



REQUIREMENTS FOR PHARMACY TECHNICIAN TRAINING PROGRAMME

1 Background

- 1.1. The Pharmacy Council of The Gambia (PCG) is mandated to determine the standard of knowledge and skill to be attained by persons seeking to become members of the pharmacy support personnel.
- 1.2. The training curriculum must prepare students for practice as entry-level pharmacy technicians in a variety of contemporary settings (e.g. community, hospital, administration) and students must acquire knowledge, skills, and abilities needed for practice.
- 1.3. The syllabus which shall be covered to pass the PCG pre-registration examination is listed in the PCG *Guideline for Pre-Registration Examination*. The curriculum requirements stated below shall be fulfilled for accreditation of training courses for students to be awarded a diploma or certificate as Pharmacy Technologist/Technician.
- 1.4. The ultimate goal of the programme shall be to train the student with the skills needed to assist in an efficient and responsible manner in compliance with the rules of the pharmacy profession. At the end of the training a graduate should be able to:
 - Participate in the management of a pharmacy at all levels of the health system under supervision of a pharmacist;
 - Ensure and promote information, education and communication about medicines to the population and health professionals;
 - Improving quality of service at a pharmacy;
 - Making pharmaceutical preparations; and
 - Support medicines control.

2 Curriculum Requirements

- 2.1. The overall duration of the training programme shall be three (3) years.
- 2.2. The Pharmacy Technician training programme should be structured so as to provide the student with knowledge in the following areas of training:
 - General Studies and Basic Sciences
 - Pharmaceutical Sciences
 - Biomedical Sciences

- Public Health Disciplines
 - Pharmacy Practice including
 - Management and Administration Sciences
 - Legislation and Ethics
- 2.3. Each training course should be assessed by a combination of continuous tests and tests at the end of the semester/trimester. The continuous evaluation and assessment at the end of semester/trimester shall consist of tests, assignments, quizzes, reports and/or written or oral or practical supervision. The final evaluation at the end of training shall consist of written, oral and practical examinations.
- 2.4. The minimum passing grade for all courses registered for per a given academic term and cumulative grade point for promotion to another higher level shall be at least forty-five percent (45%).
- 2.5. The description of the courses should be of such that it is developed along the following sequence or contains all elements mentioned therein:
- Code and Title of courses and subject areas;
 - Objective(s);
 - Topic(s)/Content(s);
 - Teaching methodology;
 - Evaluation; and
 - Reference books/materials.
- 2.6. Each course should have a code and a descriptive title. The code should have, at least, a literal component and a numerical part following it.

3 Curriculum Goals and Objectives

3.1 General Studies and Basic Sciences

English

- To facilitate the exploration of academic and professional print and electronic resources

Mathematics

- Review of the basics of arithmetic, algebra and geometry
- To introduce the student in applied mathematics

Physics

- To know various physical theories and concepts that is needed to understand the training

Chemistry

- To remind students of the general principles of general chemistry
- To review the student in the fundamentals of general and inorganic

chemistry

- To understand the use of inorganic compounds
- To introduce students to the fundamental principles of organic chemistry

Biology

- To introduce students to the fundamentals of human biology

Botany

- To introduce students to the basic principles of botany

Biochemistry

- To introduce the student to the general principles of biochemistry applicable to the pharmacy

Functional Human Anatomy and Physiology

- To introduce students to understand the various functions of the human body

Immunology and Haematology

- To introduce the student to the basic principles of human immune system and common immune disorders
- To introduce the student to the study of blood and its components and their applications in diagnosis.

Pathophysiology

- To know the most common medical and surgical pathology with emphasis on their therapeutic management, prevention and counselling

Microbiology and Parasitology

- To introduce students to the major groups of micro-organisms (eukaryotes and prokaryotes, viruses) and their relationship to humans and animals and their health
- To emphasise the importance of micro-organisms in medicine development
- To introduce students to the study of parasitic infections and their treatment

3.2 Pharmaceutical Sciences

Pharmaceutical Chemistry

- To introduce the student to pharmaceutical chemistry and knowledge of the structures and physicochemical properties of medicines (e.g. interaction between them and water) and to also allow the student to run simple analysis of medicines

Pharmacology

- To enable the student to learn the basics of general pharmacology
- To enable the student to know the pharmacological properties of medicines

Toxicology

- To introduce students to concepts of basics of toxicology and toxic effects of medicines

Pharmacognosy

- To let the student learn the essential active substances derived from plant and animal kingdoms for formulation/preparation into medicine forms

Pharmaceutics

- To let the student learn the basics of pharmaceutics including pharmaceutical calculations

Public Health

- To understand the role of the pharmacy technician in environmental health and community health
- To introduce the student to national health policy
- To understand the healthcare occupations and the health care delivery system
- To understand wellness promotion and disease prevention concepts, such as use of health screenings, health practices and environmental factors that impact health, and adverse effects of alcohol, tobacco, and licit and illicit drugs
- To introduce student to epidemiology

Nutrition

- To provide students with sufficient knowledge in nutrition, diet and their importance in pharmaceutical patient care

Research

- To introduce students to research methodology

Quality Control and Quality Assurance

- To introduce students to the fundamentals of the technical quality control of medicines
- To apply quality assurance practices to medicines
- To understand procedures and communication channels to use in the event of a product recall and adverse drug reactions

Laboratory Technology

- To introduce students to Good Laboratory Practices

3.3 Pharmacy Practice

Hospital Pharmacy

- To provide students with a comprehensive knowledge of the various forms of pharmacy-related hospital work as well as its application

Community Pharmacy

- To enable students to achieve competency in the practical aspects of

pharmacy in the community settings

Processing and Handling of Medications and Prescriptions

- To understand the pharmacy technician's role in the rational use of medicines
- To receive and screen prescriptions/medication orders for completeness, accuracy, and authenticity under the supervision of a pharmacist, where applicable
- To compound patient-specific prescriptions
- To assist pharmacists in the identification of patients who desire/require counselling to optimise the use of medications
- To maintain pharmacy facilities and equipment, including automated dispensing equipment
- To use material safety data sheets (MSDS) to identify, handle, and safely dispose of hazardous materials

Sterile and Non-Sterile Compounding

- To prepare medicines requiring compounding of sterile products under supervision of a pharmacist
- To prepare medicines requiring compounding of non-sterile products under supervision of a pharmacist
- To prepare medicines requiring compounding of chemotherapy/hazardous products under supervision of a pharmacist

Patient- and Medication-Safety

- To apply patient- and medication-safety practices in all aspects of the pharmacy technician's roles
- To verify measurements, preparation, labelling and/or packaging of medicines
- To demonstrate skills required for effective emergency preparedness
- To assist pharmacists in prescription audit

Medicine and Nursing

- To provide students with the knowledge and skills that are needed to provide first aid
- To understand pharmacists' roles when they are responding to emergency situations and how pharmacy technicians can assist pharmacists
- To introduce students on how to interpret basic medical and laboratory results

Informatics

- To provide an introduction to the main Windows applications (or any other relevant contemporary computer programme), its interface, its tools and features

- To introduce students to the practical use of pharmacy software (e.g. LMIS, Channel) and other computer programme applicable in pharmacy
- To demonstrate skill in using the internet, e-mail, and electronic medication information databases
- To demonstrate proficiency with word processing, spread sheets, and databases

Management and Administration

- To introduce students to the basics of management
- To introduce students to the concepts, approaches and methods of marketing
- To introduce students to health service management
- To introduce students to the basics of accounting and accounting applications
- To assist in pharmacy management
- To understand pharmacy reimbursement plans for covering pharmacy services

Procurement and Supply Management

- To introduce students in other areas of management practices like inventory management and procurement procedures in pharmacy, focusing on hospital and community practice
- To assist pharmacists in stock management
- To assist pharmacists in store management
- To apply accepted procedures in purchasing medicines and related products
- To apply accepted procedures in inventory control of medications, equipment and devices

Pharmacy Laws, Regulations and Ethics

- To know the aspects of legislation, regulations and ethics of pharmacy practice in The Gambia
- To compare and contrast the roles of pharmacists and pharmacy technicians in ensuring pharmacy department compliance with professional standards and relevant legal, regulatory, formulary, contractual, and safety requirements
- To maintain confidentiality of patient information

3.4 Personal Knowledge and Skills

- To present an image appropriate for the profession of pharmacy in appearance and behaviour
- To communicate clearly when speaking and in writing

- To demonstrate a respectful attitude when interacting with diverse patient populations
- To apply self-management skills, including time management, stress management, and adapting to change
- To apply interpersonal skills, including negotiation skills, conflict resolution, and teamwork
- To apply critical thinking skills, creativity, and innovation to solve problems
- To demonstrate commitment to excellence in the pharmacy profession and to continuing education and training

4 Practical Training

After successful completion of the training programme follows the internship in hospitals, pharmacies and other relevant institutions as determined by the PCG and stipulated in the PCG *Guideline for Pharmacy Internship Programme*.