PHARMACY AT RHODES

One Degree – Many Careers

CONTACT DETAILS
Should you wish to find out more about Pharmacy as a career please view the Faculty of Pharmacy web page located on the Rhodes website at www.ru.ac.za or contact the Faculty:

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Email: Dean.Pharmacy@ru.ac.za

Rhodes University is an English medium university in South Africa. The curriculum has been drawn up in accordance with the requirements of the South African Pharmacy Council.

The Faculty of Pharmacy is housed in the Chemical and Pharmaceutical Sciences building which contains excellent lecture facilities and laboratories which are well equipped with modern instrumentation available for both undergraduate and postgraduate use.

Pharmacy at Rhodes University is dedicated to achieving excellence in an environment of interdisciplinary co-operation and mutual respect consistent with the mission of the University and with the mission of the Pharmacy profession.

The mission of the Faculty is to promote pharmaceutical care through education, research, scholarship, creative endeavour and service.
CAREER OPPORTUNITIES

The Bachelor of Pharmacy degree (BPharm) offered at Rhodes University grants access to an internship and professional competence evaluation. Internships can be completed in the community, hospital, industrial or academic setting. Interns are required to work at an accredited training site for at least 12 months, and are also required to successfully complete the pre-registration exam and submit evidence of Continuing Professional Development (CPD). Successful completion of the internship is followed by registration as a Community Service Pharmacist (CSP), and working as a CSP in the public sector. Successful completion of the CSP year allows registration with the South African Pharmacy Council as a fully qualified pharmacist, which permits the applicants to practice the profession of pharmacy within the Republic of South Africa.

The work of a registered pharmacist may be performed in the following sectors: manufacturing, wholesale, community, hospital, research, or academia.

ACHIEVEMENTS

Many Rhodes University pharmacy graduates have made a significant impact on the Pharmacy profession in South Africa by assuming leadership roles in the Pharmaceutical Society of South Africa, the Academy of Pharmaceutical Sciences and the South African Association of Hospital and Institutional Pharmacists, amongst others. Several graduates have also become leaders in the pharmaceutical industry whilst several members of our Faculty have made significant contributions to Health Policy development in this country.

Feedback from Rhodes University pharmacy graduates indicates that the Faculty's Bachelor of Pharmacy curriculum complies with International standards. Testimony to this fact has been confirmed by the successful registration of our B.Pharm graduates in foreign countries such as the United Kingdom, United States of America, Canada and Australia where success in those entrance examinations have been readily achieved. This success is clearly an indication that the sound educational background obtained at Rhodes University serves as a springboard to facilitate foreign registration.

CURRICULUM

A new curriculum was introduced in 2013. The Bachelor of Pharmacy degree at Rhodes University is a 4 year programme. The curriculum for this degree is laid down by the South African Pharmacy Council and all students must pass all courses of this prescribed curriculum to be awarded the degree in Pharmacy.

Whilst the general curriculum is prescribed, each of the universities that offer pharmacy, have different emphases, thus making transfers between different Schools or Faculties of Pharmacy in South Africa difficult.

In the final year students are permitted to select electives and undertake a research project in partial fulfilment of the requirements for the Bachelor of Pharmacy degree.
The following is a brief description of the courses in the BPharm Degree:

**Chemistry:** Chemistry 101 (CHE 101) is held in the first semester and Chemistry 102 (CHE 102) in the second. CHE 101—includes learning about chemical symbols and numeracy, nuclear chemistry, atomic structure and bonding, chemical and physical equilibrium, introduction to organic chemistry. CHE 102—includes learning about properties of inorganic systems, chemistry and the environment, organic functional group chemistry, biological building blocks, reaction rates, chemical thermodynamics, electrochemistry.

**Cell Biology:** This course compares cell structure in prokaryotic and eukaryotic cells and examines cellular processes including cell to cell communication, photosynthesis and cell respiration. Cell division and fundamental genetics, including the structure of genetic material and how it controls cellular processes.

**Mathematics for Life Sciences:** A study of mathematical concepts and applications relevant for the study and practice of Pharmacy.

**Anatomy and Physiology:** A study of the functional anatomy and physiology of humans.

**Pharmaceutical Biochemistry:** A study of the important molecules found in living organisms.

**Introduction to ICT (Information & Communication Technology):** Fundamental concepts and applications of hardware, computing environments, editing and word processing, spread sheets, databases, other software packages, networks, the Internet, social issues, and the logic of problem solving.

**Foundations of Pharmacy:** An introductory course in Pharmacy, where learners will be introduced to the fundamentals of Pharmacy Practice, Pharmaceutics, and Ethics.

**Anatomy Physiology, Pathophysiology & Pathology:** A study of the functional anatomy and physiology of humans and of diseases and pathological conditions in different body systems, how diseases develop, their characteristics, features of common diseases and conditions as they occur in humans, and the effects of diseases on human functioning.

**Biochemistry, Microbiology & Immunology:** A study of the important molecules found in living organisms and of the role of Pharmaceutical Microbiologists and the application of microbiology in the practice of pharmacy, the health and economic implications of microbial contamination of pharmaceutical and hospital environments, the basic characteristics, pathogenesis, diagnosis, disease, epidemiology, prevention and treatment of microorganisms found in pharmaceutical and hospital environments, water and sewage systems.

**Pharmaceutics:** A 2½-year course covering basic pharmaceutical principles and their application to the formulation, production and assessment of medicinal products, microbiology and sterility.

**Pharmaceutical Chemistry:** A two-year course covering the study of the purity and chemical properties of various materials and formulations used in the practice of pharmacy.

**Pharmacy Practice:** A 2½-year programme, which examines Pharmaceutical Care and the role of the pharmacist; various aspects of management including performance management, organizational management, managing pharmaceutical supply; understanding and influencing behaviour; Primary Health Care; legal and psychosocial principles and their application in providing safe and effective medicine use by pharmacists and patients.

**Pharmacology:** A 1½-year study of the interaction between medicaments and the human body; disease states and medicinal therapy used to relieve these; the toxic effects of household agents, medicines and street drugs.

**Biostatistics:** A study of statistics that is used in pharmaceutical and biomedical research, so as to use and understand different statistical methods used in research.

**Pharmacotherapy:** A study of the relevant pathophysiology of diseases and conditions, how mechanisms of action of medicines are used to treat these diseases and/or disorders to counteract their pathophysiological origins, synthesizing and integrating information to make an informed and rational pharmacotherapeutic decision justifying the selection of appropriate dosage forms.

**Research Project:** An individual project on an approved topic in any pharmaceutical field.

**Electives:** Candidates may select elective courses offered in other Faculties provided they are relevant to Pharmacy and can be accommodated in the time-table for that academic year.
In spite of a rather demanding workload, pharmacy students are socially active, and have their own society: the Rhodes University Pharmacy Students Association. Although membership of RUPSA is open to all Rhodes students, it is overwhelmingly a (voluntary) group of Pharmacy students, and is run by them.

Although there are of course simple recreational functions organized by RUPSA, the society has a serious and important role in preparing its members for entry into various aspects of the profession.

A member of the Faculty’s academic staff serves permanently on RUPSA’s committee, to act as advisor and to assist, occasionally, in co-ordinating the Society’s activities with those of the Faculty.

RUPSA is affiliated to the South African Pharmacy Students Federation (SAPSF), and through this National body to IPSF (International Pharmacy Students Association). These links with the national and international community of pharmacy students promote an awareness of the global scale and significance of the profession.

The specific subjects for each year of the Bachelor of Pharmacy degree are listed below:

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<td>Chemistry (Semester 1 &amp; 2)</td>
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<td>Pharmaceutical Chemistry 3 (Semester 1 &amp; 2)</td>
<td>Pharmacology 4 (Semester 1)</td>
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<td>Cell Biology (Semester 1)</td>
<td>Anatomy Physiology, Pathophysiology &amp; Pathology 2 (Semester 1 &amp; 2)</td>
<td>Pharmacology 3 (Semester 1 &amp; 2)</td>
<td>Pharmacotherapy (Semester 2)</td>
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<td>Introduction to ICT (Information &amp; Communication Technology) (Semester 1)</td>
<td>Biochemistry, Microbiology &amp; Immunology (Semester 1 &amp; 2)</td>
<td>Pharmaceutics 3 (Semester 1 &amp; 2)</td>
<td>Research Project (Semester 1 &amp; 2)</td>
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<td>Mathematics for Life Sciences (Semester 1)</td>
<td>Pharmaceutics 2 (Semester 1 &amp; 2)</td>
<td>Pharmacy Practice 3 (Semester 1 &amp; 2)</td>
<td>Elective** (Semester 1 or 2)</td>
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<td>Anatomy &amp; Physiology 1 (Semester 2)</td>
<td>Pharmacy Practice 2 (Semester 1 &amp; 2)</td>
<td>Biostatistics (Semester 11)</td>
<td>Pharmacy Practice 4 (Semester 1)</td>
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<td>Biochemistry 1 (Semester 2)</td>
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Further specialization is possible at the postgraduate level, where studies leading to an MSc, MPharm, PharmD or PhD degrees can be pursued.

ENTRY REQUIREMENTS

To be accepted into the Bachelor of Pharmacy programme an applicant must have obtained either the National Senior Certificate with Bachelor status, or obtained a matric exemption certificate from the Board.

In the case of the National Senior Certificate, applicants must have Mathematics at Level 6 and above, Life Sciences at Level 6 and above, and Physical Sciences at Level 6 and above to receive a firm offer. Mathematical Literacy will not be considered. If a candidate has 45 points and above they will receive a firm offer, if between 40 and 44 points then admission will be at the Dean’s Discretion. Normally candidates who have 38 points or less are likely to be rejected.