



BEng (Mechanical Engineering) 4-year programme

- [University of Pretoria](#)
- [Study at UP](#)
- BEng (Mechanical Engineering) 4-year programme

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

- Heat exchangers, refrigerators, ventilation systems
- Manufacturing technologies that include the use of lasers, precision machinery
- Automobiles, aeroplanes and other vehicles
- Robotics, mechatronics and electronic control of machinery
- Digitization of physical assets through sensing, computing and data science

The undergraduate programme focuses on the establishment of a broad knowledge of engineering and includes subjects such as dynamics, strength of materials, thermodynamics, fluid mechanics and design.

Mechanical and aeronautical expertise is required for designing and manufacturing products and services, such as the provision of electricity and water, transport (road, rail and air), mining activities, mechatronics and air conditioning.

For more information, please consult the Faculty webpage.

Career Opportunities

Mechanical and aeronautical engineers are concerned with power-generating machines and systems such as vehicles, ships, air conditioners, pebble-bed nuclear reactors, aeroplanes, engines and turbines, robots and biomedical systems. Areas of specialisation include product design and manufacturing (such as the design, testing and improvement of mechanical, electrical, pneumatic and hydraulic systems), marine engineering and naval architecture, biomedical engineering, air-conditioning and refrigeration, aerospace systems and aircraft/missile engineering, vehicle engineering, maintenance engineering and energy management (gas and steam turbines, nuclear power reactors, petrol engines, cooling towers and renewable energy systems).



Programme Code

12130004

Closing Dates

- **SA** – 30/06/2024
 - **Non-SA** – 30/06/2024
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Admission Requirements

Important information for all prospective students for 2025

The admission requirements below apply to all who apply for admission to the University of Pretoria with a **National Senior Certificate (NSC)** and **Independent Examination Board (IEB)** qualifications. [Click here](#) for this Faculty Brochure.

Minimum requirements: 4-year programme

Achievement level

English Home

Language or

English First

Additional

Language

NSC/IEB

5

Mathematics

NSC/IEB

6

Physical Sciences

NSC/IEB

6

APS

35

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

Minimum requirements: 5-year programme [previously called ENGAGE]

Achievement level



**English Home
Language or
English First
Additional
Language**

NSC/IEB
5

Mathematics

NSC/IEB
65%

Physical Sciences

NSC/IEB
65%

APS

33

Students may apply directly to be considered for the 5-year Bachelor of Engineering programme.

Life Orientation is excluded when calculating the APS.

Applicants currently in Grade 12 must apply with their final Grade 11 (or equivalent) results.

Applicants who have completed Grade 12 must apply with their final NSC or equivalent qualification results.

Please note that meeting the minimum academic requirements does not guarantee admission.

Successful candidates will be notified once admitted or conditionally admitted.

Unsuccessful candidates will be notified after 30 June.

Applicants should check their application status regularly on the UP Student Portal at [click here](#).

Applicants with qualifications other than the abovementioned should refer to the International undergraduate prospectus 2025: Applicants with a school leaving certificate not issued by Umalusi (South Africa), available at [click here](#).

International students: [Click here](#).

Transferring students

A transferring student is a student who, at the time of applying at the University of Pretoria (UP) is/was a registered student at another tertiary institution. A transferring student will be considered for admission based on NSC or equivalent qualification and previous academic performance. Students who have been dismissed from other institutions due to poor academic performance will not be considered for admission to UP.

Closing dates: Same as above.

Returning students

A returning student is a student who, at the time of application for a degree programme is/was a registered student at UP, and wants to transfer to another degree at UP. A returning student will be

considered for admission based on NSC or equivalent qualification and previous academic performance.

Note:

- Students who have been excluded/dismissed from a faculty due to poor academic performance may be considered for admission to another programme at UP, as per faculty-specific requirements.
- Only ONE transfer between UP faculties and TWO transfers within a faculty will be allowed.
- Admission of returning students will always depend on the faculty concerned and the availability of space in the programmes for which they apply.

Closing date for applications from returning students

Unless capacity allows for an extension of the closing date, applications from returning students must be submitted before the end of August via your UP Student Centre.

Minimum duration of study

4 years, full-time

Faculty Notes

All modules will only be presented in English, which is the University's official language of tuition, communication and correspondence.

The Faculty of Engineering, Built Environment and Information Technology at the University of Pretoria is a leading source of graduates in the engineering, built environment and information technology professions. We achieve this by a focus on research to drive innovative and enquiry-led teaching for educating and positioning our students to be leaders in their professions. The Faculty has extensive and cutting-edge teaching, learning and laboratory facilities integrated with the excellent suite of facilities and services offered by the University. We facilitate access to our qualifications through our extended programmes but expect our students to excel and develop as future professionals through our programme offering. We invite you to consider enrolling in one of our programmes if you share our vision of excellence and want to position yourself as a leader in the professions that we support.

The Faculty is organised in four schools: the School of Engineering, the School for the Built Environment, the School of Information Technology and the Graduate School of Technology Management. The School of Engineering is the largest of its kind in the country in terms of student numbers, graduates and research contributions and offers programmes in all the major engineering

disciplines with many specialisations also offered at undergraduate and graduate level.

The University of Pretoria aims to be internationally competitive while also locally relevant. Advisory boards at both faculty and departmental level promote alignment and excellence in our teaching and research activities. Where applicable and available our programmes are accredited by statutory and professional bodies at both national and international level.

- **Disclaimer:** *This publication contains information about regulations and programmes of the University of Pretoria. Amendments to or updating of the information may be effected from time to time without prior notification. The accuracy, correctness or validity of the information contained here is therefore not guaranteed by the University at any given time and is always subject to verification. The user is kindly requested to verify the correctness of the information with the University at all times. Failure to do so will not give rise to any claim or action of any nature against the University by any party whatsoever.*
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Enquiries about the programme

[Click Here](#)



How to apply



Online Application





Note: Also consult General Rules and Information on the Yearbook website for additional information.

Disclaimer: Due to the continuous restructuring of the Faculty and this website, some of the information displayed here may not fully reflect the most recent developments in the Faculty. Any discrepancies that are experienced may be taken up with Student Administration of the Faculty.