BOARD NOTICES • RAADSKENNISGEWINGS

BOARD NOTICE 653 OF 2024

THE SOUTH AFRICAN PHARMACY COUNCIL

CRITERIA TO ACCREDIT A COURSE TO BE COMPLETED BY FOREIGN-QUALIFIED PERSONS

The South African Pharmacy Council (SAPC) intends to publish, in terms of Section 3(e)(i) Sections 33 and 34, read together with the *Regulations relating to pharmacy education and training,* the criteria to **accredit a course to be completed by foreign-qualified persons.**

Interested parties are invited to submit substantiated comments or representations regarding the proposed criteria within **30 days** of publication of this notice. Comments must be addressed to the Registrar, for the attention of the Company Secretary, at email BN@sapc.za.org

SCHEDULE

CRITERIA TO ACCREDIT A COURSE TO BE COMPLETED BY FOREIGN-QUALIFIED PERSONS

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REGISTRAR

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To obtain the full content of this Board Notice, please visit the 'Proposed Legislation' section on the South African Pharmacy Council's website: https://www.pharmcouncil.co.za/Legislation_Proposed

South African Pharmacy Council

CRITERIA TO ACCREDIT A COURSE TO BE COMPLETED BY FOREIGN-QUALIFIED PERSONS PRIOR TO WRITING THE PROFESSIONAL EXAMINATION IN SOUTH AFRICA

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1. RATIONALE FOR TRAINING FOREIGN-QUALIFIED PERSONS

The Office of the Registrar receives applications from candidates with foreign qualifications who wish to be registered with Council as Pharmacists. The Office processes these applications in terms of Regulations 17 and 18 of the *Regulations relating to the registration of persons and the maintenance of registers*, as well as the criteria for the evaluation of foreign applications approved by Council.

On 12-13 October 2022, Council resolved that a program be developed that will be successfully completed by all foreign-qualified Bachelor of Pharmacy (BPharm) graduates as a long-term solution. Council benchmarked the evaluation of foreign-qualifications against practices in other countries and, as a result, proposed long-term solutions for evaluating foreign qualifications.

2. PURPOSE OF TRAINING FOREIGN-QUALIFIED PERSONS

The course aims to prepare foreign-qualified pharmacists with the necessary contextual knowledge and skills required for practice in South Africa, as well as to prepare them to write the professional examinations specified in Regulation 17(1)(v) of the *Regulations relating to the registration of persons and the maintenance of registers*. Candidates will be admitted to write the professional exams only after completing this course.

3. TARGET GROUP FOR TRAINING

Foreign-qualified candidates who meet the minimum criteria as stipulated in section 4 below.

4. MINIMUM ENTRANCE CRITERIA FOR FOREIGN-QUALIFIED PERSONS

According to Regulation 17 of the *Regulations relating to the registration of persons and the maintenance of registers* published in terms of the Pharmacy Act, 53 of 1974, as amended, any person with a pharmacy qualification obtained outside the Republic of South Africa who applies for registration as a Pharmacist must follow the application process on the SAPC website: http://www.sapc.za.org/fqpersons. They should then click on the following link: https://www.sapc.za.org/ForeignQualificationRegistration to submit supporting documents to the Registrar. If the application is successful, a Council decision letter will be issued to the candidate to submit for application to the accredited provider.

5. DURATION OF THE TRAINING FOR FOREIGN QUALIFIED PERSONS

The recommended duration of the course is 1, 000 notional hours.

		Notional Hours
IS	**Interactive Sessions**	212
P	**Practical / Tutorial sessions / Simulated learning (Work-based learning)**	237
A	**Assessments**	105
SS	**Self-study**	446
Total		1 000

6. TRAINING RULES

To successfully complete the course, a student must:

(a) complete all the training modules; and

(b) achieve the minimum pass mark for each module as stipulated in the module documents.

7. RECOGNITION OF PRIOR LEARNING

Not applicable to the course.

8. OUTCOMES AND ASSOCIATED ASSESSMENT CRITERIA

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	**Notional Hours** (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
1. **Applied Pharmacology & Toxicology**	1.1 Antimicrobial agents	1.1.1 The candidate should be able to select appropriate antimicrobial agents for individual patients based on the nature and site of the infection, patient factors, and susceptibility testing, according to current South African treatment guidelines in both the public and private sectors.	1.1.1.1 Demonstrate the application of empiric therapy and de-escalation principles in selecting appropriate antibacterial therapy. 1.1.1.2 Demonstrate the application of clinical guidelines and evidence-based practices in selecting appropriate antimicrobial agents. 1.1.1.3 Evaluate the appropriateness of antimicrobial therapy and recommend modifications when necessary. 1.1.1.4 Evaluate patient cases for contraindications, cautions, and drug-drug and drug-disease interactions with antimicrobial therapy and recommend modifications when necessary. 1.1.1.5 Demonstrate the ability to recognise common adverse effects associated with antimicrobial agents and develop strategies for monitoring and managing antibiotic-related side effects.	IS = 9 H P = 3 H A = 6 H SS = 8 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			1.1.1.6 Demonstrate the application of current South African guidelines in antimicrobial stewardship.	
	1.2 HIV/AIDS, Tuberculosis (TB) and other associated opportunistic infections	1.2.1 The candidate should be able to utilise current South African guidelines for the diagnosis, prophylaxis, and the treatment of HIV/AIDS, TB, and other associated opportunistic infections.	1.2.1.1 Evaluate when to initiate treatment based on eligibility criteria for all key populations with HIV/AIDS, TB, and other associated opportunistic infections. 1.2.1.2 Evaluate real-life cases related to HIV/AIDS management and develop treatment plans and recommendations based on these scenarios. 1.2.1.3 Evaluate real-life cases related to TB management and develop treatment plans and recommendations based on these scenarios including DR-TB. 1.2.1.4 Demonstrate the application of clinical guidelines and evidence-based practices in selecting appropriate antiretroviral agents for specific patient cases. 1.2.1.5 Demonstrate the ability to identify common adverse effects associated with ARV and/or TB therapy and develop strategies for monitoring and managing adverse effects.	IS = 9 H P = 3 H A = 6 H SS = 8 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			1.2.1.6 Evaluate patient cases for contraindications, cautions, and any drug interactions with ARV and/or TB therapy and recommend modifications when necessary. 1.2.1.7 Demonstrate the application of clinical guidelines in selecting appropriate ARV and/or TB agents for Pre-and Post-exposure prophylaxis in specified cases and mother-to-child transmission where appropriate.	
		1.2.2 The candidate should demonstrate the ability to dispense the appropriate drugs for the prevention and treatment of opportunistic infections in HIV-positive children, based on patient-specific factors.	1.2.2.1 Evaluate real-life cases related to HIV/AIDS management and opportunistic infections, and develop treatment plans and recommendations based on paediatric scenarios. 1.2.2.2 Demonstrate the application of clinical guidelines and evidence-based practices in dispensing appropriate antiretroviral agents for specific paediatric patient cases.	

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
	1.3 Cardiovascular diseases	1.3.1 The candidate should be able to demonstrate an understanding of the current South African guidelines for the diagnosis, prophylaxis, and management of cardiovascular diseases, which includes hypertension, dyslipidemia, ischemic heart disease, peripheral vascular disease, congestive cardiac failure, and cardiac arrhythmias.	1.3.1.1 Evaluate the patient's risk for cardiovascular disease and recommend appropriate preventative measures, both non-drug and drug-based, based on current South African guidelines. 1.3.1.2 Demonstrate the application of clinical guidelines and evidence-based practices in selecting appropriate agents for specific cases of cardiovascular disease. 1.3.1.3 Demonstrate the ability to identify common adverse effects associated with therapy and develop strategies for monitoring and managing side effects related to drugs used in the prevention and treatment of cardiovascular diseases. 1.3.1.4 Evaluate patient cases for contraindications, cautions and drug interactions with therapy for the prevention and treatment of cardiovascular diseases, and recommend modifications when necessary.	IS = 6 H P = 3 H A = 6 H SS = 6 H
	1.4 Pharmacokinetics and Therapeutic Drug Monitoring (TDM)	1.4.1 The candidate should be able to perform pharmacokinetic calculations and apply	1.4.1.1 Demonstrate the application of Therapeutic Drug Monitoring (TDM) principles in adjusting drug therapy for patients belonging to special	IS = 6 H P = 2 H A = 6 H SS = 6 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		pharmacokinetic principles in TDM to optimise drug therapy in patients on specific drug classes, including antimicrobials, antiepileptics, immunosuppressants, antipsychotics, and others.	populations, such as paediatrics, geriatrics, and pregnant women. 1.4.1.2 Evaluate TDM data and make informed clinical decisions regarding drug dose adjustments. 1.4.1.3 Develop dosing regimens based on patient-specific factors, including age, weight, renal function, and genetic variations.	
	1.5 Central Nervous System (CNS) Conditions	1.5.1 The candidate should demonstrate an understanding of the applicable South African guidelines for diagnosing and managing disorders affecting the central nervous system.	1.5.1.1 Demonstrate the application of clinical guidelines and evidence-based practices in selecting appropriate agents for specific CNS conditions. 1.5.1.2 Evaluate the appropriateness of therapy for various CNS conditions and recommend modifications when necessary.	IS = 9 H P = 6 H A = 4 H SS = 12 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	**Notional Hours** (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		1.5.2 The candidate should demonstrate an understanding of the use of various classes of neuropsychiatric agents in the pharmacological management of central nervous system disorders, including mood disorders, psychosis, anxiety, and other psychiatric conditions.	1.5.2.1 Demonstrate the ability to recognise common adverse effects associated with therapy, and develop strategies for monitoring and managing side effects related to drugs used to treat CNS conditions. 1.5.2.2 Evaluate patient cases for contraindications, cautions and any drug interactions with therapy for treating CNS conditions, and recommend modifications when necessary. 1.5.2.3 Develop strategies for optimising psychotropic medication regimens, including dose titration and monitoring. 1.5.2.4 Demonstrate the ability to identify potential drug interactions and adverse drug reactions associated with CNS medications, and describe strategies for managing and preventing these reactions.	

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	**Notional Hours** (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
	1.6 Tropical conditions prevalent in South Africa	1.6.1 The candidate should be able to demonstrate an understanding of the applicable South African guidelines for diagnosing and managing malaria and other tropical diseases prevalent in South Africa.	1.6.1.1 Demonstrate application of clinical guidelines and evidence-based practices in selecting appropriate agents for malaria and other tropical diseases prevalent in South Africa.	IS = 9 H P = 6 H A = 4 H SS = 12 H
		1.6.2 The candidate should demonstrate an understanding of the use of various drug classes in the pharmacological management of malaria and other tropical diseases prevalent in South Africa.	1.6.2.1 Evaluate real-life cases related to managing malaria and other tropical diseases prevalent in South Africa, and develop treatment plans and recommendations based on these case scenarios. 1.6.2.2 Evaluate the appropriateness of therapy for malaria and other tropical diseases prevalent in South Africa and recommend modifications when necessary. 1.6.2.3 Evaluate patient cases for contraindications, cautions, and any drug interactions with therapy for preventing and treating malaria and other tropical diseases prevalent in South	

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			Africa, and recommend modifications when necessary. 1.6.2.4 Demonstrate the ability to identify common adverse effects associated with therapy and develop strategies for monitoring and managing side effects related to drugs used to prevent and treat malaria and other tropical diseases prevalent in South Africa.	
	1.7 Asthma and Chronic obstructive pulmonary disease (COPD)	1.7.1 The candidate should be able to demonstrate an understanding of the applicable South African guidelines for the diagnosis, prophylaxis, and management of asthma and COPD.	1.7.1.1 Demonstrate the application of clinical guidelines and evidence-based practices in selecting appropriate agents for specific cases of Asthma or COPD. 1.7.1.2 Evaluate real-life cases related to the management of asthma and COPD, and develop treatment plans and recommendations based on these case scenarios.	IS = 4 H P = 3 H A = 4 H SS = 12
		1.7.2 The candidate should demonstrate an understanding of the use of various drug	1.7.2.1 Evaluate the appropriateness of therapy for asthma and COPD and recommend modifications when necessary.	

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	**Notional Hours** (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		classes in managing asthma and COPD.	1.7.2.2 Demonstrate the ability to identify common adverse effects associated with therapy and develop strategies for monitoring and managing side effects of drugs used to prevent and treat asthma and COPD. 1.7.2.3 Evaluate patient cases for contraindications, cautions and any drug interactions with therapy for managing asthma and COPD, and recommend modifications when necessary.	
	1.8 Diabetes Mellitus	1.8.1 The candidate should be able to demonstrate an understanding of the applicable South African guidelines for diagnosing and managing diabetes mellitus.	1.8.1.1 Demonstrate the application of clinical guidelines and evidence-based practices in selecting appropriate agents for specific patients. 1.8.1.2 Develop patient-specific recommendations to achieve glycemic control through lifestyle changes.	IS = 6 H P = 4 H A = 4 H SS = 12 H
		1.8.2 The candidate should be able to demonstrate an understanding of the use of various classes of antidiabetic agents including insulin, sulfonylureas, biguanides,	1.8.2.1 Evaluate real-life cases related to the management of diabetes, and develop treatment plans and recommendations based on these case scenarios. 1.8.2.2 Evaluate the appropriateness of therapy for diabetes and recommend modifications when necessary.	

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		thiazolidinediones, alpha-glucosidase inhibitors, dipeptidyl peptidase-4 (DPP-4) inhibitors, Glucagon-Like Peptide-1 (GLP-1) receptor agonists, and sodium-glucose co-transporter 2 (SGLT-2) inhibitors in the management of diabetes.	1.8.2.3 Demonstrate the ability to identify common adverse effects associated with therapy and develop strategies for monitoring and managing side effects of drugs used to manage diabetes. 1.8.2.4 Evaluate patient cases for contraindications, cautions, and any drug interactions with therapy for the management of diabetes and recommend modifications when necessary.	
	1.9 Pain and inflammation	1.9.1 The candidate should be able to demonstrate an understanding of the use of various classes of analgesic and anti-inflammatory drugs in the management of conditions with acute or chronic pain and inflammation.	1.9.1.1 Evaluate real-life cases related to the management of pain and inflammation and develop treatment plans and recommendations based on these case scenarios. 1.9.1.2 Demonstrate the application of clinical guidelines and evidence-based practices in selecting appropriate agents for specific patients in the pharmacological management of chronic pain and inflammation.	IS = 6 H P = 4 H A = 4 H SS = 12 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			1.9.1.3 Demonstrate the ability to identify common adverse effects associated with therapy and develop strategies for monitoring and managing side effects of drugs used to manage pain and inflammation. 1.9.1.4 Evaluate patient cases for contraindications, cautions, and any drug interactions with therapy for managing conditions with pain and inflammation and recommend modifications when necessary.	
	1.10 Pharmacist-initiated therapy	1.10.1 The candidate should demonstrate an understanding of the use of various clinical guidelines and evidence-based practices to make informed decisions in the diagnosis and pharmacological management of conditions that fall within the scope of Pharmacist-Initiated	1.10.1.1 Demonstrate the application of clinical guidelines and evidence-based practices in selecting appropriate agents for specific patient conditions within the scope of Pharmacist-initiated therapy in South Africa. 1.10.1.2 Demonstrate the ability to identify common adverse effects associated with therapy and develop strategies for monitoring and managing side effects related to drugs used to manage conditions within the scope of Pharmacist-initiated therapy in South Africa.	IS = 9 H P = 6 H A = 4 H SS = 12 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		Therapy in South Africa.	1.10.1.3 Evaluate patient cases for contraindications, cautions, and any drug interactions with therapy for managing conditions within the scope of Pharmacist-initiated therapy (PIT) in South Africa and recommend modifications when necessary.	
	1.11 Toxicology	1.11.1 The candidate should demonstrate an understanding of different toxicological syndromes and the use of antidotes, procedures, and therapies to manage toxic exposure and poisoning.	1.11.1.1 Describe the mechanisms of action of common toxic agents. 1.11.1.2 Evaluate symptoms of toxicity and recommend appropriate antidotes or specific therapies for poisoning based on patient scenarios according to Standard Treatment Guidelines / Essential Medicines List. (STG/EML) where appropriate. 1.11.1.3 Differentiate between toxicological syndromes accurately based on clinical signs and symptoms and recommend appropriate management strategies for specific syndromes. 1.11.1.4 Develop public health initiatives and preventive measures to reduce toxic exposures and poisonings effectively.	IS = 6 H P = 4 H A = 4 H SS = 12 H
	1.12 Applied pharmacology and	1.12.1 The candidate should demonstrate the ability	1.12.1.1 Demonstrate the application of clinical guidelines and evidence-based practices in	P= 43 H A= 3 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
	toxicology in a simulated environment	to apply the different pharmacology and toxicology principles in selecting the most appropriate therapy for patients in a simulated environment.	selecting appropriate agents for specific patient conditions for patients in a simulated environment. 1.12.1.2 Demonstrate the ability to identify common adverse effects associated with therapy and develop strategies for monitoring and managing side effects related to drugs used to manage conditions for patients in a simulated environment. 1.12.1.3 Evaluate patient cases for contraindications, cautions, and any drug interactions with therapy for managing conditions for patients in a simulated environment and recommend modifications when necessary.	
2. Pharmaceutics	2.1 Pharmaceutical calculations	2.1.1 The candidate must be able to correctly perform the pharmaceutical calculations required to prepare and evaluate medicines in all sectors of pharmacy.	2.1.1.1 Identify the correct formula for various types of calculations relating to the preparation of medicines in all sectors of pharmacy. 2.1.1.2 Apply correct mathematical principles to accurately solve calculations relating to the preparation of medicines in all sectors.	IS = 10 H P = 5 H A = 2 H SS = 20 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
	2.2 Extemporaneous compounding	2.2.1 The candidate should be able to prepare typical solid, liquid, and topical preparations dispensed in institutional and community pharmacies in SA in line with the regulations of the Medicines and Related Substances Act, 101 of 1965.	2.2.1.1 Accurately calculate the various excipients/solvents required to prepare the medicinal formulations. 2.2.1.2 Prepare the various solid, liquid, and topical preparations. 2.2.1.3 Select the correct packaging for the above preparations and assign appropriate shelf life and storage conditions. 2.2.1.4 Prepare the correct labels for the above preparations as per the regulations of the Medicines and Related Substances Act	IS = 6 H P = 15 H A = 2 H SS = 6 H
	2.3 Comparative dissolution studies on innovator and generic medicines	2.3.1 The candidate must be able to perform dissolution studies and undertake the required comparative analyses between an innovator and a generic product for both immediate-release and controlled-release products.	2.3.1.1 Understand key principles of dissolution, dissolution testing, and approval of generic medicines. 2.3.1.2 Undertake Dissolution studies using United States Pharmacopeia (USP)-approved methods on an immediate-release innovator and generic medicine in approved media per South African Health Products Regulatory Authority (SAHPRA) guidelines. 2.3.1.3 Undertake Dissolution studies using USP-approved methods on a controlled release	IS = 6 H P = 12 H A = 3 H SS = 6 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			innovator and generic medicine in approved media as per SAHPRA guidelines. 2.3.1.4 Analyse the dissolution data using relevant formulae to establish similarity. 2.3.1.5 Prepare a dissolution study report as per SAHPRA guidelines.	
	2.4 Stability and shelf life	2.4.1 The candidate must be able to design a stability study according to the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH) guidelines and calculate the shelf life of a medicine.	2.4.1.1. Demonstrate an understanding of the ICH guidelines to determine the impurity profiling for an Active Pharmaceutical Ingredient (API) and Finished Pharmaceutical Products (FPP). 2.4.1.2. Demonstrate understanding of the ICH guidelines for stability studies on APIs and finished products in Africa. 2.4.1.3. Prepare a typical stability study report showing specifications, data, etc., for any specified dosage form. 2.4.1.4. Calculate/Predict shelf lives of APIs and final product.	IS = 9 H P = 3 H A = 2 H SS = 20 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
	2.5 SAHPRA and Medicine Regulatory Procedures	2.5.1 The candidate must have an understanding of SAHPRA's role in the approval of medicines and devices.	2.5.1.1 Demonstrate understanding of the structure of SAHPRA, the responsibilities, and mandates of the various committees of SAHPRA.	IS = 12 H P = 0 H A = 1 H SS = 12 H
		2.5.2 The candidate must be able to understand the submission requirements under each section in a dossier for a medicine registration application.	2.5.2.1 Demonstrate understanding of the procedures to follow for the registration of new medicines and the amendments to currently approved medicines. 2.5.2.2 Demonstrate understanding of the pharmaceutical requirements to be provided for each of the sections in a new dossier submitted for medicine approval.	
	2.6 Good manufacturing practice (GMP) and quality assurance (QA)	2.6.1 The candidate must have an understanding of GMP and QA principles as per SAHPRA guidelines.	2.6.1.1 Understand the role of QA, Quality Control (QC), and GMP and their inter-relationship. 2.6.1.2 Understand the nature and purpose of the documentation (e.g. Standard Operating Procedures (SOPs), Certificate of Analysis (CoA), Standard Manufacturing Formula (SMF), Batch Manufacturing Record) (BMR), Batch Production Record (BPR), etc.) related to pharmaceutical manufacturing and the registration of medicines.	IS = 6 H P = 6 H A = 2 H SS = 12 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			2.6.1.3 Understand the importance of validation and qualification in pharmaceutical manufacturing.	
	2.7 Aseptic reconstitution and preparation of sterile products	2.7.1 The candidate must be able to reconstitute and prepare various sterile dosage forms under aseptic conditions.	2.7.1.1 Understand the principles of quality assurance and quality control in preparing sterile and cytotoxic extemporaneous preparations. 2.7.1.2 Demonstrate the ability to apply the principles of aseptic technique in preparing sterile and cytotoxic extemporaneous preparations.	IS = 6 H P = 12 H A = 3 H SS = 12 H
	2.8 Biostudies	2.8.1 The candidate must be able to design and analyse bioavailability studies and identify biopharmaceutical, and pharmacokinetic properties to establish the bioavailability of drugs.	2.8.1.1 Identify the correct design parameters for bioavailability studies. 2.8.12 Analyse and interpret biopharmaceutical and pharmacokinetic parameters of drugs. 2.8.1.2 Demonstrate an understanding of the bioavailability and biopharmaceutical properties of drugs in establishing their therapeutic effect	IS = 6 H P = 4 H A = 4 H SS = 36 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		2.8.2 The candidate must be able to interpret data to establish the bioavailability and bioequivalence of drug products according to the guidelines set by medicine regulatory authorities, such as SAHPRA.	2.8.2.1 Demonstrate the ability to correctly extract the necessary pharmacokinetic data from published bioequivalence studies and assess them to establish bioequivalence. 2.8.2.2 Demonstrate an understanding of the guidelines from medicine regulatory bodies such as SAHPRA, for establishing the bioavailability and bioequivalence of pharmaceutical products.	

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
3. Pharmaceutical Chemistry	3.1 Fundamental Principles of Pharmaceutical Chemistry	3.1.1 The candidate must be able to demonstrate an understanding of the principles of organic chemistry, molecular structure, stereochemistry, and physicochemical properties in the context of pharmaceutical agents	3.1.1.1 Demonstrate an understanding of organic structures and key functional groups, emphasising their roles in drug activity and stability. 3.1.1.2 Demonstrate an understanding of physicochemical properties, including solubility, partition coefficient, and ionisation, emphasising their role in drug behaviour. 3.1.1.3 Demonstrate an understanding of the influence of stereochemistry, including chirality, enantiomers, and diastereomers, on biological activity and drug design.	IS = 9 H P = 0 H A = 2 H SS = 18 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
	3.2 The impact of Pharmaceutical Chemistry on pharmacodynamic properties of molecules	3.2.1 The candidate must be able to demonstrate an understanding of how the chemical structure of a drug influences its biological activity, and how this knowledge can be applied in the rational design of new therapeutic agents.	3.2.1.1 Demonstrate an understanding of how the structure of molecules influences protein-ligand interactions and receptor affinity and selectivity. 3.2.1.2 Demonstrate an understanding of the classification of pharmaceutical agents based on structure-activity relationships and link molecular structure to pharmacological activity/mechanisms of action. 3.2.1.3 Demonstrate an understanding of rational drug design approaches and techniques.	IS = 9 H P = 9 H A = 3 H SS = 24 H
	3.3 The impact of Pharmaceutical Chemistry on pharmacokinetic properties of molecules	3.3.1 The candidate must be able to demonstrate an understanding of how the molecular structure and physicochemical properties of drug molecules influence the absorption, distribution, metabolism, and excretion (ADME) of drugs.	3.3.1.1 Demonstrate an understanding of how the structure and physicochemical properties of molecules impact on drug absorption and the choice of route of administration. 3.3.1.2 Demonstrate an understanding of how the structure and physicochemical properties of molecules impact drug distribution. 3.3.1.3 Demonstrate an understanding of how the structure and physicochemical properties of molecules impact drug metabolism and excretion.	IS = 9 H P = 6 H A = 3 H SS = 24 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
	3.4 The impact of Pharmaceutical Chemistry on the stability and formulation of molecules and dosage forms	3.4.1 The candidate must be able to demonstrate an understanding of how the chemical properties of the API influence drug formulation and manufacturing, and the stability of pharmaceutical products.	3.4.1.1. Demonstrate an understanding of the relationship between structure and physicochemical properties of molecules and formulation choices. 3.4.1.2 Demonstrate an understanding of how the structure and physicochemical properties of molecules influence the selection of excipients, solvents, and drug delivery systems in formulation. 3.4.1.3 Demonstrate an understanding of how the structure and physicochemical properties of molecules can be used to optimise manufacturing processes such as granulation, compaction and lyophilisation, etc. 3.4.1.4 Demonstrate an understanding of how the structure and physicochemical properties of molecules can affect the stability of the final pharmaceutical product, including considerations for storage conditions and shelf-life.	IS = 6 H P = 12 H A = 4 H SS = 18 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		3.4.2 The candidate must be able to integrate analytical methods including quality control strategies in the context of API properties.	3.4.2.1 Demonstrate proficiency in various qualitative and quantitative analytical techniques to assess API identity, structure and purity, and overall quality control and stability. 3.4.2.2. Demonstrate proficiency in integrating analytical methods, including spectroscopy, chromatography, and mass spectrometry to formulate quality control strategies that consider the chemical properties of the API.	
4. Law and Ethics	4.1 Health Law, Ethics, Code of Conduct. Medicines and Pharmacy Act read together with its Regulations as they relate to the practice of pharmacy in South Africa.	4.1.1 The candidate should be able to demonstrate detailed knowledge and understanding of the Laws, Ethical Principles, Code of Conduct pertaining to the practice of pharmacy and its medicines, including a comprehensive and detailed knowledge of	4.1.1.1 Demonstrate knowledge and understanding of the Regulatory Authority (SAHPRA), Statutory Council (SAPC), and laws/regulations that govern medicines and the practice of pharmacy in SA. 4.1.1.2 Demonstrate knowledge and understanding of the scope of practice of all persons involved in the practice of pharmacy in SA. 4.1.1.3 Explain how pharmacy is practiced (with emphasis on dispensing) in SA in terms of Chapter IV of the Pharmacy Act and its	IS = 10 H P = 12 H A = 2 H SS = 26 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		the basic regulatory framework of SA.	regulations by applying Sections 22A, 22F,22G, and 22H of the Medicines Act. 4.1.1.4 Demonstrate understanding of medicines' registration and scheduling, including Sections 14, 21, and 15c of the Medicines Act, using examples/scenarios. 4.1.1.5 Explain the supply of medicines to patients via Regulations 31 and 32 of the Medicines Act. 4.1.1.6 Demonstrate the knowledge and understanding of the ethical principles applied to ensure professionalism as found in the code of conduct and ethical rules as per the Pharmacy Act. 4.1.1.7 Demonstrate knowledge and understanding of the requirements for Continuing Professional Development (CPD) completion and recording as stipulated by the Pharmacy Act.	
5. Pharmacy Practice	5.1 Health Systems	5.1.1 The candidate should be able to demonstrate and understand the structure and function of the South	5.1.1.1 Demonstrate an understanding of the key components of health systems: governance, financing, health human resources,	IS = 10 H P = 8 H (Minimum of 3 hours simulation)

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		African health system and its comparison with other global health systems	pharmaceuticals management, and service delivery. 5.1.1.2 Demonstrate a broad understanding of universal healthcare systems both globally and in South Africa. 5.1.1.3 Describe the principles of health governance and policy structures in South Africa. 5.1.1.4 Describe the structure of the South African healthcare system, including an understanding of the past, present, and emerging structures. 5.1.1.5 Demonstrate understanding of different health financing models and their applicability to South Africa. 5.1.1.6 Assess the implications of public and private health financing structures on pharmaceutical access and healthcare delivery. 5.1.1.7 Describe the pathways that patients follow within the healthcare system, including primary, secondary, and tertiary care, and	A = 2 H SS = 10 H

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			understand the referral processes between different levels of care. 5.1.1.8 Recognise and describe the various stakeholders involved in healthcare provision, including healthcare professionals, administrative staff, and support personnel, and understand their respective roles and responsibilities with a particular focus on the role of the Pharmacist. 5.1.1.9 Identify and analyse current healthcare challenges in South Africa and how they may affect the future delivery of healthcare.	
	5.2 Medicine Logistics.	5.2.1 The candidate should be able to manage the logistics of the selection, procurement, storage, distribution, and disposal of pharmaceutical products.	5.2.1.1 Demonstrate an understanding of how quality medicines are selected according to rational scientific and evidence-based principles and patient needs. 5.2.1.2 Describe how medicines are selected when morbidity and pharmaco-epidemiological data are utilised. 5.2.1.3 Describe how medicines are selected when bioavailability, therapeutic equivalence and generic equivalence considerations are applied.	IS = 5 H P = 10 H (Minimum of 6 hours simulation) A = 2 H SS = 10

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	**Notional Hours** (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			5.2.1.4 Demonstrate knowledge of the calculations for procurement of appropriate quantity of medicines based on patients' consumption, morbidity data, pharmaco-economic principles and the STG/EML. 5.2.1.5 Demonstrate knowledge on how medicines are procured according to organisational policies and standard operating procedures from accredited vendors. 5.2.1.6 Demonstrate understanding of the storage and distribution of medicines and related products according to Section 2.3 of the *Rules relating to Good Pharmacy Practice*. 5.2.1.7 Describe how medicines are disposed of in terms of Regulation 44 of the Medicines Act as amended. 5.2.1.8 Demonstrate comprehensive knowledge of the South African health system and its impact on the medicine supply chain.	

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			5.2.1.9 Demonstrate application of the logistics management principles in the medicines supply chain process.	
	5.3 Medicine Dispensing in community & institutional pharmacies	5.3.1 The candidate should be able to dispense medication and ensure optimal pharmaceutical care for the patient in terms of Sections 2.7, 2.8, 2.9, 2.10, 2.11, and 2.12 of the GPP together with Sections 18, 22A, 22F, 22G of the Medicines Act, and Sections 10, 33-36, and 39 of the Medicines Act regulations.	5.3.1.1 Critically evaluate a prescription in terms of its legality (authenticity, validity), appropriateness of prescribed medications for the patient (indications, dosage, safety, contraindications, drug interactions, and duplication of treatment), and demonstrate knowledge of the application of cost-effective principles (e.g., generic substitution). 5.3.1.2 Describe how pharmaceutical care, evidence-based practice principles, and medicine utilisation reviews are applied to facilitate rational drug use. 5.3.1.3 Demonstrate how medicines are prepared and labelled in accordance with Good Pharmacy Practice (GPP) and current SA legislative requirements. 5.3.1.4 Demonstrate the ability to communicate effectively with the prescriber regarding any therapeutic intervention needed.	IS = 5 H P = 15 H (Minimum of 12 hours simulation) A = 3 H SS = 20

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			5.3.1.5 Demonstrate the ability to recognise and respect diversity (e.g. sexual orientation, race, and social status), and cultural differences including beliefs, values, and customs that influence health behaviours. 5.3.1.6 Demonstrate the ability to communicate effectively with the patient in a respectful, empathetic, and person-centred manner 5.3.1.7 Demonstrate the ability to adapt communication based on the health literacy and linguistic needs of the patient/carer to optimise therapeutic outcomes by using the appropriate sources of information and communication tools. 5.3.1.8 Demonstrate competence in maintaining accurate and up-to-date patient records and documentation as per the GPP and current legislative requirements.	
	5.4 Pharmaceutical Care Principles and Therapeutic outcomes	5.4.1 The candidate should be able to apply pharmaceutical care management	5.4.1.1 Demonstrate understanding of the principles of pharmaceutical care in terms of optimising therapeutic outcomes for a specific patient.	IS = 5 H P = 10 H (Minimum of 6 hours simulation)

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		approaches to optimise therapeutic outcomes for a patient	5.4.1.2 Create and implement a pharmaceutical care plan in collaboration with other health care professionals and the patient. 5.4.1.3 Devise a monitoring plan to promote adherence and optimal patient health outcomes. 5.4.1.4 Demonstrate ability to monitor patient outcomes and evaluate patient outcomes and pharmaceutical care interventions. 5.4.1.5 Demonstrate the practice of pharmacovigilance, with an emphasis on Adverse Drug Reactions (ADR), in terms of Regulation 40 of the Medicines Act, including Adverse Drug Events reporting, and understanding the structures and processes involved in ADR reporting as per current legislation.	A = 4 H SS = 20
	5.5 Therapy Initiation and Modification	5.5.1 The candidate should be able to initiate and/or modify therapy, or refer where appropriate, within the scope of practice of a	5.5.1.1 Demonstrate ability to conduct thorough patient assessments including medication history, health status, and risk factors. 5.5.1.2 Demonstrate the ability to initiate and/or modify treatment based on patients'	IS = 5 H P = 10 H (Minimum of 8 hours simulation) A = 4 H SS = 20

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	Notional Hours (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
		Pharmacist and in accordance with GPP, the Medicines Act, and Good Clinical Practice (GCP), where applicable.	assessment according to legal requirements, and clinical guidelines. 5.5.1.3 Demonstrate skills in recommending appropriate action, including Pharmacist-Initiated Therapy (PIT) , lifestyle advice or referral to a healthcare professional. 5.5.1.4 Demonstrate competence in documenting patient interaction logs/records ensuring adherence to legal and ethical requirements. 5.5.1.5 Explain how therapeutic outcomes are monitored in accordance with GPP and principles of pharmaceutical care.	
	5.6 Public Health	5.6.1 Promotion of Public Health	5.5.1.1 Demonstrate an understanding of public health principles including disease prevention, health promotion, and community health. 5.5.1.2 Demonstrate the ability to develop and deliver educational material that informs the public on health topics, and medicines in accordance with Regulation 45 of the General Regulations published under the Medicines Act.	IS = 3 H P = 6 H (Minimum of 3 hours simulation) A = 2 H SS = 15

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	**Notional Hours** (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			5.5.1.3. Demonstrate the ability to recognise and manage disease risk factors and implement prevention strategies including promoting healthy lifestyles. 5.5.1.4 Describe types of promotive health services that can be offered in terms of current health policy, epidemiological information, and current legislative requirements. 5.5.1.5 Demonstrate the use of screening tests to assist in the early detection of disease, counselling, therapeutic interventions, and referrals. 5.5.1.6 Demonstrate knowledge of appropriate record keeping, filing, and monitoring of therapeutic outcomes in accordance with GPP and Pharmaceutical Care Principles.	
	5.7 Management principles in pharmacy	5.7.1 Integrate and apply management principles in the practice of pharmacy.	5.7.1.1 Demonstrate comprehensive knowledge of management principles relevant to Pharmacy Practice. 5.7.1.2 Demonstrate the application of the Basic Conditions of Employment Act, 75 of 1997 to Human Resource Management in the pharmacy (including the recruitment, retention of staff, and conflict resolution).	IS = 6 H P = 3 H (Minimum of 1 hour simulation) A = 2 H SS = 15

STAGES	TOPICS	SPECIFIC OUTCOMES	ASSESSMENT CRITERIA	**Notional Hours** (Interactive Sessions = IS Practical / Tutorial sessions / Simulated learning (work-based learning) = P Assessments = A Self-study = SS)
			5.7.1.3 Demonstrate the application of management principles in interactions with patients, caregivers, and other healthcare professionals, ensuring these interactions are managed in accordance with professional practice standards. 5.7.1.4 Demonstrate the application of the risk management and quality improvement principles in Pharmacy Practice. 5.7.1.5 Demonstrate proficiency in financial aspects of pharmacy management including budgeting and financial reporting. 5.7.1.6 Demonstrate ability to efficiently manage pharmacy operations including inventory management and workflow optimisation.	

9. CRITICAL CROSS-FIELD OUTCOMES

(a) Identify, analyse and solve problems related to the provision of pharmaceutical care using creative approaches.

(b) Work effectively with others as a member of a team of health care professionals by applying pharmaceutical care management principles.

(c) Organise and manage activities responsibly and effectively in contributing to the institution and broader community.

(d) Collect, analyse, organise, and critically evaluate information using evidence-based approaches to provide services and information for developing a pharmaceutical product or enhancing pharmaceutical care programmes and services.

(e) Communicate effectively using visual, mathematical, and/or language skills in oral, written, and/or practical presentation modes in a sustained discourse.

(f) Use science and technology, including informatics in pharmacy effectively and critically, demonstrating responsibility towards the environment and health of others by promoting ethical conduct in all contexts.

(g) Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

10. QUALIFICATIONS AND EXPERIENCE OF PRESENTERS/FACILITATORS

The presenters of the course must have the following qualifications:

(a) Undergraduate qualification: relevant to the modules to be presented i.e. Bachelor of Pharmacy (BPharm) degree, Bachelor of Sciences (BSc) degree, Bachelor of Health Sciences degrees;

(b) Academics: Minimum Requirement is a master's degree and at least one (1) year of teaching experience in the undergraduate programme. For presenters of the pharmacy practice modules, registration as a Practicing Pharmacist and demonstration of current practice experience is necessary;

(c) Principal Laboratory Staff: Minimum requirement is a bachelor's degree in the Sciences; and

(d) Demonstrators: Minimum requirement is BPharm (for Pharmacology and Pharmacy Practice) / BSc (Pharmaceutics/Pharmaceutical Chemistry).

11. STANDARDS FOR PRESENTATION OF THE COURSE FOR FOREIGN-QUALIFIED PERSONS

The course must be offered by a Higher Education Institution accredited by the South African Pharmacy Council to offer the course.

12. MODE OF DELIVERY

The course should be offered to Foreign-Qualified Pharmacists wishing to be registered in South Africa. It may be delivered through blended learning, incorporating both online and face-to-face sessions. However, contact sessions for practicals must be included where appropriate. The course should be designed to allow for flexibility. The Higher Education Institution must have a reliable electronic platform that provides easy access to study materials and resources. This platform must have access control and, at a minimum, support the following:

(a) General announcements;
(b) Communication with students;
(c) Resources and training material (For example, study guides, PowerPoint® presentations, videos);
(d) Submission of work assignments; and
(e) Online assessments.

A comprehensive study guide must be available. This guide should lead students through the learning process and integrate all the topics covered in each module. In addition, additional textbooks and references should be used, with citations provided in the study guide.

13. ASSESSMENT OF ENROLLED STUDENTS

The course must include assessments such as formative, summative, and/or continuous assessments. Both formative and summative assessments should be developed in accordance with the assessment policies of the Higher Education Institution. The minimum pass mark for the course should be 50%.

14. PROCESS OF APPEAL

The programme should include an appeals process developed in accordance with the higher education institution's policies, and this process should be detailed in the study guide.

15. PROCESS IN CASE OF DISHONESTY AND PLAGIARISM

The programme should include a disciplinary process for academic dishonesty, including plagiarism, developed in accordance with the higher education institution's disciplinary policies. This process should be outlined in the study guide. Students found guilty of academic dishonesty under the university's disciplinary procedures will be reported to the South African Pharmacy Council.

16. STANDARDS FOR ADMINISTRATION AND RECORD KEEPING

A student administration system must be in place to maintain and update each enrolled student. This information must include, but is not limited to, the following:

(a) Student's full name and surname;
(b) Maiden name (if applicable);
(c) Identification or passport number;
(d) Contact numbers (cell phone and landline);
(e) E-mail address;
(f) Postal address;
(g) Qualifications; and

(h) Past and current employment (indicating work experience in a clinical environment).

The system must include a functionality to generate a document that can be used as a "Proof of Registration" for each enrolled student.

The student administration system must also allow for record keeping of the marks that each student has obtained in each of the assessments.

Confidentiality of personal information must be maintained at all times.

17. CERTIFICATION METHODS AND PROCEDURES

Procedures must be in place to ensure that student certification is managed securely and safely. The security and accuracy of certificates during printing, filing, and distribution must be assured. The following minimum information is required for certification of the course:

(a) Provider name and/or logo;
(b) Name of the course;
(c) Student's full name (first name(s) followed by surname);
(d) Student identification;
(e) Date of issue of the certificate; and
(f) Signatories.

18. FACILITIES, EQUIPMENT AND CONSUMABLES

The physical facilities must be adequate to deliver both the theoretical and practical components of the training. For theoretical training, facilities must include an online teaching and learning platform and, where applicable, suitable lecture venues. The facilities and equipment for practical training should meet the minimum standards prescribed in the Good Pharmacy Education (GPE) guidelines.

Annexure A: Summary of Notional Hours

Discipline	Topic	Notional hours				
		IS	**P**	**A**	**SS**	**Total**
Applied Pharmacology & Toxicology	1.1 Antimicrobial agents	9	3	6	8	**26**
	1.2 HIV/AIDS, Tuberculosis (TB) and other associated opportunistic infections	9	3	6	8	**26**
	1.3 Cardiovascular diseases	6	3	6	6	**21**
	1.4 Pharmacokinetics and Therapeutic Drug Monitoring (TDM)	6	2	6	6	**20**
	1.5 Central Nervous System (CNS) Conditions	9	6	4	12	**31**
	1.6 Tropical conditions prevalent in South Africa	9	6	4	12	**31**
	1.7 Asthma and Chronic obstructive pulmonary disease (COPD)	4	3	4	12	**23**
	1.8 Diabetes Mellitus	6	4	4	12	**26**
	1.9 Pain and inflammation	6	4	4	12	**26**
	1.10 Pharmacist-initiated therapy	9	6	4	12	**31**
	1.11 Toxicology	6	4	4	12	**26**
	1.12 Applied pharmacology and toxicology in a simulated environment	0	43	3	0	**46**
Total		**79**	**87**	**55**	**112**	**333**
Pharmaceutics	2.1 Pharmaceutical calculations	10	5	2	20	**37**
	2.2 Extemporaneous compounding	6	15	2	6	**29**
	2.3 Comparative dissolution studies on innovator and generic medicines	6	12	3	6	**27**
	2.4 Stability and shelf life	9	3	2	20	**34**
	2.5 SAHPRA and Medicine Regulatory Procedures	12	0	1	12	**25**
	2.6 Good manufacturing practice (GMP) and quality assurance (QA)	6	6	2	12	**26**
	2.7 Aseptic reconstitution and preparation of sterile products	6	12	3	12	**33**
	2.8 Biostudies	6	4	4	36	**50**
Total		61	57	19	124	**261**
Pharmaceutical Chemistry	3.1 Fundamental principles of Pharmaceutical Chemistry	9	0	2	18	**29**
	3.2 The impact of Pharmaceutical Chemistry on pharmacodynamic properties of molecules	9	9	3	24	**45**
	3.3 The impact of Pharmaceutical Chemistry on pharmacokinetic properties of molecules	9	6	3	24	**42**

	3.4 The impact of Pharmaceutical Chemistry on the stability and formulation of molecules and dosage forms	6	12	4	18	**40**
Total		**33**	**27**	**12**	**84**	**156**
Law and Ethics	4.1 Health Law, Ethics, Code of Conduct.	10	12	2	26	**50**
Total		**10**	**12**	**2**	**26**	**50**
Pharmacy Practice	5.1 Health systems	10	8	2	10	**30**
	5.2 Medicine logistics	5	10	2	10	**27**
	5.3 Medicine Dispensing in community & institutional pharmacies	5	15	3	20	**43**
	5.4 Pharmaceutical Care Principles and Therapeutic outcomes	5	10	4	20	**39**
	5.5 Therapy Initiation and Modification	5	10	4	20	**39**
	5.6 Public Health	3	6	2	15	**26**
	5.7 Management principles in pharmacy	6	3	2	15	**26**
Total		**29**	**54**	**17**	**100**	**200**
Overall Total						**1000**