



# BSc Chemistry

- [University of Pretoria](#)
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- BSc Chemistry

Everything around us involves chemistry. Chemists recognise the major role science plays in supporting modern lifestyles. Chemistry is responsible for many aspects of our lives: the clothes we wear are made from synthetic fabrics produced by chemical processes; the drugs used for curing many illnesses are the result of intensive chemical research; a chemical process produces the paper we write on, and the ink we write with is a mixture of many chemicals. Chemistry assures the quality of the food we eat, the air we breathe and the water we drink. Our body is a complex mixture of chemicals, and the principles of chemistry are fundamental to understanding the processes involved in the functioning of all living organisms and the development of new medications and materials. It is the interaction and collaboration of chemistry with the other sciences and engineering that meet the ever-increasing demands of a modern society.

Chemistry has been described as the central science as its impact on our lives and society is all-pervasive. Since 1901, the Nobel Prize for Chemistry has been awarded to 153 individuals for work covering all aspects of the chemical sciences. The concepts of sustainable growth, including the reduction of carbon emissions, renewable fuels, secure food and fresh water supplies, recycled materials, environmentally responsible manufacture and waste disposal are all firmly embedded in chemical expertise. Chemistry is also at the heart of cutting-edge research in biotechnology, nanotechnology and new materials required for faster computers and improved solar voltaic cells.

This programme focuses on the fundamental aspects of the discipline and aims to provide students with a thorough background in the chemical sciences. Undergraduate training in this programme provides an opportunity to combine chemistry with other fields of interest, such as physics, geology, mathematics and computer science, or subjects from the biological sciences, such as biochemistry, microbiology and botany. In the first year of study, students are introduced to chemistry. This is followed by a more in-depth study of analytical, inorganic, organic and physical chemistry in the second and third years of study. All subjects have theoretical and practical components.

First-year modules in mathematics and physics are compulsory subjects for the BSc (Chemistry) degree. More advanced modules in mathematics and programming are recommended if students want to pursue postgraduate studies in the computer modelling of molecules, materials or processes.

For more information, please consult the Faculty webpage.

- **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*



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## Career Opportunities

Graduates are employed in most technology-based institutions and work in a laboratory environment as part of an industrial, research or academic institution. A chemist must be able to participate in teamwork in a multidisciplinary environment in a wide variety of enterprises in both the private and public sectors. It is important to note that the type of work available to a graduate in chemistry depends on the level of the qualification obtained. Advanced qualifications will eventually lead to positions in research and/or production management and require management skills and financial planning. Many career opportunities are found in the sectors of education, research, journalism, environmental protection, food and beverages, energy, water, health, sport, pharmaceuticals and cosmetics, geology, mining and law enforcement. These include the well-known professions of synthetic chemist, materials scientist, chemical pathologist, forensic chemist, analytical chemist, drug analyst, patent lawyer, environmental chemist, geochemist, food chemist, polymer chemist and soil chemist.

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## Programme Code

02133173

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## Closing Dates

Applications for this plan have closed.

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## Admission Requirements

### Important information for all prospective students for 2022

- The admission requirements apply to students who apply for admission to the University of Pretoria with a **National Senior Certificate (NSC) and Independent Examination Board (IEB) qualifications.**
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- **Applicants with qualifications other than the abovementioned** should refer to:
  - **Brochure:** Undergraduate Programme Information 2022: Qualifications other than the NSC and IEB, available at [click here](#).
- **Citizens from countries other than South Africa (applicants who are not South African citizens)** should also refer to:
  - **Brochure:** Newcomer's Guide 2021, available at [click here](#).
  - **Website:** [click here](#).
- **School of Tomorrow (SOT), Accelerated Christian Education (ACE) and General Education Development Test (GED):** The University of Pretoria no longer accepts qualifications awarded by these institutions.
- **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.

## Transferring students

A transferring student is a student who, at the time of application for a degree programme at the University of Pretoria (UP) –

- is a registered student at another tertiary institution, **or** was previously registered at another tertiary institution and did not complete the programme enrolled for at that institution, and is not currently enrolled at a tertiary institution, **or** has completed studies at another tertiary institution, but is not currently enrolled at a tertiary institution, **or** has started with tertiary studies at UP, then moved to another tertiary institution and wants to be readmitted at UP.

A transferring student will be considered for admission based on

- an NSC or equivalent qualification with exemption to bachelor's or diploma studies (whichever is applicable); **and** meeting the minimum faculty-specific subject requirements at NSC or tertiary level; **or** having completed a higher certificate at a tertiary institution with faculty-specific subjects/modules passed (equal to or more than 50%), as well as complying with faculty rules on admission;
- previous academic performance (must have passed all modules registered for up to the closing date of application ) or as per faculty regulation/promotion requirements;
- a certificate of good conduct.

**Note:** Students who have been dismissed at the previous institution due to poor academic performance, will not be considered for admission to UP.

## Returning students

A returning student is a student who, at the time of application for a degree programme –

- is a registered student at UP, and wants to transfer to another degree at UP, **or** was previously

registered at UP and did not complete the programme enrolled for, and did not enrol at another tertiary institution in the meantime (including students who applied for leave of absence), **or** has completed studies at UP, but is not currently enrolled or was not enrolled at another tertiary institution after graduation.

A returning student will be considered for admission based on

- an NSC or equivalent qualification with exemption to bachelor's or diploma studies (whichever is applicable); **and** meeting the minimum faculty-specific subject requirements at NSC or tertiary level; **or** previous academic performance (should have a cumulative weighted average of at least 50% for the programme enrolled for);
- having applied for and was granted leave of absence.

**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. The Admissions Committee may consider such students if they were not dismissed more than twice. Only ONE transfer between UP faculties will be allowed, and a maximum of two (2) transfers within a faculty.

### **Important faculty-specific information on undergraduate programmes for 2022**

- The closing date is an administrative admission guideline for non-selection programmes. Once a non-selection programme is full and has reached the institutional targets, then that programme will be closed for further admissions, irrespective of the closing date. However, if the institutional targets have not been met by the closing date, then that programme will remain open for admissions until the institutional targets are met.
- The following persons will be considered for admission: Candidates who have a certificate that is deemed by the University to be equivalent to the required National Senior Certificate (NSC) with university 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.
- Life Orientation is excluded when calculating the Admission Point Score (APS).
- Grade 11 results are used for the conditional admission of prospective students. Final admission is based on the final NSC/IEB results.

**University of Pretoria website:** [click here](https://www.up.ac.za)

### **Minimum requirements Achievement level**



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English Home Language or English First Additional Language	Mathematics	Physical Sciences	APS
NSC/IEB	NSC/IEB	NSC/IEB	
5	5	5	<b>34</b>

Candidates who do not comply with the minimum admission requirements for BSc (Chemistry), may be considered for admission to the BSc – Extended programme – Physical Sciences, which requires an additional year of study.

### **BSc - Extended Programme - Physical Sciences**

#### **Minimum requirements**

#### **Achievement level**

English Home Language or English First Additional Language	Mathematics	Physical Sciences	APS
NSC/IEB	NSC/IEB	NSC/IEB	
4	4	4	<b>28</b>

#### **Note:**

\*The BSc – Extended programmes are not available for students who meet all the requirements for the corresponding mainstream programme.

\*Please note that only students who apply in their final NSC or equivalent qualification year will be considered for admission into any of the BSc – Extended programmes.

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### **Duration of study**

3 years, full-time.

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### **Faculty Notes**

The Faculty of Natural and Agricultural Sciences is home to more than 6 500 undergraduate and postgraduate students. The Faculty presents degrees in fields ranging from the proverbial A to Z – from

actuaries to zoologists, and consists of 13 departments.

All degree programmes are designed to develop problem-solving individuals who can easily adapt to changing circumstances and take the lead in their chosen fields of specialisation. The qualifications awarded are of world-class and provide access to a multitude of career opportunities for dynamic and creative people. According to the latest Times Higher Education World University Rankings the University has achieved new world rankings in Physical Sciences, a discipline which features strongly in NAS and also maintains excellent positions on the ISI Web of Science (WOS) field rankings in Plant and Animal Sciences, Agricultural Sciences, and Environment and Ecology Sciences.

In the Faculty of Natural and Agricultural Sciences, we strive to continuously improve our high impact research and significantly address the national shortage of PhD graduates that respond to global and local challenges.

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## Enquiries about the programme

[Click Here](#)

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**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.