

BSc Chemistry

This programme provides students with training in the different fields of chemistry such as inorganic, organic, analytical, physical, and polymer chemistry in one of the most dynamic and best equipped chemistry departments in the country. Take note of the four focal areas within which you have options in choosing your majors.

Focal areas	Major/s
Chemistry & Polymer Science	Chemistry and Applied Chemistry, Applied Mathematics, Computer Science, Mathematics, Microbiology or Physics or Geology
Chemical Biology	Chemistry & Biochemistry
Applied & Sustainable Chemistry	Chemistry & Applied Chemistry
Chemistry with Chemical Engineering	Chemistry, Applied Chemistry & Applied Mathematics plus Chemical Engineering as elective

Consult the latest Faculty of Science Yearbook (Part 5) for information on subjects and modules.

Do I qualify?

Minimum admission requirements

- A NSC average of **65%** (excluding Life Orientation)
- English OR Afrikaans
(Home Language or First Additional Language): **50%**
- Maths: **70%**
- Physical Sciences: **50%** (both Chemistry & Physics)



Focal areas explained:

Chemistry and Polymer Science

This focal area provides a strong foundation for careers as professional chemists or analytical chemists across a wide range of industries where chemistry plays a central role. Students develop a solid chemistry-based technical background while retaining flexibility to choose a complementary second major, such as Applied Chemistry (including polymers), Microbiology, Geology, Mathematics, or Physics

Applied and Sustainable Chemistry

This focal area focuses on innovative chemical solutions to environmental challenges, including pollution reduction, waste minimisation, and the development of safer, renewable materials. Students are trained to think critically about chemical life cycles and sustainability, preparing them to become responsible, forward-thinking scientists. Modules in polymer chemistry and applied medicinal chemistry further strengthen the applied nature of this focal area.

Chemical Biology

Chemical Biology prepares students for careers in industries that draw on the organic and biochemical aspects of chemistry, including food production and medicinal chemistry. This focal area also provides a strong foundation for postgraduate studies and research careers in Chemistry or Biochemistry.

Chemistry with Chemical Engineering

This focal area combines a strong grounding in chemistry with key chemical engineering principles. Graduates are well prepared for careers in industrial sectors where chemistry underpins process development and production. On completion, students may apply for admission into the Bachelor of Engineering in Chemical Engineering, starting in the third year of that programme.

NB: You can also consider another programme in chemistry: the BSc (focal area Applied Medicinal Chemistry), majoring in Chemistry and Physiology.



Why study BSc Chemistry?

- I want to develop research, problem-solving and analytical skills.
- I enjoy chemistry, mathematics and physics.
- I love the prospect of new discoveries and finding out how things work.
- I would like to focus on medicinal chemistry and drug development.
- I want to help solve global challenges like access to clean water, reduced dependency on fossil fuels, solutions to antimicrobial resistance, improved food security, environmental pollution, human health issues such as cancer, heart diseases, malaria and TB, sustainable lifestyle interventions etc.

Why study Chemistry at Stellenbosch University?

- The Department of Chemistry and Polymer Science is one of the top departments in this field in Africa – we have a strong research ethos and the largest research effort in polymer science in Africa.
- You can develop your skills and explore many options during the three years of study so that you do not limit yourself when finally deciding on a career path of choice.

What can I do with a BSc Chemistry degree?

Analytical chemist
Development chemist
Disaster management officer
Environmental consultant
Forensic chemist
Geochemist

Laboratory director
Nanotechnologist
Paint chemist
Physical sciences teacher
Pharmaceutical scientist

Product engineer
Quality assurance manager
Research scientist
Toxicologist

"It is a challenging, multidisciplinary course that focuses on the student's level of understanding rather than just absorbing and memorising information."

– undergraduate BSc student

Contact details

Department of Chemistry and Polymer Science

Tel: (021) 808 3331

E-mail: cheminfo@sun.ac.za

Website:

www.su.ac.za/chemistry-and-polymer-science

Contact our Coordinator: Student and Academic Affairs

[at scienceadmin@sun.ac.za](mailto:scienceadmin@sun.ac.za)

Deadline: Apply with your grade 11 marks by 31 July

General admission and selection criteria

www.su.ac.za/ugrequirements

BSc Chemie

Hierdie program bied aan studente opleiding in die verskillende velde van chemie, soos anorganiese, organiese, analitiese, fisiese, en polimeerchemie in een van die mees dinamiese en goed toegeruste chemie-departemente in Suid-Afrika. Neem kennis van die vier fokusareas waarbinne jy opsies het om jou hoofvakke te kies:

Fokusareas	Hoofvakke
Chemie en Polimeerwetenskap	Chemie en Toegepaste Chemie, Geologie, Toegepaste Wiskunde, Wiskunde, Rekenaarwetenskap, Mikrobiologie of Fisika
Chemiese Biologie	Chemie en Biochemie
Toegepaste & Volhoubare Chemie,	Chemie en Biochemie
Chemie met Chemiese Ingenieurswese	Chemie, Toegepaste Chemie & Toegepaste Wiskunde plus Chemiese Ingenieurswese as keusemodule

Raadpleeg die nuutste Jaarboek van die Fakulteit Natuurwetenskappe (Deel 5) vir inligting oor vakke en modules.

Voldoen ek aan die vereistes?

Minimum toelatingsvereistes

- NSS-gemiddeld van **65%** (Lewensoriëntering uitgesluit)
- Engels OF Afrikaans (Huistaal of Eerste Addisionele Taal) **50%**
- Wiskunde **70%**
- Fisiese Wetenskappe **50%** (beide Chemie én Fisika)



Fokusareas uiteengesit:

Chemie en Polimeerwetenskap

Hierdie fokusarea bied 'n stewige grondslag vir loopbane as professionele chemici of analitiese chemici oor 'n wye reeks industrieë waar chemie 'n sentrale rol speel. Studente ontwikkel 'n soliede chemie-gebaseerde agtergrond terwyl hulle die buigsaamheid behou om 'n komplementêre tweede hoofvak te kies, soos Toegepaste Chemie (insluitend polimere), Mikrobiologie, Geologie, Wiskunde of Fisika.

Toegepaste en Volhoubare Chemie

Hierdie fokusarea fokus op innoverende chemiese oplossings vir omgewingsuitdagings, insluitend besoedelingsvermindering, afvalminimalisering en die ontwikkeling van veiliger, hernubare materiale. Studente word opgelei om krities te dink oor chemiese lewensiklusse en volhoubaarheid, wat hul voorberei om verantwoordelike, vooruitdenkende wetenskaplikes te word. Modules in polimeerchemie en toegepaste medisinale chemie versterk verder die toegepaste aard van die hierdie fokusarea.

Chemiese Biologie

Chemiese Biologie berei studente voor vir loopbane in nywerhede wat berus op die organiese en biochemiese aspekte van chemie, insluitend voedselproduksie en medisinale chemie. Hierdie fokusarea bied ook 'n stewige grondslag vir nagraadse studie en navorsingsloopbane in Chemie of Biochemie.

Chemie met Chemiese Ingenieurswese

Hierdie fokusarea kombineer 'n stewige grondslag in chemie met sleutelbeginsels van chemiese ingenieurswese. Gegradeerdes is goed voorbereid vir loopbane in nywerheidsektore waar chemie, prosesontwikkeling en produksie onderlê. Na voltooiing hiervan kan studente aansoek doen vir toelating tot die Baccalaureusgraad in Chemiese Ingenieurswese, beginnende in die derde jaar van die daardie program.

NB: Jy kan ook 'n ander program in chemie oorweeg: die BSc (fokusarea Toegepaste Medisinale Chemie), met Chemie en Fisiologie as hoofvakke.



Waarom Chemie studeer?

- Ek wil navorsings-, probleemoplossings- en analitiese vaardighede ontwikkel.
- Ek geniet chemie, wiskunde, en fisika.
- Ek hou van die vooruitsig van nuwe ontdekkings en om uit te vind hoe dinge werk.
- Ek wil graag fokus op medisinale chemie en die ontwikkeling van nuwe geneesmiddels.
- Ek wil help om globale uitdagings die hoof te bied, soos toegang tot skoon water, verminderde afhanklikheid van fossielbrandstof, oplossings vir antimikrobiële weerstandigheid, verbeterde voedselsekureit, omgewingsbesoedeling, gesondheidsverwante kwessies soos kanker, hartsiektes, malaria, tuberkulose, en volhoubare leefstylintervensies.

Waarom Chemie by die Universiteit Stellenbosch studeer?

- Die Departement Chemie en Polimeerwetenskap is een van die top- departemente in hierdie veld in Afrika – ons het 'n sterk navorsingsetos en die grootste navorsingsgroep in polimeerwetenskap in Afrika.
- Gedurende die drie jaar van studie kan jy jou vaardighede ontwikkel en verskeie opsies ondersoek sodat jy nie jouself beperk wanneer jy uiteindelik finaal 'n loopbaan kies nie.

Wat kan ek doen met 'n graad in Chemie?

Analitiese chemikus
Farmaseutiese wetenskaplike
Fisiese Wetenskappe-onderwyser
Forensiese chemikus
Gehalteversekeringbestuurder
Geochemikus

Laboratoriumdirekteur
Nanotegnoloog
Navorsingswetenskaplike
Omgewingskonsultant

Ontwikkelingschemikus
Produkingenieur
Rampbestuurbeampte
Verfchemikus

“Dit is 'n uitdagende, multidissiplinêre kursus wat fokus op die student se vlak van begrip, eerder as die blote inneem en memorisering van inligting”.

– Voorgraadse BSc-student

Kontak ons

Department of Chemistry and Polymer Science

Tel: (021) 808 3331

E-pos: cheminfo@sun.ac.za

Webwerf:

www.su.ac.za/chemistry-and-polymer-science

Kontak ons Koördineerder:

Studente- en Akademiese Sake

by scienceadmin@sun.ac.za

Sperdatum: Doen aansoek met jou graad 11-punte voor 31 Julie

Algemene toelatings- en keuringskriteria

<https://www.su.ac.za/ugrequirements>