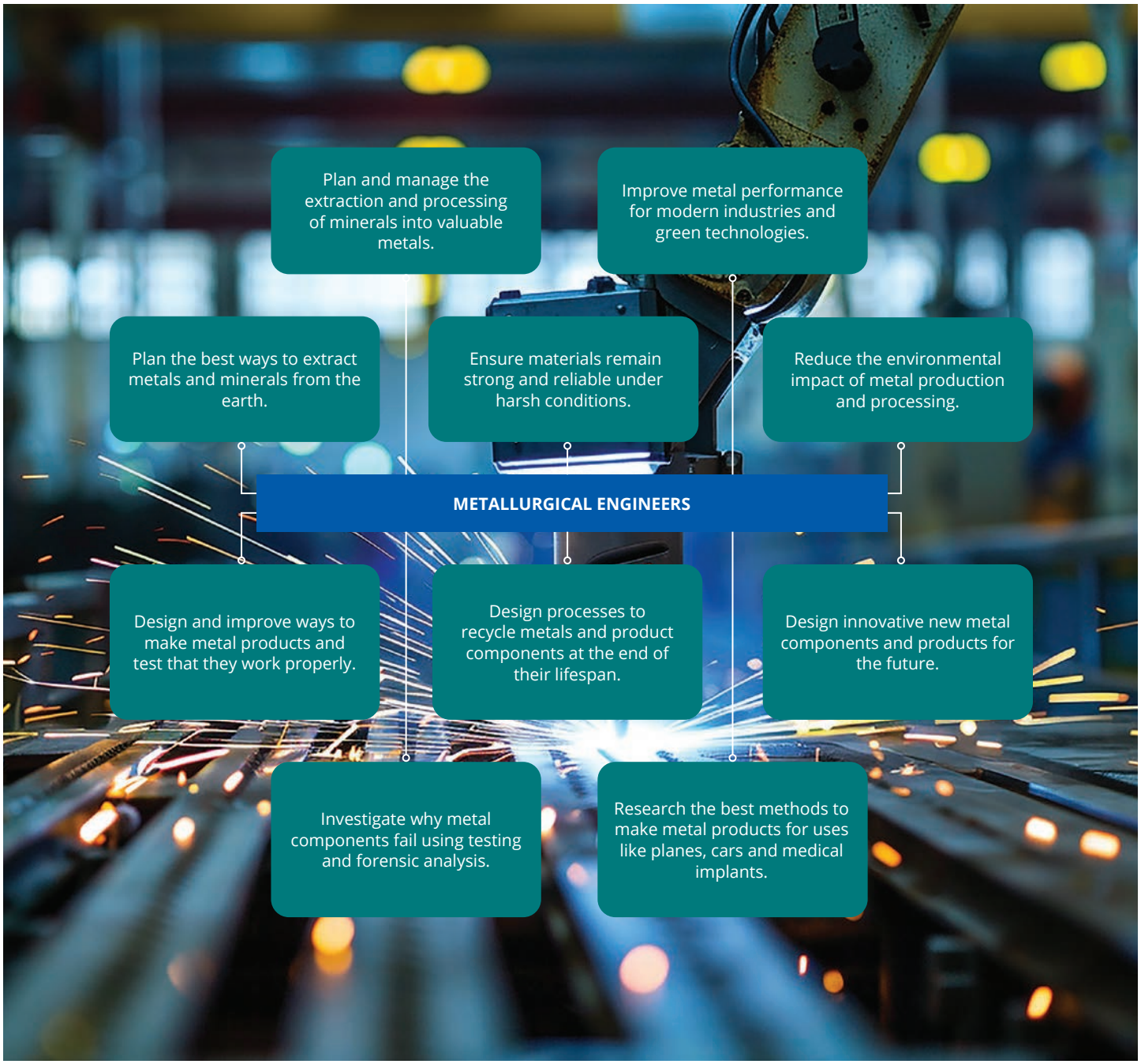
Students are supported in several ways. To help them overcome academic and personal challenges, a member of staff is appointed as a mentor for each year group. First-year students, in particular, are guided by dedicated staff members to help them adjust to the demands of university life.

The standard Bachelor of Engineering degree programme is four years long, but students who do not meet the minimum requirements for the four-year programme are supported through the five-year ENGAGE programme.

LEARN MORE

SCHOOL OF ENGINEERING

Bachelor of Engineering in Metallurgical Engineering *(continued)*



Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	**English Home Language or English First Additional Language**	**Mathematics**	**Physical Sciences**	
Bachelor of Engineering in Metallurgical Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Metallurgical Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics if your APS and subject requirements of your first-choice programme are not obtained.

Contact information Prof Natasia Naudé | **Tel** +27 (0)12 420 3182/4208 | **Email** natasia.naude@up.ac.za
Websites www.up.ac.za/metal | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

SCHOOL OF ENGINEERING

Department of Mechanical and Aeronautical Engineering

Bachelor of Engineering in Mechanical Engineering

Thermal power systems, heat exchangers, cooling and refrigeration systems, ventilation systems, etc.

Manufacturing technologies that include the use of lasers, precision machinery

What is mechanical engineering?
Mechanical engineering is concerned with the **design, manufacture and operation** of components, devices or systems such as:

Automobiles, aeroplanes and other vehicles

Robotics, mechatronics and electronic control of machinery

Digitisation of physical assets through sensing, computing and data science

What does the programme entail?

The undergraduate programme gives students a broad foundation in engineering. It covers topics such as dynamics, strength of materials, thermodynamics, fluid mechanics and design. Students learn the mechanical and aeronautical skills needed to design and make products and services, including electricity and water systems, transport (road, rail and air), mining, mechatronics and air conditioning.

Who is the ideal candidate?

The ideal candidate should be resilient to work pressure, and flourish when confronted with new problems that need to be solved effectively and efficiently. The following skills are required to achieve this:

- Creativity
- Critical thinking
- Fundamental understanding
- Mathematical rigour
- Teamwork
- Adaptivity

Oral, verbal and graphical communication abilities are essential for a technically diverse team of individuals.

Why choose the University of Pretoria

The programmes of our School of Engineering are all accredited by the Engineering Council of South Africa (ECSA), and the School has been ranked **#1 in Africa** by the US News and World Report. Our mechanical engineering programme has been ranked **among the top in South Africa** in the QS World University Rankings.

The Department of Mechanical and Aeronautical Engineering offers a unique learning environment for engineering students with opportunities for practical application of theoretical knowledge in activities like the Tuks Baja team and the AREND project. We also host the only off-road vehicle dynamics group in the country.

International collaboration

The University of Pretoria is always looking for opportunities to collaborate with other innovative institutions around the world. One such an initiative is our third-year exchange programme with Massachusetts Institute of Technology (MIT) in the USA (2023–2028). The exchange programme makes it possible for students from the Department to study at MIT for a year, and for MIT students to study at the University of Pretoria for a year.

SCHOOL OF ENGINEERING

Bachelor of Engineering in Mechanical Engineering *(continued)*

Career opportunities

Mechanical engineers are employed in almost all sectors of the economy, including the chemical industry, mining, manufacturing, processing, vehicle and aircraft design, defence and aeronautics. Possible careers include:

- Aerospace engineer
- Automotive engineer
- Maintenance engineer
- Design engineer
- Mathematical and computational modeling engineer
- Data science engineer

Mechatronics: Where mechanics and electronics meet

Mechatronics is a combination of the principles of mechanics, electronics and computing. At the University of Pretoria, the mechanical engineering programme includes courses in electrical engineering, electronics, programming and control systems, which make provision for all the building blocks of mechatronics. Furthermore, all final-year students do mechatronics and control, and can choose a mechatronics-related final-year research project.

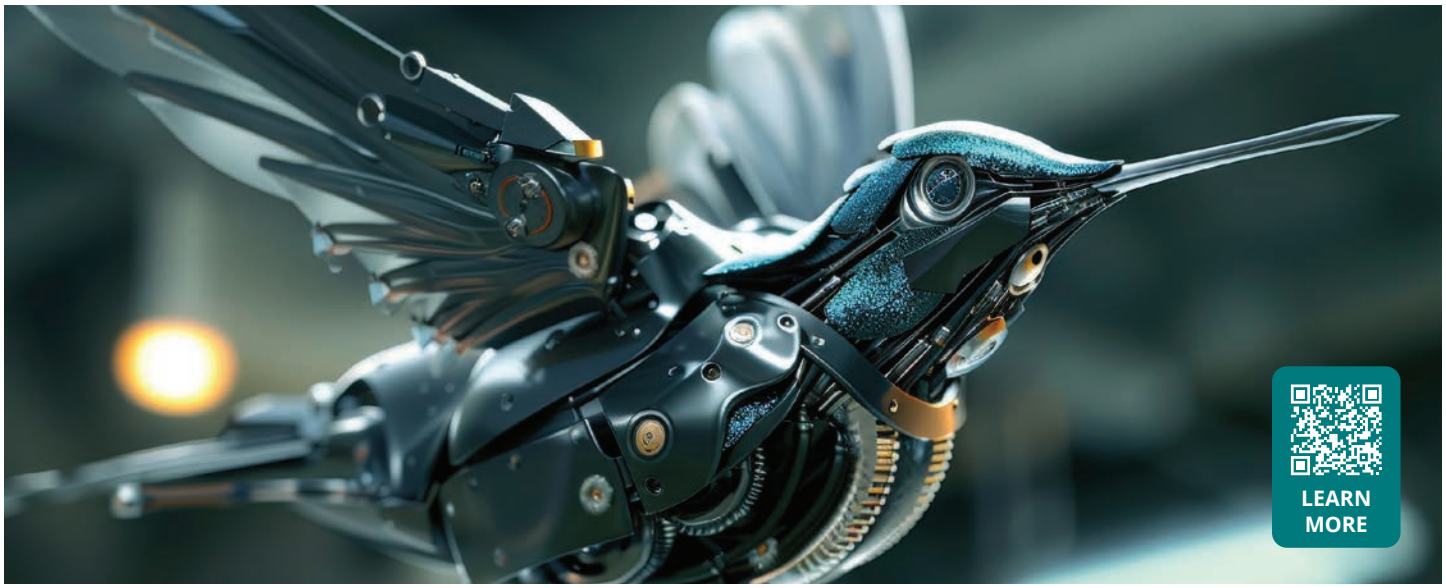
Mechatronics is also offered at the postgraduate level. Students first complete a Mechanical Engineering undergraduate degree to build a strong foundation in core engineering principles. This ensures they have in-depth knowledge of mechanics, design and problem-solving before broadening their skills in mechatronics, which combines mechanical, electronic and computer systems.

While other universities may offer Mechatronics as an undergraduate degree with a multidisciplinary focus from the start, UP's approach provides a deeper understanding of mechanical engineering, giving students a solid base to excel in multidisciplinary teams at an advanced level.

TuksNovation

TuksNovation acts as a catalyst for the development of business technology clusters to positively impact on the South African economy. Innovations arising from research can lead to new product development.

TuksNovation provides technology development and entrepreneurship support, from the prototype to the commercialisation growth stages, to ensure that the technology is fully developed, and addresses a relevant market need. A virtual incubation programme focuses on technology and techno-entrepreneurship skills, while an acceleration programme focuses on commercialisation and business growth.



Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Engineering in Mechanical Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Mechanical Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics if your APS and subject requirements of your first-choice programme are not obtained.

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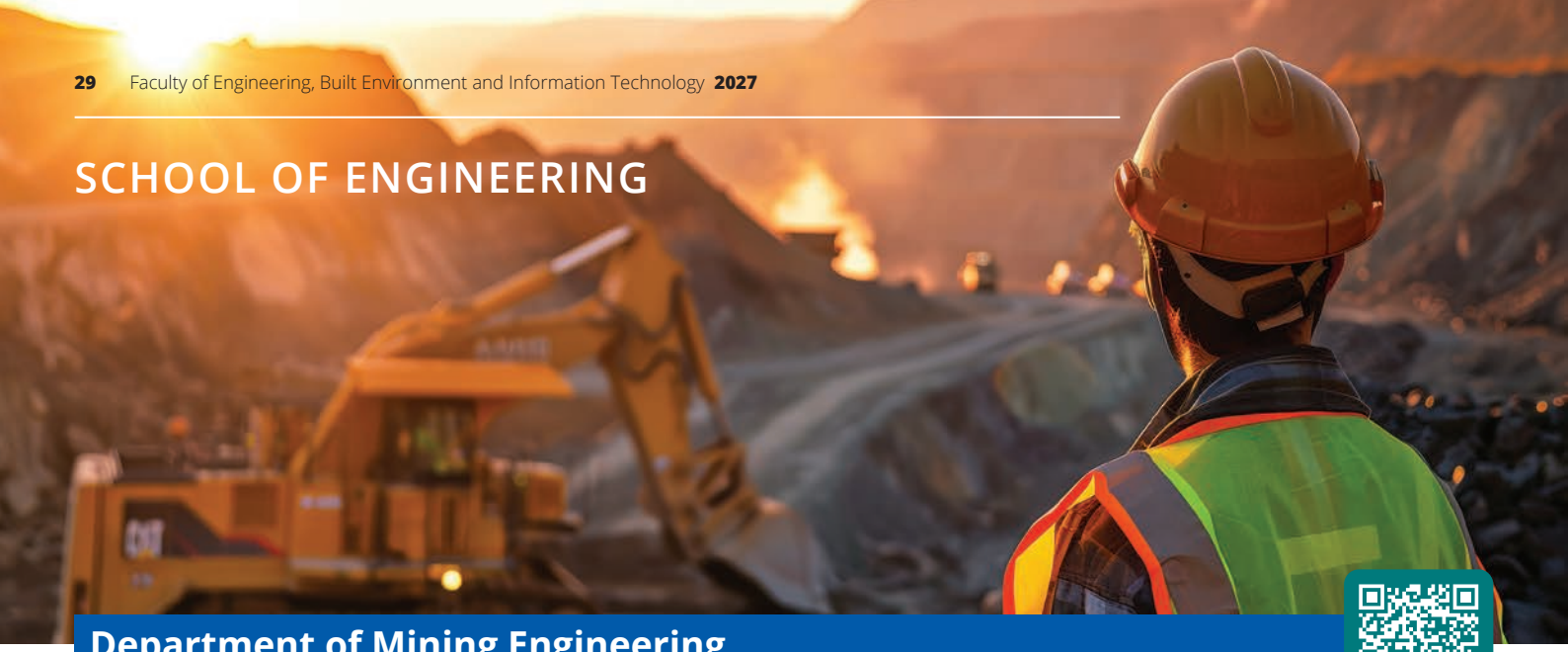
Websites www.up.ac.za/mechanical-and-aeronautical-engineering | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

SCHOOL OF ENGINEERING



Department of Mining Engineering

Bachelor of Engineering in Mining Engineering

A mining engineer plans how to safely extract materials like gold or coal from the ground. They use science and technology to plan, design and operate mines, solve problems and help protect the environment.

What does the programme entail?

The Bachelor of Engineering in Mining Engineering degree involves learning how to extract minerals and resources safely and efficiently from the earth. Students gain knowledge in geology, rock mechanics, mine design, ventilation and environmental management. The programme includes both classroom learning and hands-on training in labs and fieldwork. Students also learn to use advanced software and technologies used in modern mining practices. Courses include mathematics, physics, chemistry and engineering principles. There is a strong focus on safety, sustainability and problem-solving.

What makes this programme unique?

Studying Mining Engineering at the University of Pretoria (UP) offers a distinctive and comprehensive educational experience that sets it apart from other institutions.

Innovative teaching with immersive technology

UP's Department of Mining Engineering features a state-of-the-art Virtual Reality Centre, providing students with immersive simulations of mining environments. This hands-on approach enhances understanding of complex mining operations.

Holistic student development

The programme emphasises not only technical proficiency but also the development of leadership and soft skills. Through mentorship and coaching, students are prepared to become well-rounded professionals in the mining industry.

Accreditation and global recognition

UP's engineering programmes are accredited by the Engineering Council of South Africa (ECSA) and are recognised internationally through the Washington Accord, providing global career opportunities for graduates.

Research excellence and cross-disciplinary opportunities

The university encourages impactful cross-disciplinary research, allowing mining engineering students to collaborate on projects that address societal challenges and advance the mining sector.

Strategic location and industry connections

Situated in Pretoria, a hub for mining activities in South Africa, UP offers students direct access to industry partnerships, internships and employment opportunities within the country's extensive mining sector.

By choosing to study Mining Engineering at UP, students gain access to cutting-edge facilities, a curriculum that balances theory and practice and opportunities that prepare them for successful careers both locally and internationally.

Who is the ideal candidate?

Successful engineers need the following skills and qualities:

- Visualise objects in three dimensions
- Maintain good health and stamina
- Demonstrate strong mathematical and scientific ability
- Show curiosity and a willingness to learn
- Be disciplined and focused
- Display passion for mining
- Use creativity and initiative to solve problems
- Act responsibly and ethically
- Show self-confidence
- Manage tasks effectively and stay organised
- Stay calm and take charge in challenging situations
- Communicate effectively through listening, speaking and writing

Career opportunities

Why studying mining engineering leads to a rewarding career:

- **High demand worldwide** – Mining engineers are needed globally to power infrastructure, technology and production of much need minerals.
- **Innovation and technology** – Engage with cutting-edge tools like automation, AI and sustainable mining practices.
- **Real-world impact** – Contribute to the production of essential resources that drive modern life.
- **Career diversity** – Access roles in operations, consulting, research, management and environmental stewardship.

SCHOOL OF ENGINEERING

Bachelor of Engineering in Mining Engineering *(continued)*

Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	**English Home Language or English First Additional Language**	**Mathematics**	**Physical Sciences**	
Bachelor of Engineering in Mining Engineering [4 years]	5	6	6	**35**

The suggested second-choice programmes for Bachelor of Engineering in Mining Engineering are Bachelor of Science in Chemistry, Bachelor of Science in Mathematics and Bachelor of Science in Physics.

Contact information Ms Abea Kgatshe | **Tel** +27 (0)12 420 3763 | **Email** abea.kgatshe@up.ac.za
Websites www.up.ac.za/mining-engineering | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

SCHOOL OF ENGINEERING

Bachelor of Engineering

Five-year programme for all Engineering disciplines

What does the programme entail?

An engineering degree is very demanding. The workload is high, the pace is fast and the modules are academically challenging. Many students also face challenges regarding background knowledge in mathematics and physical sciences, academic literacy and information technology. They may not have the study skills to cope with the mainstream four-year programme.

Furthermore, many students – even some of those who attended high-performing schools – struggle with the transition to university life due to the very large first-year classes, freedom from strict school routine and many social activities.

For this reason, the School of Engineering offers a five-year programme which is available in all the engineering disciplines. It provides a carefully structured curriculum that helps students adjust to university life and cope with the academic demands of engineering studies.

In the five-year programme, the volume of work is gradually increased while the support provided is decreased over a period of three years. However, the workload – the time students must spend on their studies – is high from the very beginning. This programme is not for anyone who doesn't want to put in the effort!

What makes this programme unique?

In the first and second years of the five-year Bachelor of Engineering programme, students get extra support through additional modules. This helps them build a strong foundation while adjusting to university life.

Who is the ideal candidate?

Students may apply for the Bachelor of Engineering five-year programme if:

- their marks in the National Senior Certificate meet the minimum admission requirements for the five-year programme; or
- their marks in the National Senior Certificate meet the minimum admission requirements for the four-year programme, but they would like more support.

Structure of the programme

In the five-year Bachelor of Engineering programme, students take the same first-year modules and attend the same classes as the four-year degree programme students, but the modules are spread out over two years.

In addition, for every 16-credit 100-level (first-year) module, students also take an extra 8-credit module. For example, in the first year, students take the same mathematics modules (16 credits) as the four-year degree programme students, as well as some extra mathematics modules (8 credits).

In the extra modules, students work in small groups of about 50. They focus on improving problem-solving and thinking skills, building a deeper understanding of concepts, and getting the background knowledge needed for both the extra module and the main four-year module.

In the first year, students take basic science modules that form the foundation of engineering: chemistry, physics and mathematics. (Computer engineering students take mechanics instead of chemistry.) Students in the five-year programme also take Professional Orientation, which introduces information technology and helps develop academic and communication skills. First-year students also complete a humanities and social sciences (HAS) module.

In the second year, students take all the introductory engineering modules, along with a compulsory extra module for each. They also take one 200-level mathematics module per semester.

In the third year, students take the remaining 200-level modules. Since they have already completed two 200-level mathematics modules, their workload is slightly lighter than students in the four-year programme.

In the last two years, students in the five-year Bachelor of Engineering programme follow the same modules as the four-year programme students. All parts of the programme are compulsory, and students must attend all lectures and discussion classes.

Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL OF ENGINEERING	**English Home Language or English First Additional Language**	**Mathematics**	**Physical Sciences**	
Bachelor of Engineering [5 years] This is a five-year programme for all Engineering disciplines. *Previously called ENGAGE*	65%	65%	65%	**33**
For advice on a second-choice programme, please consult a student advisor. To make an appointment, send an email to carol.bosch@up.ac.za.				

Note: The admission requirements above are relevant to prospective students who will commence their studies in 2027.
Admission to the five-year programme in the School of Engineering will be determined by the NSC results.

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Websites www.up.ac.za/academic/engage | www.up.ac.za/school-of-engineering | www.up.ac.za/ebit-postgraduate

I AM EBIT: INDUSTRIAL ENGINEERING

The University of Pretoria's industrial engineering graduates thrive in industry

Kutlwano Mabeba

Kutlwano Mabeba is a business analyst at Lombard Insurance who graduated with a degree in industrial engineering from the University of Pretoria (UP) in 2019. She is currently enrolled for a master's degree in innovation management with the university's Graduate School of Technology Management (GSTM).

What attracted her to this field of study was its potential to unlock opportunities in a diverse range of industries. 'You can branch into literally everything and find work in any discipline that has a problem that needs to be solved,' Mabeba says. The principles she learnt during her studies and the exposure to industry problems she received can be applied to any company in any conceivable field. Mabeba studied with a bursary from the global transportation company DSV, and she was fortunate to start working for the organisation immediately after graduation, as she had also completed vacation work at the company. She spent three years with the company, gaining experience as a logistics engineer.

The work she is currently doing as a business analyst at Lombard Insurance is the total opposite of what she did at DSV. Here, she forms part of a team that solves business problems. She describes her work as an industrial engineer as continually improving and optimising processes to solve problems, as there is always a better, more efficient way of doing things. She is excited that her qualification has enabled her to identify opportunities for continuous improvement.

Mabeba has also experienced the value of studying at an internationally recognised institution such as UP. She explains that some companies, especially the company at which she started her career as an industrial engineer, strongly prefer to employ graduates from UP's Faculty of Engineering, Built Environment and Information Technology as they have a strong work ethic. 'This gives graduates from UP a differentiating position in the workplace and enhances their credibility in industry,' she notes.

She would definitely recommend industrial engineering as a career path for prospective students, as 'it gives one the opportunity to tap into fields as diverse as data management, logistics, and banking, and there will always be a need to improve systems and processes to ensure business sustainability'.

Reflecting on her postgraduate studies in innovation management, Mabeba admits that she is being challenged in ways she has never been challenged before. She is learning valuable concepts, and the programme is shaping the way she thinks. She loves how she is learning to question things and believes that it will improve her value to her current and future employers.

I AM EBIT: EDUCATION IN ACTION

Annual Robot Car Race Day

The annual Robot Race at the Faculty of Engineering, Built Environment and Information Technology (EBIT) started in 2013. Prof Tania Hanekom created it to make the third-year Microcontrollers module more enjoyable and practical, as students were finding the module difficult.

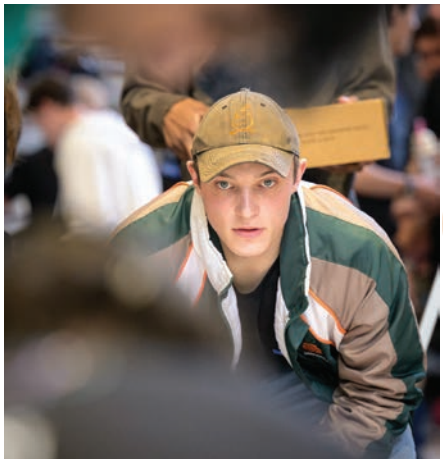
The intent was to spark excitement about the subject by giving students a chance to play and explore in a formal setting. What began as the final practical assessment in the Microcontrollers module soon grew into a public event when spectators were invited. This not only motivated students by giving their work an audience, but also allowed other students and members of the public to see the creativity and practical skills being developed in class.

Students worked in small groups to design and build a microcontroller-based autonomous robotic car. The challenge was for the car to follow a specific coloured line on the floor as quickly as possible. Along the way, this line deliberately crossed over other differently coloured lines. The robot car had to recognise the correct line and stay on track without veering off onto the wrong line.

The project has since been included in other modules in the Department, allowing students to connect what they learn across different subjects and to build on their knowledge as they progress through their studies.

Inspired by the popular Robot Race, the University of Pretoria launched the Tuks Robot School in 2021. This community engagement project uses a specially designed curriculum for Grade 8–11 learners, teaching them about robotics, electronics and programming. It is presented free of charge between April and October each year, giving high school students a hands-on, fun introduction to STEM—while also allowing UP students to share their skills and passion.

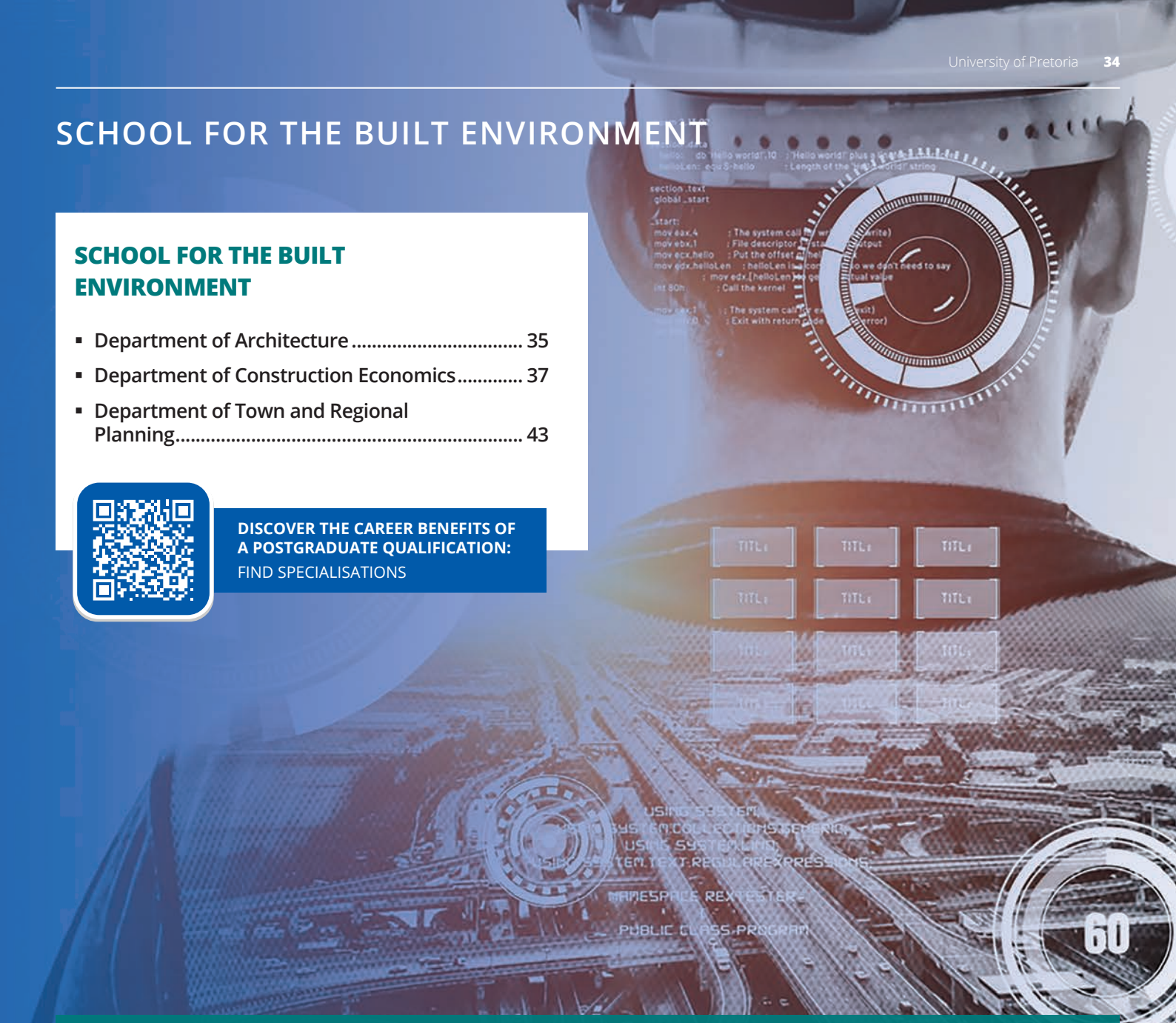
LEARN MORE



SCHOOL FOR THE BUILT ENVIRONMENT

SCHOOL FOR THE BUILT ENVIRONMENT

DISCOVER THE CAREER BENEFITS OF A POSTGRADUATE QUALIFICATION:
FIND SPECIALISATIONS



The School for the Built Environment offers professional degree programmes in architecture, quantity surveying, construction management, real estate and town and regional planning, and professional postgraduate programmes in landscape architecture and interior architecture.

All these programmes are internationally recognised and accredited by their respective statutory councils, allowing students to register as members of their chosen professions. We also encourage our students to participate in community development and service during their studies, as well as after they graduate.

Our close relationships with industry and government expose students to regular engagements with practitioners and real-life projects; and ensure curricula that are relevant to current and future challenges. These relationships also open doors to exciting research opportunities at postgraduate levels in fields such as environment behaviour studies, climate change adaptation, urban resilience, urban citizenship, green building, regenerative design and development, heritage and cultural landscapes, safe and sustainable housing and urban spaces, strategic development planning, construction cost databases, escalation and indices, and contracts and property law.

MAKE AN IMPACT

EBIT focuses its research on impacting global challenges. As the only faculty at a South African higher education institution to house a unique combination of schools related to engineering, the built environment, information technology and technology management, EBIT is in the ideal position to pursue research that provides integrated solutions. The School for the Built Environment actively contributes to research in the following Sustainable Development Goals (SDGs) of the United Nations:

- **SDG 9:** Industry, Innovation and Infrastructure
- **SDG 11:** Sustainable Cities and Communities
- **SDG 12:** Responsible Consumption and Production
- **SDG 13:** Climate Action

SCHOOL FOR THE BUILT ENVIRONMENT

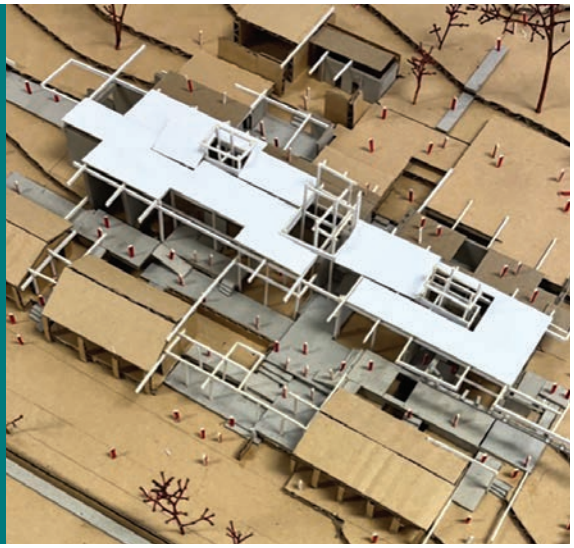
Department of Architecture

Bachelor of Science in Architecture

About the Department

The Department of Architecture believes that designers today should help build a better future for both people and the environment, while respecting the diverse histories that shaped our world. The Department focuses on human-centred design, working with communities, designing responsibly for the environment, and understanding how social, environmental, cultural and economic systems connect and influence one another. These ideas guide the Department's approach to creating sustainable and regenerative designs.

Our mission is to offer a well-rounded education, not just technical training. We aim to develop graduates who are skilled and adaptable, who are ready to succeed in the fast-changing world of the 21st century. We focus on building an open and flexible mindset, critical thinking, problem-solving abilities and the imagination to see new possibilities beyond current ways of doing things. We also value empathy, adaptability and emotional intelligence.



What does the programme entail?

The curriculum for the Bachelor of Science in Architecture programme integrates knowledge from the humanities and the natural sciences to develop students' spatial design skills, and aims to instil a culture of lifelong learning in graduates.

Design and Applied Theory
Architecture students earn half of their credits each year through the design module, which is taught alongside architectural theory. This combination gives students the vocabulary and theoretical knowledge they need to support their design work.

Design is a studio-based module where students work on projects of varying scales and complexity. It encourages critical and independent thinking, the ability to evaluate designs within social, cultural, and ecological contexts and the exploration of creative and suitable solutions. In the studio, students develop design judgement through ongoing discussion, peer learning and both formal and informal assessment.

The Department promotes design that meets real needs and is based on research and practical evidence, rather than focusing only on style or making a statement. Students are encouraged to understand global principles while responding thoughtfully to local contexts.

Students attend classes in the following subject streams:

History of the Environment
History of the Environment helps students understand their role in society and explore meaning in history through the study of themselves and other cultures. It looks at the context and significance of cultural artefacts—including spaces and places—to show how form and order were shaped by environmental, political and philosophical conditions. In the third year, students focus specifically on the history of southern Africa.

Theory of Structures
Theory of Structures gives students the knowledge and practical skills to analyse, plan and design key structural components—like beams, columns and trusses—using materials such as timber, steel and concrete.

Community and Practice
Students take part in collaborative community projects guided by the Department's research initiatives and the Faculty's community engagement programme. In the third year, the focus shifts to managing a professional practice and understanding the legal aspects of construction and contract law.

Earth Studies
Earth Studies introduces students to systems thinking and ecological responsibility, helping them design buildings and spaces that support social, cultural and environmental wellbeing.

The module covers ecological principles that guide inclusive, sustainable, responsive and passive design approaches. Passive design means working with natural elements—like sunlight, wind and shading—to keep spaces comfortable and energy-efficient without relying heavily on heating or cooling systems.

Construction
The study of construction theory, materials and methods builds on design skills, helping students turn their architectural concepts into real, tangible buildings.

Design Communication
Design Communication helps students develop the digital and visual skills essential for designers in the 21st century. The module covers visual communication, digital visualisation, representation and the management of documents and building information.

SCHOOL FOR THE BUILT ENVIRONMENT

Bachelor of Science in Architecture *(continued)*

Career opportunities

Our Bachelor of Science in Architecture degree explores the design of meaningful environments across varying scales, from intimate spaces to larger projects that shape landscapes. The degree prepares graduates for advanced and specialised professional work. It also provides a pathway to honours and master's studies, which are needed to register as a professional architect, landscape architect or interior architect. Graduates can further specialise in design or research, both in South Africa and internationally. The programme is accredited by the South African Council for the Architectural Profession (SACAP) and recognised by the Canberra Accord on Architectural Education. This means our graduates can access international postgraduate studies and apply for professional registration abroad.

The programme is a three-year, full-time, studio-based course delivered through a blended learning model, combining guided, independent, peer and online learning. It develops creative and critical design thinking, exposing students to complex social, cultural and environmental challenges. Students benefit from the Department's interdisciplinary focus and national and international collaborations. The curriculum also encourages lifelong learning, producing graduates who are highly respected in both academia and professional practice.

Architects design buildings and spaces to satisfy our daily needs and improve the world in which we live. They need abilities and skills that range from the practical to the artistic, and from the technical to the theoretical. As professionals, they conceptualise, design and document building projects and oversee quality control during construction. Architects manage their own practices, work for and with other, often multidisciplinary firms, or make contributions to the government sector, in research and advisory positions in the public and private sectors. While the majority of our graduates work in professional practice, there is a wide range of other possibilities that branch out from the spatial design disciplines: from furniture to urban design, ecological planning to entrepreneurship, as well as in research and advisory positions in the public and private sectors.

Duration of the programme		Outcome (SACAP registration)
Bachelor of Science in Architecture	Three years (full-time, studio-based)	Candidate Architectural Technologist
At least one year of work or travel is recommended before postgraduate studies are undertaken.		

Admission by selection

A limited number of students are admitted to the Department annually. Admission is determined by a four-part selection process explicitly developed to level the playing field between students coming from different educational and cultural backgrounds. Please refer to www.up.ac/architecture for information on the selection requirements and process.

Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL FOR THE BUILT ENVIRONMENT	English Home Language or English First Additional Language	Mathematics	Physical Sciences	
Bachelor of Science in Architecture [3 years]	5	4	4	**30**
Will only be considered as first study choice. The selection process includes an interview.				

Contact information Dr Nico Botes | **Tel** +27 (0)12 420 4600 | **Email** arch@up.ac.za
Websites www.up.ac.za/architecture | www.up.ac.za/school-for-the-built-environment | www.up.ac.za/ebit-postgraduate

SCHOOL FOR THE BUILT ENVIRONMENT

Department of Construction Economics

Bachelor of Science in Construction Management

What is construction management?

Construction management is the management of the physical construction process within the built environment and includes the coordination, administration and management of resources. The construction manager takes full responsibility in this process and can work either as a construction manager or a construction project manager.

What makes this programme unique?

The Bachelor of Science in Construction Management and Bachelor of Science Honours in Construction Management programmes are accredited nationally by the South African Council for the Project and Construction Management Professions (SACPCMP) and internationally by the Chartered Institute of Building (CIOB) and by the Royal Institute of Chartered Surveyors (RICS), both based in the UK with worldwide footprints. This international recognition makes our degree highly sought after.

Who is the ideal candidate?

The ideal candidate should have the following skills:

- Communication
- Risk management
- Financial management
- Organisation
- Managerial skill

Career opportunities

Various job opportunities exist in the construction industry. On successful completion of the three-year programme, students can enter a career in construction management, or undertake subcontract and main contract work. On successful completion of the one-year honours degree, opportunities become far wider. The one-year honours degree focuses on further training in aspects such as financial, project and strategic management.

After registration with the South African Council for the Project and Construction Management Professions (SACPCMP), students will be able to become professional construction managers and construction project managers.

SCHOOL FOR THE BUILT ENVIRONMENT

Bachelor of Science in Construction Management *(continued)*

Duration of the programme

Bachelor of Science in Construction Management
The three-year programme will qualify Bachelor of Science in Construction Management graduates to support professionals in the construction industry with all types of construction work.

Bachelor of Science Honours in Construction Management
The one-year Bachelor of Science Honours in Construction Management programme builds on the BSc Construction Management degree and qualifies graduates to start a professional career in construction and related industries. After submitting proof of the required professional practical experience and successfully completing an assessment of professional competence, graduates may register with the South African Council for the Project and Construction Management Professions (SACPCMP).

The honours degree requires students to work part-time at construction companies or firms or other relevant establishments for a minimum of 240 hours. This gives students practical experience to complement their theoretical studies. Students are also expected to keep and submit a logbook using the prescribed template.

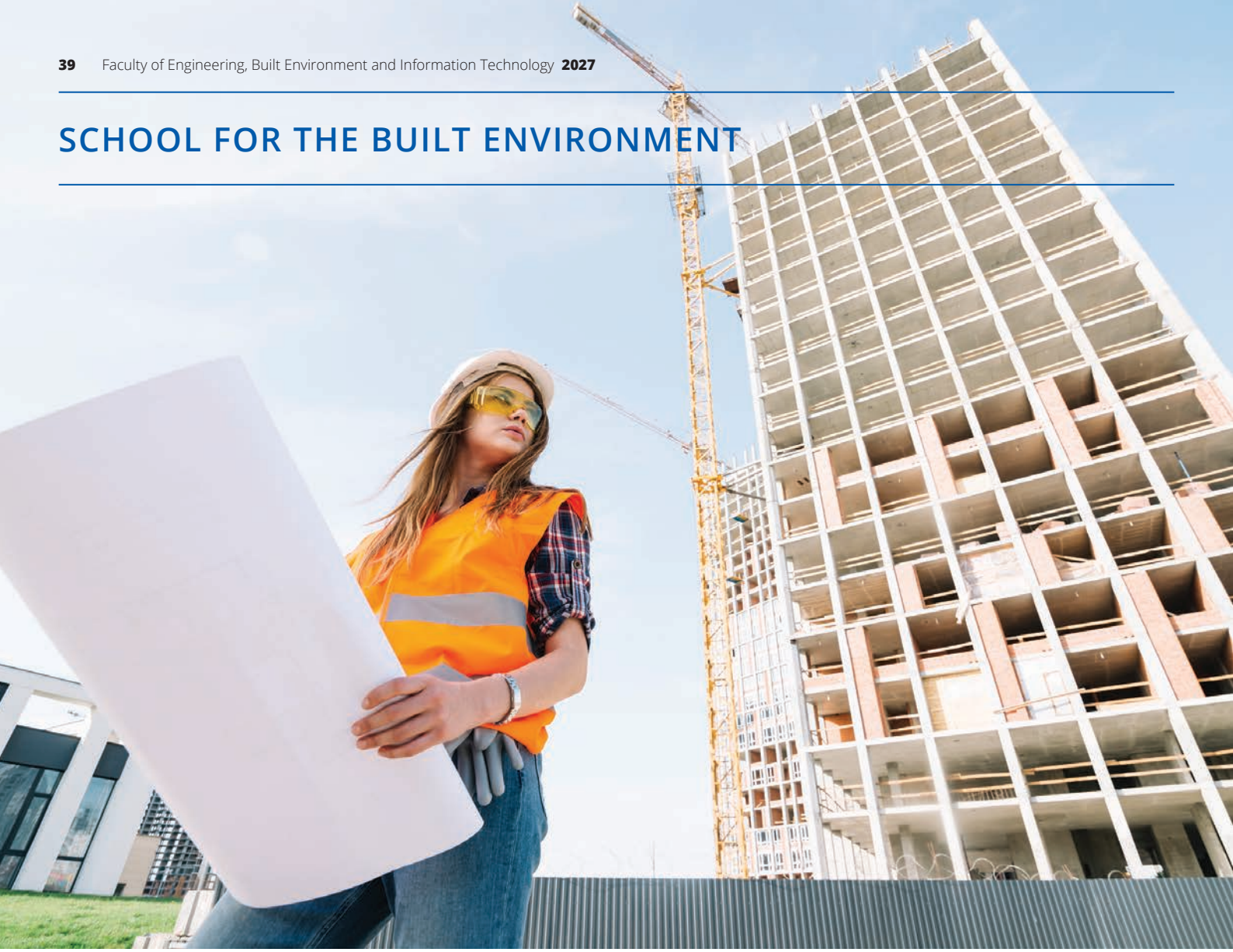
Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL FOR THE BUILT ENVIRONMENT	English Home Language or English First Additional Language	Mathematics	Physical Sciences or Accounting	
Bachelor of Science in Construction Management [3 years]	5	5	4	**30**

The suggested second-choice programme for Bachelor of Science in Construction Management is Bachelor of Science in Real Estate.

Contact information Mr Derick Booyens | **Tel** +27 (0)12 420 4433 | **Email** derick.booyens@up.ac.za
Websites www.up.ac.za/construction-economics | www.up.ac.za/school-for-the-built-environment | www.up.ac.za/ebit-postgraduate

SCHOOL FOR THE BUILT ENVIRONMENT



Department of Construction Economics

Bachelor of Science in Quantity Surveying

Quantity surveyors are independent, professional consultants who are responsible for the financial management of construction projects. They provide expert financial and contractual advice to clients and work closely with architects, engineers and contractors to protect the client's interests. Their work includes preparing budgets and tender documents, consulting with developers and project teams, and making sure the financial and contractual aspects of a project run smoothly.

What makes this programme unique?

The three-year Bachelor of Science in Quantity Surveying and Bachelor of Science Honours in Quantity Surveying programmes are accredited nationally by the South African Council for the Quantity Surveying Profession (SACQSP) and internationally by the Royal Institute of Chartered Surveyors (RICS).

The RICS has a worldwide footprint, which provides our degrees in quantity surveying with international recognition. The Department also offers doctoral degrees, which can be obtained by submitting a dissertation and thesis respectively.

Who is the ideal candidate?

The ideal candidate should have:

- Strong numeracy skills
- Attention to detail
- Negotiation skills
- Organisational skills
- Discipline
- Interpersonal skills

LEARN MORE

Career opportunities

Various job opportunities exist in the construction industry. Most quantity surveyors are employed in quantity surveying practices in the private sector. Quantity surveyors can also be employed as a contractor's quantity surveyor with construction companies.

After registration with the South African Council for the Quantity Surveying Profession (SACQSP), quantity surveyors may become partners or directors in their firms, or even start their own practices.

SCHOOL FOR THE BUILT ENVIRONMENT

Bachelor of Science in Quantity Surveying *(continued)*

Duration of the programme

Bachelor of Science in Quantity Surveying
This three-year programme qualifies graduates to support professional quantity surveyors with all types of construction work, particularly buildings and infrastructure.

Bachelor of Science Honours in Quantity Surveying
Please note: Completion of the BSc in Quantity Surveying is required before enrolling in this Honours programme.

The one-year Bachelor of Science Honours in Quantity Surveying programme builds on the BSc Quantity Surveying degree and qualifies graduates to start a professional career in construction and related industries. After submitting proof of the required professional practical experience and successfully completing an assessment of professional competence, graduates may register with the South African Council for the Quantity Surveying Profession (SACQSP).

The honours degree requires students to work part-time at quantity surveying firms or other relevant establishments for a minimum of 240 hours. This gives students practical experience to complement their theoretical studies. Students are also expected to keep and submit a logbook using the prescribed template.

Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL FOR THE BUILT ENVIRONMENT	**English Home Language or English First Additional Language**	**Mathematics**	**Physical Sciences or Accounting**	
Bachelor of Science in Quantity Surveying [3 years]	5	5	4	**30**

The suggested second-choice programmes for Bachelor of Science in Quantity Surveying are Bachelor of Science in Construction Management and Bachelor of Science in Real Estate.

Contact information Dr Inge Pieterse | **Tel** +27 (0)12 420 6534 | **Email** inge.pieterse@up.ac.za
Websites www.up.ac.za/construction-economics | www.up.ac.za/school-for-the-built-environment | www.up.ac.za/ebit-postgraduate

SCHOOL FOR THE BUILT ENVIRONMENT

Department of Construction Economics

Bachelor of Science in Real Estate

The study of real estate (also called property science) focuses on land and buildings. It includes learning about how land is developed, how buildings are managed, how land and buildings are valued and how decisions are made about financing and investing in property. Real estate professionals work across the property industry in many different roles, including as qualified property valuers.

What makes this programme unique?

The Bachelor of Science in Real Estate and Bachelor of Science Honours in Real Estate are accredited both in South Africa by the South African Council for the Property Valuers Profession (SACPVP) and internationally by the Royal Institution of Chartered Surveyors (RICS). This means the degree is recognised locally and abroad, opening opportunities to work anywhere in the world.

The programme qualifies you to work across the property industry and prepares you to become a professional property valuer.

For those who want to study further, the Department also offers a Master of Science in Real Estate (coursework), as well as research-based master's and doctoral degrees. The Master of Science coursework degree is also accredited internationally by RICS, giving your qualification global recognition.

Who is the ideal candidate?

The ideal candidate should have:
- A keen interest in the greater built environment
- Strong project and management skills
- Strong creative and communication skills
- Strong entrepreneurial skills

Career opportunities

Real estate is a specialised field that plays a major role in the South African economy, as property makes up nearly half of the world's total assets.

Graduates can look forward to careers in areas such as property investment, property finance and facilities management. Completing the honours degree allows students to register as professional property valuers through the South African Council for the Property Valuers Profession (SACPVP).

Career opportunities exist across the property sector, from entrepreneurship in the private sector to employment in government, semi-government or private organisations.

Duration of the programme

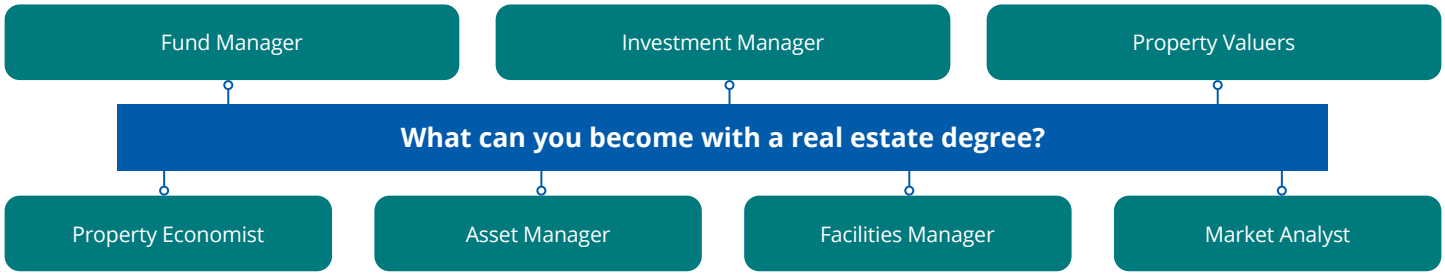
Bachelor of Science in Real Estate
This is a three-year programme that prepares graduates to work in different areas of the property industry, including management, development and marketing.

Bachelor of Science Honours in Real Estate
This one-year programme qualifies graduates to begin a professional career in the property industry. As part of the honours degree, students are required to work part-time at approved property companies or related businesses for at least 240 hours. This practical experience complements the theoretical studies and must be recorded in a logbook using the prescribed template.

Once students have completed the honours degree, gained the prescribed professional practical experience, and passed the professional examination, they may register with the South African Council for the Property Valuers Profession (SACPVP).

SCHOOL FOR THE BUILT ENVIRONMENT

Bachelor of Science in Real Estate *(continued)*



Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL FOR THE BUILT ENVIRONMENT	English Home Language or English First Additional Language	Mathematics	Physical Sciences or Accounting	
Bachelor of Science in Real Estate [3 years]	5	5	4	**30**

The suggested second-choice programme for Bachelor of Science in Real Estate is Bachelor of Commerce specialising in Investment Management.

Contact information Dr Inge Pieterse | **Tel** +27 (0)12 420 6534 | **Email** inge.pieterse@up.ac.za
Websites www.up.ac.za/construction-economics | www.up.ac.za/school-for-the-built-environment | www.up.ac.za/ebit-postgraduate

SCHOOL FOR THE BUILT ENVIRONMENT

Department of Town and Regional Planning

Bachelor of Town and Regional Planning

What does the programme entail?

This programme prepares students for a career in which they help plan, design and manage changes in society through the development and use of land.

Students learn to create projects and interventions at different levels—from designing individual housing or commercial sites to planning entire neighbourhoods, cities or even regions.

The aim is to give people more choices in where and how they live, promote fairness and equal access to resources, support environmentally and socially sustainable communities and improve overall quality of life.

The main goal of this profession is to find innovative, fair, sustainable and affordable ways to improve how people live and use land. In South Africa today, town and regional planners play an important role in fixing imbalances in cities and rural areas, and in improving settlements that are poorly planned, unfair or inefficient.

Planning is challenging because different people and groups—such as local communities, businesses, government and environmental organisations—often have different and sometimes conflicting ideas about what should happen in a town or region. Planners must find solutions that balance these interests while improving the area for everyone.

Structure of the programme

Practice and theory are closely integrated in the Town and Regional Planning programme. Lectures, practical projects and studio work encourage critical thinking, discussion and problem-solving by applying theory to real-world situations. The programme is student-centred, and each student's progress is carefully monitored.

Students gain the knowledge and skills needed to plan interventions for properties, settlements and regions. Key areas of focus include planning theory and history, land-use management and development, settlement planning and design, strategic and integrated development planning, urban and rural regeneration, public policy and planning methods and techniques.

Additional modules in related fields ensure students develop a multidisciplinary perspective, enabling them to provide innovative, inclusive, affordable and practical solutions to complex urban and rural challenges.

SCHOOL FOR THE BUILT ENVIRONMENT

Bachelor of Town and Regional Planning *(continued)*

What makes this programme unique?

One of the Department's key goals is to take on new challenges and find creative ways to help rebuild and improve South Africa. The Department is actively involved in community development projects, working on research and contracts for local, provincial and national government. These projects focus on making communities more inclusive and helping them grow in a positive way.

The professional four-year Bachelor of Town and Regional Planning qualification enables graduates to register as professional town and regional planners with the South African Council for Planners (SACPLAN), which is an official body established in terms of an act of Parliament. The degree is internationally recognised.

Who is the ideal candidate?

The ideal candidate needs to be:
- Professional
- Caring and sensitive
- Analytical and strategical
- A creative problem-solver
- Able to suggest innovative solutions
- Able to bring different people's ideas together

Because South Africa faces big challenges like housing shortages, limited social services and high levels of poverty and inequality, planners also need a strong sense of social and environmental justice. They should be committed to improving the lives of people and communities.

Career opportunities

While most town and regional planners are employed in the three spheres of government, or act as private consultants to the public and private sectors, they are also employed by research agencies such as the Council for Scientific and Industrial Research (CSIR) and the Human Sciences Research Council (HSRC), non-governmental and development organisations, community-based organisations, major financial institutions and property development groups.

Application requirements

Programme	Application requirements for NSC/IEB for 2027			
	Achievement level			APS
SCHOOL FOR THE BUILT ENVIRONMENT	**English Home Language or English First Additional Language**	**Mathematics**	**Physical Sciences**	
Bachelor of Town and Regional Planning [4 years]	5	4	-	**30**

For advice on a second-choice programme, please consult a student advisor. To make an appointment, send an email to carol.bosch@up.ac.za.
The minimum period of study is four years' full-time study. Only a limited number of candidates can be accommodated and admission is subject to selection.

Contact information Prof Karina Landman | **Tel** +27 (0)12 420 6379 | **Email** karina.landman@up.ac.za
Websites www.up.ac.za/townplanning | www.up.ac.za/school-for-the-built-environment | www.up.ac.za/ebit-postgraduate

SCHOOL OF INFORMATION TECHNOLOGY

SCHOOL OF INFORMATION TECHNOLOGY

DISCOVER THE CAREER BENEFITS OF A POSTGRADUATE QUALIFICATION:
FIND SPECIALISATIONS

The School of Information Technology is a forerunner in the South African IT environment. With its unique combination of the fields of computer science, informatics and information science, students benefit from an integrated approach, supported by modern laboratories.

All the degree offerings in the School of Information Technology (SIT) are highly sought after in the IT industry with a focus on industry-related trends. We also collaborate with industry and academic partners from the African continent and the rest of the world on a variety of research projects in exciting new technology fields.

The curricula conform to the highest international standards and provide breadth and depth in computing skills; equipping students with problem-solving abilities, and giving them a foundation for continued learning in an IT career. As a testimony to our commitment to top-quality education, the School of IT is a proud member of the iSchools Organisation.
Learn more at **ischools.org**

MAKE AN IMPACT
The School of Information Technology actively contributes to research in the following Sustainable Development Goals (SDGs) of the United Nations:

- **SDG 4:** Quality Education
- **SDG 9:** Industry, Innovation and Infrastructure
- **SDG 17:** Partnerships for the Goals

I AM EBIT: BREAKING BOUNDARIES

UP graduate completes 2-year IT master's in 10 months

Mikhail Edwards, a Masters of Information Technology (MIT) degree graduate from the University of Pretoria's Department of Informatics in the EBIT Faculty, wants to make a difference to society at the intersection of software development, business analysis, project management and strategic leadership.

He impressed his supervisors with his creativity and passion to learn when he completed the two-year master's programme in only 10 months. As partner and managing director of the South African branch of the software development company Cirrus Bridge, he is now serving the industry with his insight and critical, innovative thinking.

Despite not having any information technology (IT)-related subjects in matric, his initial interest was in the business side of Informatics. He later became invested in IT, especially its application in business system analysis. 'As my father had an IT company, I knew what it entailed, and always knew I wanted to do something innovative in that line,' he explains.

After completing his BCom Informatics: Information Systems degree in 2022, he enrolled for an honours degree, which he obtained with distinction at the end of 2023, followed by an MIT: ICT Management degree, which he also obtained with distinction at the end of 2024. He is currently enrolled for his PhD in Information Systems, where he is developing a maturity model that integrates DevOps (the practice of combining software development and IT operations to deliver software solutions faster, more reliably and with greater stability) and enterprise architecture management for business value creation.

During 2024, while completing his master's degree, he served as an assistant lecturer in the Department of Informatics and worked as a coordinator in the Department's User Experience (UX) Laboratories. Although he had initially chosen to conduct research on merging business analysis with UX design to provide industry with better solutions through the identification of better requirements, he discarded this for a topic with greater industry application. This followed his appointment as a student intern at the BMW IT Hub, where the company suggested a topic that was identified as a need in the motor industry: using artificial intelligence (AI) anticipatory functions to establish the efficacy of cloud-hosted systems.

Prof Hanlie Smuts, Head of the Department of Informatics and Mikhail's research supervisor, describes him as an inspirational student. 'In both his honours and his master's research, I found him to be very focused and goal oriented. He does not procrastinate and ensures that his work is always finished in good time. He has an excellent work ethic, applies what he has learnt, and practices good time management. These are qualities that will serve him well in his career.'

Since his research was completed ahead of schedule, he had the opportunity, together with his supervisor, to present his findings at the 17th International Conference on Information Systems of the International Association for Development of the Information Society (IADIS) in Portugal in 2024. This led to an invitation to expand on his research for a peer-reviewed article published in the *International Journal on Computer Science and Information Systems*. 'This is a major achievement for a postgraduate student,' says Prof Smuts. She believes that he could make a career for himself in academia, but that he would be just as successful carving a career for himself in industry. 'However, his impact on society would perhaps be better achieved in industry.'

The decision to join the start-up company that had been established by his brother Patric in the Netherlands reveals his desire to apply his knowledge in different industries. 'It appealed to the entrepreneur in me, and responded to the desire I have always had to make a difference.' His aim is to build an international company that can leverage business value for its clients.

He attributes the success he has achieved, to a large extent, to his decision to enrol in the University of Pretoria's Department of Informatics after matric. It has taken him through his entire post-school life cycle, from student to industry. 'It is a top-ranked department in Africa, and the lecturers prepare one for a career in industry by keeping up to date with the latest developments.' He believes this has equipped him to add value to any business, from a start-up to a leader in industry. 'The Department ensures that its graduates have the relevant skills when they enter industry. I could not have asked for any better.'

SCHOOL OF INFORMATION TECHNOLOGY

Department of Computer Science

Bachelor of Science in Computer Science

What does the programme entail?

A Bachelor of Science in Computer Science degree from the University of Pretoria provides a strong foundation and advanced skills in computing. It equips students with problem-solving abilities and ensures that they have a solid foundation for continued learning and producing high-quality software in an IT career.

What makes this programme unique?

The curriculum conforms to the highest international standards and will give students a foundation in all the important areas of computer science. Students will study a wide variety of computer science modules that emphasise the most up-to-date ways of developing software for use in the IT industry.

Career opportunities

Graduates follow careers in programming, system analysis, system architecture, consulting, database administration and network analysis. They can also be employed as researchers.

Who is the ideal candidate?

The ideal candidate is someone who is:

- Curious about how computers work
- Interested in building things carefully and systematically
- Good at step-by-step reasoning
- Fascinated by designing solutions that others can use
- Able to pay attention to detail
- Able to recognise good style in their work
- Creative and able to work well in a team
- Persistent in completing tasks

Structure of the programme

The minimum time required for completing a Bachelor of Science in Computer Science degree is three years. This programme includes a significant number of mathematics and natural sciences modules to strengthen the kind of thinking needed for the development of software and the enhancement of problem-solving abilities. It also provides a basis for research in computer science, which often relies on a certain level of mathematical skill and maturity.

LEARN MORE

Application requirements

Programme	Application requirements for NSC/IEB for 2027		
	Achievement level		APS
SCHOOL OF INFORMATION TECHNOLOGY	English Home Language or English First Additional Language	Mathematics	
Bachelor of Science in Computer Science [3 years]	5	6	30

The suggested second-choice programmes for Bachelor of Science in Computer Science are Bachelor of Science in Information Technology in Information and Knowledge Systems and Bachelor of Commerce specialising in Information Systems.

Contact information Prof Linda Marshall | **Tel** +27 (0)12 420 2361 | **Email** compsci@up.ac.za
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SCHOOL OF INFORMATION TECHNOLOGY

Department of Computer Science

Bachelor of Science in Information Technology in Information and Knowledge Systems

What does the programme entail?

Bachelor of Science in Information Technology in Information and Knowledge Systems is the ideal programme for students who are interested in computer science, and specifically in one of the following areas of specialisation:

- Data science
- Genetics
- Geographical information systems
- IT and enterprises
- Law
- Music
- Software development

The minimum period for the completion of the Bachelor of Science in Information Technology in Information and Knowledge Systems programme, which aims to prepare students for careers in the IT industry, is three years.

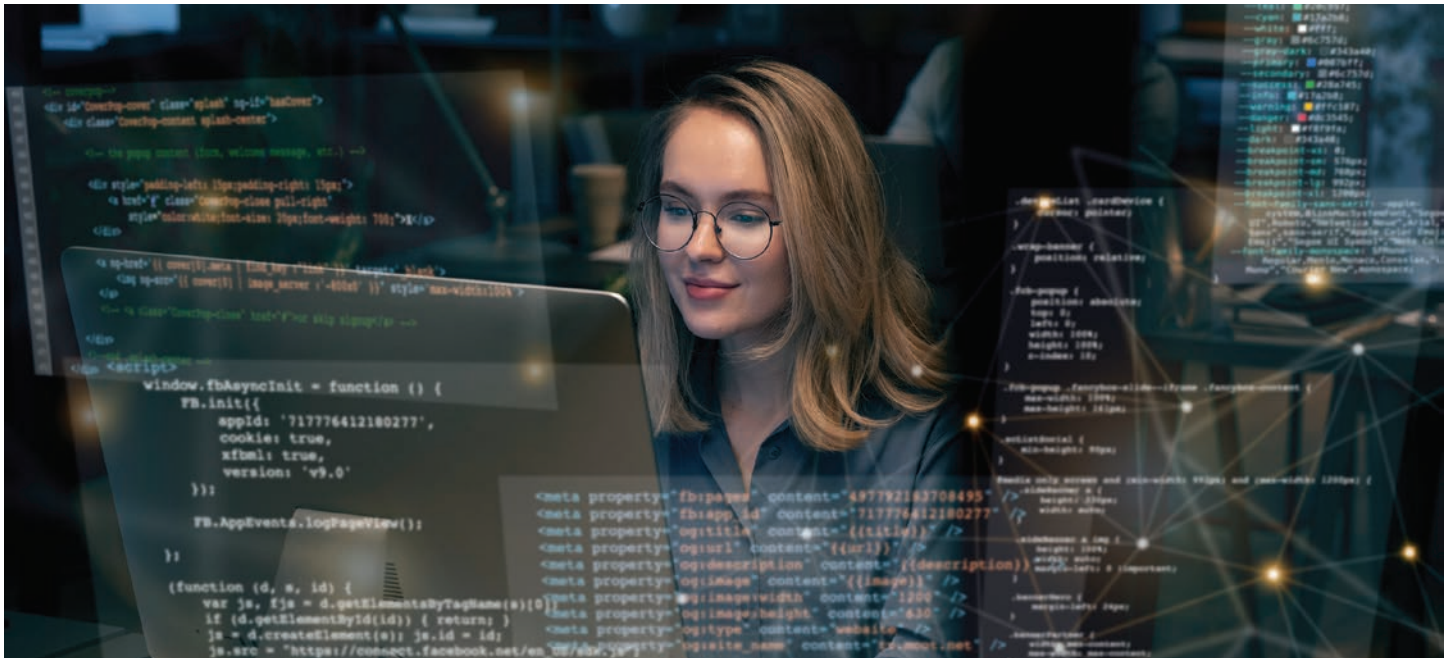
What makes this programme unique?

The Bachelor of Science in Information Technology in Information and Knowledge Systems programme covers more than just computing. It has a multidisciplinary approach, meaning students learn how computer science connects with other fields. The curriculum also allows students to choose a second major besides computer science, giving them a broader perspective and more opportunities for different careers.

Who is the ideal candidate?

The ideal candidate should have:

- Attention to detail
- The ability to work with others in a team
- Analytical skills
- Creativity



Application requirements

Programme	Application requirements for NSC/IEB for 2027		
	Achievement level		APS
SCHOOL OF INFORMATION TECHNOLOGY	English Home Language or English First Additional Language	Mathematics	
Bachelor of Science in Information Technology in Information and Knowledge Systems [3 years]	4	6	30
The suggested second-choice programme for Bachelor of Science in Information Technology in Information and Knowledge Systems is Bachelor of Technology in Information Systems			

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SCHOOL OF INFORMATION TECHNOLOGY

Department of Informatics

Bachelor of Information Technology in Information Systems

What does the programme entail?

Students who enrol in this programme study how computer and information systems are used in organisations. As the use of information technology grows rapidly, new and more complex applications are constantly being developed.

Informatics specialists learn to analyse business problems and improve the efficiency, effectiveness and control of processes in commercial organisations, government departments, non-profit organisations or any organisation where information is important. They not only identify business needs but also design and implement information systems to meet them.

Today, the term 'information systems' usually refers to computer-based systems, including mobile applications, that store and manage data so people can understand it and make better decisions.

What makes this programme unique?

What makes the Informatics degree at the University of Pretoria unique is the Capstone Project, which is a working software solution for a real-life client. Implementing this software solution exposes students to the industry's need for graduates with both soft skills and technical skills.

Career opportunities

Informatics specialists can choose between many excellent job opportunities. For example, they can take on roles as a:

- Business analyst
- System analyst
- Data scientist
- Knowledge manager
- Quality assurance tester
- User experience designer
- Project manager
- Developer (front end, back end or full stack)
- IT auditor
- IT entrepreneur
- IT tax specialist
- e-business consultant

Who is the ideal candidate?

The ideal candidate should have:

- analytical skills;
- excellent research skills;
- problem-solving skills;
- communication skills; and
- the ability to work in a team.

Structure of the programme

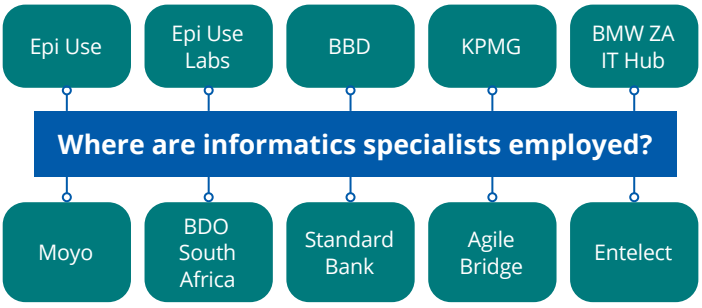
The Bachelor of Information Technology in Information Systems programme takes a minimum of three years to complete.

Core modules

- Critical thinking and problem solving
- Programming
- Systems analysis and design
- Database design and development
- Team skills development

Elective modules are dependent on the chosen stream. Streams are:

- Computer Auditing
- eTaxation
- Data Science Management
- Geography
- eBusiness
- Entrepreneurship
- User Experience Design



Application requirements

Programme	Application requirements for NSC/IEB for 2027		
	Achievement level		
SCHOOL OF INFORMATION TECHNOLOGY	English Home Language or English First Additional Language	Mathematics	APS
Bachelor of Information Technology in Information Systems [3 years]	5	5	**30**

The suggested second-choice programme for Bachelor of Information Technology in Information Systems is Bachelor of Information Science.

Contact information Prof Marié Hattingh | **Tel** +27 (0)12 420 3798 | **Email** informatics@up.ac.za
Websites www.up.ac.za/informatics | www.up.ac.za/school-of-information-technology | www.up.ac.za/ebit-postgraduate

SCHOOL OF INFORMATION TECHNOLOGY

Department of Informatics

Bachelor of Commerce specialising in Information Systems

What does the programme entail?

Students enrolled for the Bachelor of Commerce specialising in Information Systems degree study the application and use of computer and information systems in an organisation. The degree is offered as an inter-faculty programme between the Faculty of Economic and Management Sciences (EMS) and the Faculty of Engineering, Built Environment and Information Technology (EBIT). Students also have the option to pursue further studies within the BCom elective stream, allowing them to deepen their expertise in specific areas of interest.

The broad background in economic and management sciences gained through this programme is combined with information technology (IT) to teach students how to design and implement systems for storing and manipulating data in such a way that people can understand, use, interpret and make decisions based on that information.

What makes this programme unique?

The Bachelor of Commerce specialising in Information Systems programme at UP is the only degree in South Africa that is internationally endorsed by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) of the USA.

The Bachelor of Commerce specialising in Information Systems degree at the University of Pretoria features a Capstone Project in which students develop a working software solution for a real-life client. Through this project, students gain valuable exposure to industry expectations, particularly the need for graduates with both strong technical abilities and well-developed soft skills.

Career opportunities

A well-qualified informatics specialist can take on a role as a:

- Data scientist
- IT auditor
- IT entrepreneur
- Programmer
- Business analyst
- Project manager
- Chief Information Officer (CIO)
- Chief Technical Officer (CTO)
- Knowledge manager

‘As a high school student, I had already acknowledged that my strengths lay in IT and business. When representatives from the University of Pretoria came to my high school and presented the different programmes they offered, the informatics degree immediately sparked my interest. Looking back on my journey as a Bachelor of Commerce student specialising in Information Systems, I realise that it has been one of the best choices I have made. This degree not only aligns with my strengths but also covers a wide range of expertise. I was able to learn how to apply and use information systems in organisations and incorporate commerce into the IT industry. This degree offers a wide variety of career opportunities, meaning I will not be limited to certain career options. I am confident that I have chosen the right degree.’

Amy Trawin – Bachelor of Commerce specialising in Information Systems

Application requirements

Programme	Application requirements for NSC/IEB for 2027		
	Achievement level		APS
SCHOOL OF INFORMATION TECHNOLOGY	English Home Language or English First Additional Language	Mathematics	
Bachelor of Commerce specialising in Information Systems [3 years]	5	5	30

This programme is presented in collaboration with the Faculty of Economic and Management Sciences.
Suggested second-choice programme: Bachelor of Information Technology in Information Systems

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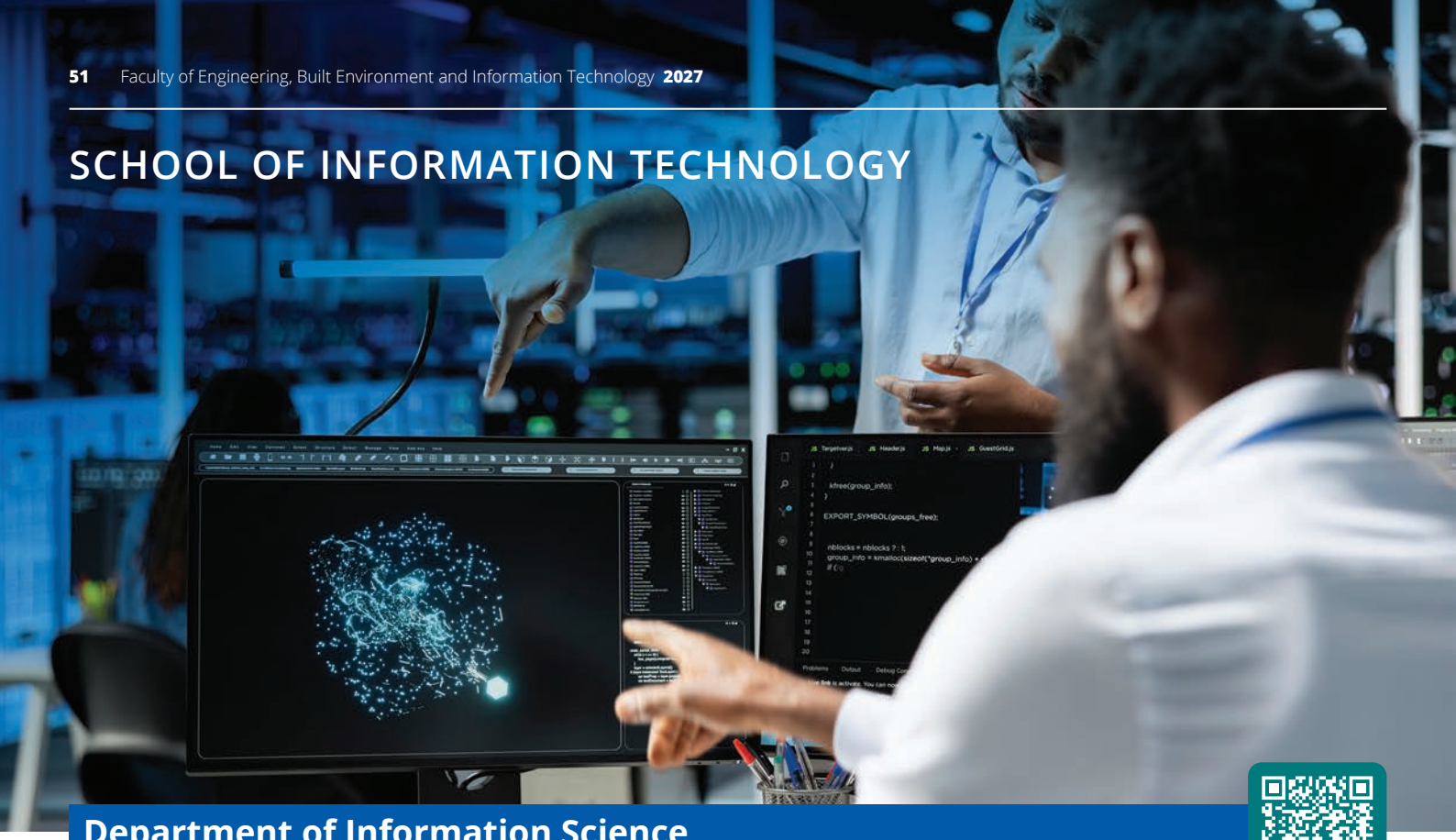
SCHOOL OF INFORMATION TECHNOLOGY



Department of Information Science

Bachelor of Information Science specialising in Multimedia*

What does the programme entail?

The rapid evolution of digital technology has redefined how we create, communicate and interact with information. The Multimedia qualification in the Department of Information Science equips students to design and develop interactive digital experiences across various platforms and media. This includes websites, games, animations, mobile applications and other user-centred interactive systems.

The programme integrates technical development skills with creative problem-solving and critical understanding of current computing and digital innovation trends. Students gain hands-on experience in web development, interaction design, animation, video and sound editing and 3D modelling. A strong emphasis is placed on programming and core computer science principles, giving students the foundation to build robust, scalable and intelligent digital systems. They also engage with human-computer interaction, user experience design and emerging technology trends.

By combining practical application with theoretical insight, the qualification prepares students to navigate and shape the rapidly changing landscape of interactive technology. This degree offers the skills and perspective needed to remain relevant and adaptable in an increasingly digital world where engagement, usability and innovation are critical.

Which companies employ our graduates?

Graduates with skills in interactive technology can find opportunities across many sectors that benefit from innovative digital solutions. For example, our graduates have gone on to work at:

- RetroRabbit
- Gendac
- EPI-USE Labs
- 24-bit Games
- bizAR Reality
- 5DT

What makes this programme unique?

This programme bridges the gap between design and development, equipping students to collaborate effectively across multidisciplinary teams. Graduates gain the versatility to operate in both creative and technical roles, with the ability to move between front-end design, user experience and back-end development tasks.

Through its integration of programming, computer science fundamentals, and applied digital technologies, the programme prepares students to engage with cutting-edge tools and methodologies used in industry, from web development and game design to immersive environments and interactive media. This versatility ensures graduates are not only technically capable but also industry-relevant and future-ready.

Who is the ideal candidate?

The ideal candidate should be:

- Passionate about computing and technological advancements
- Happy to spend many hours in front of a computer
- Interested in creating and maintaining websites (both front- and back-end)
- Interested in learning about animation, image, sound and video editing
- Interested in the intersection between technical aspects (programming) and design aspects (user experience, visual design)
- Interested in understanding how people interact with computing systems and how to design them based on this knowledge (user experience and interaction design)

** Possible name change to: Bachelor of Information Science specialising in Interactive Technology*

SCHOOL OF INFORMATION TECHNOLOGY

Bachelor of Information Science specialising in Multimedia* *(continued)*

Structure of the programme

Core modules
- Theory of information science
- Web development
- Interactive technology theory and trends
- Interactive technology authoring tools
- Human-computer interaction
- Programming and program design
- Computer science theory
- Visual design

Elective modules (3rd year computer science only)
- Software engineering
- Artificial intelligence
- Computer networks
- Programming languages
- Compiler construction
- Computer security
- Database systems
- Computer graphics

Application requirements

Programme	Application requirements for NSC/IEB for 2027		
	Achievement level		
SCHOOL OF INFORMATION TECHNOLOGY	English Home Language or English First Additional Language	Mathematics	APS
Bachelor of Information Science specialising in Multimedia* [3 years]	4	5	**30**

The suggested second-choice programmes for Bachelor of Information Science specialising in Multimedia* are Bachelor of Information Science, Bachelor of Science in Information Technology in Information and Knowledge Systems and Bachelor of Science in Computer Science.

Contact information Ms Annique Smith | **Email** annique.smith@up.ac.za
Websites www.up.ac.za/information-science > Multimedia | www.up.ac.za/school-of-information-technology
www.up.ac.za/ebit-postgraduate
** Possible name change to: Bachelor of Information Science specialising in Interactive Technology*

SCHOOL OF INFORMATION TECHNOLOGY

Department of Information Science

Bachelor of Information Science

What does the programme entail?

Information and technology are found in every aspect of modern society, and there is a growing need for graduates who understand how people interact with information and technology. This is especially relevant with new technologies from the Fourth Industrial Revolution and other innovations.

This degree focuses on using technology to manage and process information products. Students learn how to organise, retrieve and share information, as well as how to make it more useful and valuable.

Students also gain skills in managing information and knowledge, which are the most critical resources for any organisation. This includes learning about knowledge management, competitive intelligence and digital tools like online repositories.

Who is the ideal candidate?

This degree is ideal for students who:
- Enjoy working with information
- Enjoy creating or sharing knowledge, both in digital and analogue formats
- Are able to organise, manage and use information
- Practice knowledge management and competitive intelligence in an ethical way

Graduates with these skills are in high demand and can help companies that rely heavily on information to achieve their goals and compete globally.

Which companies employ our graduates?

Graduates can work in banks, telecom companies, consultancy firms and any industry that relies heavily on information.

Career opportunities

- **Knowledge managers** (manage information and knowledge resources)
- **Information specialists** (organise, retrieve and add value to information)
- **Information consultants** (consult on information products, services and systems)
- **Information brokers** (become an infopreneur and buy and sell information products and services)
- **Systems specialists** (analyse and develop information systems)

Application requirements

Programme	Application requirements for NSC/IEB for 2027		
	Achievement level		
SCHOOL OF INFORMATION TECHNOLOGY	English Home Language or English First Additional Language	Mathematics	APS
Bachelor of Information Science [3 years]	4	-	28

The suggested second-choice programmes for Bachelor of Information Science are Bachelor of Information Science specialising in Publishing and Bachelor of Arts.

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SCHOOL OF INFORMATION TECHNOLOGY

Department of Information Science

Bachelor of Information Science specialising in Publishing

What does the programme entail?

The Bachelor of Information Science specialising in Publishing programme teaches publishing theory and skills by selecting and developing content based on the needs of the user and appropriately packaging this content through a process of adding value. Publishing can happen in both paper-based and electronic format and includes a range of products, such as books for the trade market and publications for educational, academic and corporate readers. Publishing processes are also used in the production of mass media products, such as newspapers and magazines.

This programme aims to:
- provide students with knowledge of the publishing process and role-players, as well as trends and initiatives in the local and international publishing industry;
- provide students with relevant and current skills, including editing, design and production;
- enable students to work with a variety of information formats, from print to digital; and
- make students aware of the social, ethical and legal responsibilities involved in the publishing process.

What makes this programme unique?

This programme is the only undergraduate publishing degree available in South Africa and gives students access to the full publishing value chain. It is benchmarked against international programmes and students can continue with their studies in other countries.

Who is the ideal candidate?

The ideal candidate should have:
- excellent language and communication skills, both written and verbal;
- project management and the ability to work towards goals and deadlines;
- computer skills and an aptitude for learning new skills;
- critical reading and reasoning; and
- good business sense.

Career opportunities

Graduates can work in a wide variety of publishing, communication and media companies. Various career opportunities are available in the publishing industry, book retail and corporate communications. Content production for media houses, magazines and other content creators is also possible.

Some career opportunities include the following:
- Editorial functions
- Layout, design and typesetting
- Digital production
- Copyright permissions and negotiations
- Marketing and promotion
- Self-publishing and consultancy

LEARN MORE

Which companies employ our graduates?

Our graduates can be found at all major local publishers (Pan Macmillan, Jonathan Ball, NB, Oxford University Press, Van Schaik, Springer Nature and and Juta), as well as at companies as diverse as legal firms, medical aid schemes and car manufacturers. Some are also entrepreneurs and start new businesses, for example BK Publishing and Blackbird Books.

Application requirements

Programmes	Application requirements for NSC/IEB for 2027		
	Achievement level		APS
SCHOOL OF INFORMATION TECHNOLOGY	English Home Language or English First Additional Language	Mathematics	
Bachelor of Information Science specialising in Publishing [3 years]	5	-	**28**

The suggested second-choice programmes for Bachelor of Information Science specialising in Publishing are Bachelor of Information Science, Bachelor of Arts specialising in Languages and Bachelor of Arts.

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Websites www.up.ac.za/information-science | www.up.ac.za/school-of-information-technology | www.up.ac.za/ebit-postgraduate

DEPARTMENT OF INFORMATION SCIENCE: STUDENT TESTIMONIALS

'I chose the BIS Multimedia degree because it combines critical and creative thinking, offering the perfect balance of technical challenge and creative freedom in a fast-growing career field. My favourite part of the programme was my final-year project, where Multimedia students worked in groups to develop a video game from scratch. It was an incredible experience that taught me how to turn an idea into a complete product while having fun collaborating with others.

Throughout the degree, I've gained valuable technical and creative skills, including experience with different coding languages, which has given me the confidence to contribute meaningfully to any workspace. The programme has also taught me how multimedia products can shape the way people interact with technology, enhancing user experiences in creative and meaningful ways. I would advise future students to take the time to truly understand the foundational concepts in each module, as they are essential for success. This degree has equipped me with creative problem-solving skills, allowing me to make a positive impact in both the industry and the wider community.'

Ayla Inggs – Bachelor of Information Science Honours specialising in Multimedia*

'I have always been passionate about IT and technology and their continuous advancements. This degree was perfect for me because of the wide variety of content and topics it covers, from developing web applications and coding AI, to making short films—both animated and live action—and creating video games. My favourite part of the degree was that it allowed me to express my creative side while staying relevant to the content being taught. The programme encourages you to be expressive and to put your own style into your work.

The skills and knowledge I have gained prepare me for a variety of career paths. I could pursue full-stack development or specialise in front-end work, focusing on user interface and user experience. The degree also helped me develop my personal interests in 3D modelling and visual effects through applications like Blender, Unity and the full Adobe suite. Many projects and assignments involve group work, which helps prepare you for the professional environment by developing teamwork and effective communication skills.

For anyone considering this degree, I would say: be prepared to work hard but also have fun doing it. The topics are fascinating, so don't be afraid to express yourself.'

Jerome Lou – Bachelor of Information Science specialising in Multimedia*

'When I was in school, I took IT and loved the theory, but wasn't a fan of coding. Many encouraged me to pursue programming because it's a highly sought-after skill. While applying, I discovered Information Science, which immediately seemed like the perfect fit since coding was optional. It's hard to pick a favourite part of this degree because it opens up so many career options. From information ethics to knowledge management and competitive intelligence, I feel well prepared for roles in governance, data management or business analysis. I consider it a 'hidden gem' degree—some modules offered at UP aren't available anywhere else.

I love that this degree goes beyond teaching processes; it trains you to critically assess problems, so solutions are practical and useful. Information exists everywhere, so the skills I've gained apply to almost any industry.

And of course, there's AI. The skills we acquire aren't easily replaced by technology because this degree emphasises human and machine collaboration. We learn to be the link between processes and end-users, translating needs into instructions or blueprints for those behind the scenes.

Overall, I highly recommend this degree to anyone who loves IT but wants to explore its business applications, maybe with a bit of coding on the side, and who values building relationships to deliver collaborative solutions.'

Caitlin Moses – Bachelor of Information Science

** Possible name change to: Bachelor of Information Science specialising in Interactive Technology*

DEPARTMENT OF INFORMATION SCIENCE: STUDENT TESTIMONIALS

'I chose the Bachelor of Information Science because I've always been solution-driven, and I saw how well it aligned with my passion for using information and technology to solve real-world problems. One of my most memorable experiences was during my second year when I took part in the joint community project (JCP), which is a year-long project. Working alongside Engineering and IT students, we helped catalogue books in a community library—a hands-on project that showed me the value of collaboration across disciplines.

Throughout my time in Information Science, I've gained essential skills such as time management, research and accountability. I've also had the chance to be involved in research collaborations, which strengthened my interest in the field of cyber security, where I see myself building a career. I believe students who thrive here are curious and willing to put in the work to grow both academically and personally. Making it onto the Dean's List has been the highlight of my journey, and my advice to future students is simple: you can if you believe.'

Katlego Ngoato – Bachelor of Information Science

'I chose the Bachelor of Information Science specialising in Publishing degree because I've always believed that the more you read, the more you understand the world. Books and other media have played a big role in my life, so I wanted to learn how information is created and packaged. My favourite part of the programme has been learning about the publishing industry and how it connects with other fields, especially through guest lectures who are working in industry.

Throughout the degree, I've gained many skills, including teamwork, time management and attention to the bigger picture. I've also developed practical and critical thinking skills such as copywriting, proofreading, copy-editing, project management and design. This degree has prepared me for my future career by teaching me to think outside the box and develop an eye for quality—skills that are essential in any industry.

I would recommend this degree to anyone looking for a balance between creativity and logic. It allows you to develop logical thinking in creative ways, which is a truly rewarding process.

Publishing is the gateway between people and communication, and the keeper of culture. I'm proud to have studied it, and I believe it will enable me to make a meaningful difference in my community and the industry as a proactive, creative problem solver.'

Lizé Behrens – Bachelor of Information Science Honours specialising in Publishing

'I chose the Bachelor of Information Science specialising in Publishing degree, because of my interest in media. My experience has been intriguing as I have gotten to learn about the niche world of publishing, which feels like an elite club that a select few are privy to. Like most people, I did not know that publishing had its own field. It can be as much a creative field as it is mechanical. Paradoxical, I know, but this was made evident to me when I had a module that needed us to make use of InDesign. This is when I could let my imaginative side shine through with the use of design concepts. I also enjoyed the coding modules, although it was the most challenging for me, as I have absolutely no coding background from high school.

If you are a creative such as myself, there's space for you as a graphic designer, copywriter and so on. The highlight of my journey has been getting a greater sense of self because this degree is interdisciplinary, and the people who enter it are just as versatile, which gives you a large canvas to grow.'

Tshiya Nell – Bachelor of Information Science specialising in Publishing

FLAGSHIP RESEARCH PROJECTS

Engineering 4.0 positions the University of Pretoria (UP) as a centre of excellence for smart transportation

The state-of-the-art Engineering 4.0 complex, completed in 2020, houses several laboratories and research and training facilities, including a concrete laboratory, a timber laboratory, and a training laboratory. It is also the site of SANRAL's National Roads Materials Reference Laboratory, where the independent reference testing of materials for the road construction industry takes place, as well as an accelerated pavement testing track that can be monitored to study data related to traffic, pavement design, and road construction. This will support cost-effective and innovative pavement engineering for Africa's infrastructural development. Through this initiative, the Faculty is well on its way to earning a reputation as the country's leading expert in smart transportation.

Through its focus on the development of an integrated transportation system, Engineering 4.0's research concentrates on the reduction of energy consumption levels in transportation, maximising productivity in industry and creating a better quality of life for the country's citizens. With the introduction of artificial intelligence, robotics, and Big Data, the Department of Civil Engineering is making use of a smart alternative transportation platform in the form of a four-legged terrestrial robot. This research platform serves as a vehicle to access infrastructure for data collection across various disciplines.

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Immersive learning

The Faculty has embraced immersive technology as an innovative teaching approach that provides students with realistic and engaging virtual learning experiences. Through virtual reality tools, it is possible to take the classroom to a remote and unsafe environment, such as an underground mine, and students can even potentially be taught to operate equipment in the virtual space before they are exposed to the actual machinery in the laboratory. This not only reduces the chance of accidents but also increases accessibility.

The Department of Mining Engineering is a trailblazer in this initiative, having established a virtual reality training centre in 2015. The Department of Information Science also plays a key role in this project with its Immersive Technology Laboratory. Here, students and staff can explore the latest immersive technology tools, including virtual reality (VR) and augmented reality (AR) tools, to gain confidence in using this technology.

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FLAGSHIP RESEARCH PROJECTS

Built environment research contributes to urban upliftment

Postgraduate students in the School for the Built Environment have been making a difference in the informal settlements of Tshwane since 2016.

The research activities of the Department of Architecture's Unit for Urban Citizenship focus on addressing the needs of the residents of Plastic View and Melusi. This includes creating a sustainable built environment and providing basic services and infrastructure.

The unit strives to develop the scholarship of civil engagement and participatory development within the context of a complex emergent African urbanism. It simultaneously strives to embed a culture of responsible and collaborative urban citizenship in both its graduates and the communities within which it works. It offers a platform for vertical integration between study years to incorporate a socially responsive teaching and learning philosophy into the programmes of the Department of Architecture.

It also establishes an interdisciplinary network of collaboration that can achieve the horizontal integration of its objectives with specific stakeholders through inter-faculty engagement. By facilitating collaboration with its internal and external stakeholders, the department's teaching and research can be aligned to improve impact. In the process, the role of a university, as an anchor institution and social actor, is embedded in the community.

Teamwork across disciplines enhances sustainability

The global construction industry significantly contributes to the emission of greenhouse gases and the depletion of resources. This is aggravated by the waste that is generated in the construction and demolition of buildings. Adopting a circular value chain for building materials presents a wonderful opportunity to reduce embodied carbon, the dependency on raw materials, and wasteful practices. This entails reusing, refurbishing, and recycling existing materials and products for as long as possible. Since so much building waste ends up in the country's landfill sites, this has both a financial and an environmental impact. Members of the departments of Architecture and Civil Engineering therefore pursued an innovative approach in which they adopted a circular value chain for building materials.

This approach aimed to improve value chains in construction through transdisciplinary education by establishing how building materials originating from the demolition of structures can be reused in the construction of new buildings. The result was a transdisciplinary training model that employed computer models with building information data. Its success depended on collaboration and teamwork between members of the individual disciplines. It achieved international recognition for its impact, scalability, and sustainability when it received the Quanser Global Sustainability Award for 2023. It was the only shortlisted project from Africa.

FLY@UP ASSIST FIRST-YEAR AWARDS

TABLE 1: FLY@UP ASSIST FIRST-YEAR AWARDS 2026 *Umalusi issued school-leaving certificates such as NSC, IEB and SACAI, irrespective of citizenship*		
Award A	**Qualifying average percentage**	**Amount**
Average percentage for the six (6) best subjects taken, excluding Life Orientation	80%–89.99%	R18 000
	90%–100%	R45 000
NOTE: Award B is only applicable if you achieved Award A.		
Award B*	**Qualifying average percentage**	**Amount**
Percentage obtained for Mathematics	80%–100%	R2 000
Percentage obtained for Advanced Mathematics	80%–100%	R2 000
Percentage obtained for Further Mathematics	80%–100%	R2 000
Percentage obtained for Alpha Mathematics	80%–100%	R2 000
Percentage obtained for Additional Mathematics	80%–100%	R2 000
Percentage obtained for Physical Sciences	80%–100%	R2 000
Percentage obtained for Advanced Physical Sciences	80%–100%	R2 000
Percentage obtained for Further Physical Sciences	80%–100%	R2 000

Conditions for the above awards:

- Table 1 primarily applies to UP candidates with Umalusi school leaving certificates (NSC, IEB and SACAI).
- FLY@UP Assist First-Year Awards are based on the final school-year examination results as issued by Umalusi via the Department of Basic Education.
- These awards are made automatically to first-time entering first-year registered undergraduate students who meet the award criteria. Students do not apply for these awards.
- First-time entering first-year students who register for studies at UP directly after Grade 12 (final school year) or who took a gap year(s) after their final school year and who meet the award criteria will be considered.
- Students who have previously registered at a tertiary educational institution before registration at UP will not be considered for FLY@UP Assist First-Year awards. Students who registered at UP in previous years, are also not considered.
- For candidates who present an NSC/IEB Certificate, the percentages obtained for the six (6) best subjects taken, excluding Life Orientation are used. Certain subjects are EXCLUDED in the calculation of average percentages:
  - Life Orientation
  - Practical Music Grade 4 and 5 (Note: Practical Music Grades 6, 7 and 8 are considered for inclusion in the calculation of the average percentage—if your music report for this subject is not part of your NSC report, please submit your official music report to the Student Service Centre at ssc@up.ac.za, before commencement of classes.)
- Mathematical Literacy, Technical Mathematics, Technical Sciences and equivalent subjects are not eligible for this award.
- *A candidate only qualifies for Award B if the candidate meets the criteria for Award A. Therefore, candidates who obtained 80% and above for the subjects in Award B only, will not be eligible for the subject awards.
- The calculation of the average percentage is based on the University of Pretoria's formula, per examination authority and not on the number of distinctions achieved.
- The average percentage is not rounded off.
- Results obtained for papers that have been re-marked are not considered for award purposes.
- This award will be cancelled for students who discontinue, are excluded or who terminate their studies for whatever reason during the year in which the award is made. No payouts of the award will be allowed.

TABLE 2: FLY@UP ASSIST FIRST-YEAR AWARDS 2026 *School-leaving certificates not issued by Umalusi. A maximum of R30 000 per student can be awarded, irrespective of citizenship*			
Cambridge Assessment International Education (CAIE)		**International Baccalaureate Diploma Programme (IBDP)**	
Award	**Amount**	**Award**	**Amount**
A-Level: A*, A or B symbol	R5 000	IBDP: Higher Level 6 or 7 symbol	R5 000
AS-Level: A symbol	R5 000	IBDP: Standard Level 7 symbol	R5 000

Conditions for the above awards:

The University of Pretoria (UP) reserves the right to amend award values without prior notice.

- The awards in Table 2 are made automatically to first-time entering first-year registered undergraduate students who meet the award criteria. Students do not apply for these awards.
- R5 000 is awarded per symbol and only once per subject achieved, eg if you achieved an A*, an A or a B-symbol on A-Level in Mathematics as well as an A-symbol on AS-Level in Mathematics, you will only be awarded R5 000 for Mathematics.
- First-time entering first-year students who register for studies at UP directly after Grade 12 (final school year) or who took a gap year(s) after their final school-year and who meet the award criteria will be considered.
- Students who have previously registered at a tertiary educational institution before registration at UP will not be considered for FLY@UP Assist First-Year awards. Students who registered at UP in previous years, are also not considered.
- Results obtained for papers that have been re-marked are not considered for award purposes.
- This award will be cancelled for students who discontinue, are excluded or who terminate their studies for whatever reason during the year in which the award is made. No payouts of the award will be allowed.
- Any international school-leaving qualification that can be converted to the UP bursary formula, based on the UP conversion approved guidelines, may be eligible for an award of up to R30 000.
- The University's decision is final.
- These awards are subject to the availability of funds.

TABLE 3: OTHER FLY@UP AWARDS 2026		
Award	**Amount**	**Who**
JuniorTukkie Grade 11 Empowerment Week Award	R16 000	The 40 learners with the best Grade 12 results (NSC or equivalent) who attended the JuniorTukkie Grade 11 Empowerment Week.
Grade 12 Dux Scholar Award	R11 000	This award will be applicable to schools identified by the University of Pretoria.
Vice-Chancellor's Previously Disadvantaged Group Award	R15 700	Top prospective African and Coloured students with the highest average percentage will be considered.
Vice-Chancellor's Distinguished Merit Award (VCDMA)	The award covers three years' tuition fees and additional years may be considered on a case-by-case basis. An amount of R150 000 can be awarded in the first year of study.	This offer will be made to: 1. The first-time entering first-year student who has achieved the highest overall average percentage in the final school-year results. 2. The first-time entering first-year student from a Quintile 1, 2 and 3 school who has achieved the highest overall average percentage in the final school-year results. Based on the decision of the University, additional awards may be offered. The terms and conditions of the full offer will be contained in the candidate's specific award letter.

Conditions for the above awards:

- Specific terms, conditions and exclusions do apply for each award in Table 3.
- These awards are made automatically to first-time entering first-year registered undergraduate students who meet the award criteria.
- Students do not apply for these awards.
- Qualifying students will be notified.

Contact information
Tel +27 (0)12 420 3111 | **Email** ssc@up.ac.za
Awards information www.up.ac.za/student-funding/article/2746337/flyup-assist-1st-year-awards
More information www.up.ac.za/article/2749200/fees-and-funding
For FLY@UP Assist Senior Undergraduate Awards 2026, refer to www.up.ac.za/fees-and-funding

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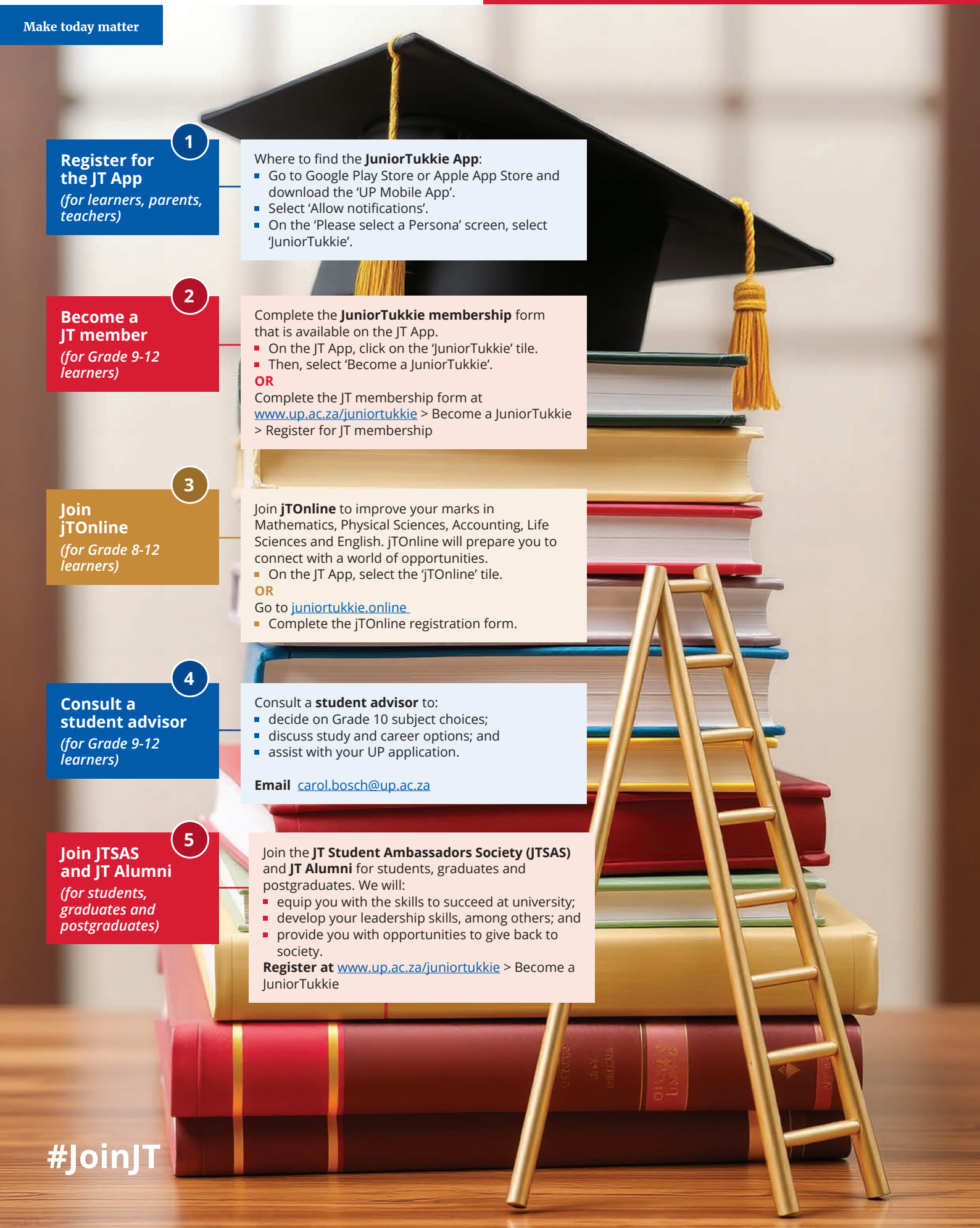

1 Register for the JT App
(for learners, parents, teachers)

Where to find the **JuniorTukkie App**:
- Go to Google Play Store or Apple App Store and download the 'UP Mobile App'.
- Select 'Allow notifications'.
- On the 'Please select a Persona' screen, select 'JuniorTukkie'.

2 Become a JT member
(for Grade 9-12 learners)

Complete the **JuniorTukkie membership** form that is available on the JT App.
- On the JT App, click on the 'JuniorTukkie' tile.
- Then, select 'Become a JuniorTukkie'.

OR

Complete the JT membership form at www.up.ac.za/juniortukkie > Become a JuniorTukkie > Register for JT membership

3 Join jTOnline
(for Grade 8-12 learners)

Join **jTOnline** to improve your marks in Mathematics, Physical Sciences, Accounting, Life Sciences and English. jTOnline will prepare you to connect with a world of opportunities.
- On the JT App, select the 'jTOnline' tile.

OR

Go to juniortukkie.online
- Complete the jTOnline registration form.

4 Consult a student advisor
(for Grade 9-12 learners)

Consult a **student advisor** to:
- decide on Grade 10 subject choices;
- discuss study and career options; and
- assist with your UP application.

Email carol.bosch@up.ac.za

5 Join JTSAS and JT Alumni
(for students, graduates and postgraduates)

Join the **JT Student Ambassadors Society (JTSAS)** and **JT Alumni** for students, graduates and postgraduates. We will:
- equip you with the skills to succeed at university;
- develop your leadership skills, among others; and
- provide you with opportunities to give back to society.

Register at www.up.ac.za/juniortukkie > Become a JuniorTukkie

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2027

EBIT Concert

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