

Pharm-D (Doctor of Pharmacy)

Candidates for admission to Doctor of Pharmacy should have passed F.Sc. (Pre-medical with 60% marks or B.Sc. (After F.Sc. Pre-medical 60% marks] or equivalent examination.

About the Course:

In line with the **Higher Education Commission (HEC) Ordinance 2002** and the **Pharmacy Council of Pakistan (PCP) under the Pharmacy Act 1967**, the **Punjab University College of Pharmacy, University of the Punjab, Lahore, Pakistan** has adopted a comprehensive **Doctor of Pharmacy (PharmD) curriculum**. This program is designed to equip students with advanced knowledge, professional ethics, and practical skills to meet the evolving demands of the pharmacy profession.

Aims & Objectives of the PharmD Programme:

The **Doctor of Pharmacy (PharmD) curriculum** aims to produce **competent pharmacy professionals** who possess **scientific expertise, ethical values, strong communication skills, and practical knowledge**. The program prepares graduates for careers in:

- **Pharmaceutical care** in hospitals, community pharmacies, and healthcare systems, ensuring safe and effective medication use.
- **Pharmaceutical industry**, focusing on drug formulation, manufacturing, and quality assurance.
- **Academia, research, and development**, contributing to innovation and advancement in pharmaceutical sciences.

Programme Aims:

The PharmD programme is designed to:

- ✓ Equip graduates with **scientific knowledge and technical expertise** to work in pharmaceutical research, development, and healthcare.
- ✓ Ensure proficiency in the **design, manufacture, distribution, and safe use of medications** in clinical and community settings.
- ✓ Keep graduates updated with **modern advancements in pharmaceutical sciences** to meet global healthcare challenges.

Programme Objectives:

The PharmD curriculum focuses on:

- ü **Bridging the gap between theory and practice** by incorporating hands-on experience in pharmacy disciplines.
- ü **Preparing graduates to work in diverse pharmacy sectors**, including clinical, community, hospital, and industrial pharmacy.
- ü **Ensuring competency in patient care** by teaching medication therapy management, dosage regimen preparation, and disease-state management.
- ü **Enhancing soft skills** like ethics, communication, writing, and professional behavior to develop well-rounded healthcare professionals.
- ü **Aligning the curriculum with international standards**, making graduates competitive in both local and global pharmaceutical markets.
- ü **Standardizing credit hours** for theory and practical components to maintain academic uniformity.

ü Encouraging clinical-oriented learning, especially in areas like OTC pharmacy, patient counseling, and public health initiatives.

ü Preparing students for leadership roles in healthcare organizations, policy-making bodies, and regulatory authorities.

This programme ensures that **graduates of the Punjab University College of Pharmacy, University of the Punjab, Lahore, Pakistan** are equipped to **adapt to the paradigm shift in healthcare** and contribute effectively to national and international health systems.

Curriculum Outlines

Doctor of Pharmacy is a Five Years degree programme based on annual system duly approved by the Academic Council, Higher Education Commission and Pharmacy Council of Pakistan. The detail of new syllabus and marks is given below (Subject to the approval from University's concerned bodies):

First Professional

Theory

Paper	Subject Name	Marks	Teaching Hrs./Week
1	Pharmaceutical Chemistry-I (Organic)	100	3
2	Pharmaceutical Chemistry-II (Biochemistry)	100	3
3	Pharmaceutics-I (Physical Pharmacy)	100	3
4	Physiology	100	3
5	Anatomy & Histology	50	2
6	English	100	3
TOTAL		550	17

Practical

Paper	Subject Name	Marks	Lab Hrs./Week
7	Pharmaceutical Chemistry-I (Organic)	100	3
8	Pharmaceutical Chemistry-II (Biochemistry)	100	3
9	Pharmaceutics-I (Physical Pharmacy)	100	3
10	Physiology	100	3
11	Anatomy & Histology	50	2
TOTAL		450	14

Total Marks: 1000

Second Professional

Theory

Paper	Subject Name	Marks	Teaching Hrs./Week
1	Pharmaceutics-II (Dosage Forms Science)	100	3
2	Pharmacology and Therapeutics-I	100	3
3	Pharmacognosy-I (Basic)	100	3
4	Pharmaceutics-III (Pharmaceutical Microbiology & Immunology)	100	3
5	Pakistan Studies and Islamic Studies/Ethics (Compulsory)	100	3
6	Pharmacy Practice-I (Pharmaceutical Mathematics and Biostatistics)	100	3
TOTAL		600	18

Practical

Paper	Subject Name	Marks	Lab Hrs./Week
7	Pharmaceutics-II (Dosage Forms Science)	100	3
8	Pharmacology and Therapeutics-I	100	3
9	Pharmacognosy-I (Basic)	100	3
10	Pharmaceutics-III (Pharmaceutical Microbiology & Immunology)	100	3
TOTAL		400	12

Total Marks: 1000

Third Professional

Theory

Paper	Subject Name	Marks	Teaching Hrs./Week
1	Pathology	50	2
2	Pharmacology and Therapeutics-II	100	3
3	Pharmacognosy-II (Advanced)	100	3
4	Pharmacy Practice-II (Dispensing, Community, Social & Administrative Pharmacy)	100	3
5	Pharmaceutical Chemistry-III (Pharmaceutical Analysis)	100	3
6	Pharmacy Practice -III (Computer and its Applications in Pharmacy)	50	2
TOTAL		500	16

Practical

Paper	Subject Name	Marks	Lab Hrs./Week
7	Pathology	50	2
8	Pharmacology and Therapeutics-II	100	3
9	Pharmacognosy-II (Advanced)	100	3
10	Pharmacy Practice-II (Dispensing, Community, Social & Administrative Pharmacy)	100	3
11	Pharmaceutical Chemistry-III (Pharmaceutical Analysis)	100	3
12	Pharmacy Practice -III (Computer and its Applications in Pharmacy)	50	2
TOTAL		500	16

Total Marks: 1000

Fourth Professional

Theory

Paper	Subject Name	Marks	Teaching Hrs./Week
1	Pharmacy Practice-IV (Hospital Pharmacy)	100	3
2	Pharmacy Practice -V (Clinical Pharmacy-I)	100	3
3	Pharmaceutics-IV (Industrial Pharmacy)	100	3
4	Pharmaceutics-V (Biopharmaceutics and Pharmacokinetics)	100	3
5	Pharmaceutics-VI (Pharmaceutical Quality Management)	100	3
TOTAL		500	15

Practical

Paper	Subject Name	Marks	Lab Hrs./Week
6	Pharmacy Practice -V (Clinical Pharmacy-I)	100	3
7	Pharmaceutics-IV (Industrial Pharmacy)	100	3
8	Pharmaceutics-V (Biopharmaceutics and Pharmacokinetics)	100	3
9	Pharmaceutics-VI (Pharmaceutical Quality Management)	100	3
TOTAL		400	12

Total Marks: 900

Fifth Professional

Theory

Paper	Subject Name	Marks	Teaching Hrs./Week
1	Pharmaceutical Chemistry-IV (Medicinal Chemistry)	100	3
2	Pharmacy Practice -VI (Advanced Clinical Pharmacy-II)	100	3
3	Pharmaceutics-VII (Pharmaceutical Technology)	100	3
4	Pharmacy Practice -VII (Forensic Pharmacy)	100	3
5	Pharmacy Practice-VIII (Pharmaceutical Management and Marketing)	100	3
TOTAL		500	15

Practical

Paper	Subject Name	Marks	Lab Hrs./Week
6	Pharmaceutical Chemistry-IV (Medicinal Chemistry)	100	3
7	Pharmacy Practice -VI (Advanced Clinical Pharmacy-II)	100	3
8	Pharmaceutics-VII (Pharmaceutical Technology)	100	3
TOTAL		300	9

Total Marks: 800

Grand Total Marks: 4700

PHARM-D FIVE YEARS (ANNUAL SYSTEM) TEACHING AND LAB HRS. SUMMARY

Profession	Teaching Hrs./Week	Lab Training Hrs./Week	Total Hrs./Week
1	17	14	31
2	18	12	30
3	16	16	32
4	15	12	27
5	15	9	24
TOTAL	81	63	144

Professional Training

Clinical Pharmacy (4th & 5th Professions) Clerkship a Total of: 350 hrs.

An Internship, in any of the given tracks is mandatory for the ward of degree i.e., Pharmaceutical Industry, Community Pharmacy, Hospital / Clinical Pharmacy, Pharmaceutical Marketing, Management & Regulatory Affairs a total of:

Outcome of the Training Program

The **Clinical Pharmacy Clerkship Training Program** is designed to equip PharmD students with hands-on experience in hospital and healthcare settings. The training enhances clinical knowledge, patient care skills, and research capabilities, ensuring that graduates are **competent, confident, and practice-ready** in real-world pharmacy environments.

✔ Real-World Preparedness:

Graduates develop the ability to monitor pharmacotherapy-related clinical outcomes, identify and manage medication-related complications, and contribute to improved patient care.

✔ Medication System Navigation:

Students learn to navigate the medication management system effectively, including **pharmacy informatics, medication safety principles, order validation, and handling sterile and non-sterile products**.

✔ Pharmacist Care Practices:

Training emphasizes **patient assessment, follow-ups, identification, resolution, and prevention of drug-related problems**, ensuring comprehensive pharmaceutical care.

✔ Research Project Completion:

Students undertake **research projects** that enhance their skills in **problem-solving, literature evaluation, data analysis, and presentation**, fostering a research-oriented mindset.

✔ Clinical Knowledge & Exposure:

Through **hospital-based clerkships**, students gain exposure to various hospital units, including **pediatrics, psychiatry, pulmonology, cardiology, dermatology, and gynecology**.

✔ Dose Adjustments & Drug Interaction Monitoring:

Students monitor patient cases, focusing on **dose adjustments in hepatic and renal impairments, drug-drug interactions, and adverse drug reactions**.

✔ Hospital Pharmacy Exposure:

Participation in **medical rounds, drug distribution, procurement, and hospital management systems (HMIS)** familiarize students with hospital operations.

✔ Effective Communication:

Students develop **interpersonal and communication skills** to improve pharmacist-patient interaction and contribute effectively to hospital pharmacy practice.

Training Locations

PharmD students at the **Punjab University College of Pharmacy, University of the Punjab, Lahore, Pakistan** undergo clinical training at **renowned teaching and tertiary care hospitals**, ensuring exposure to well-structured pharmacy services. Training locations include:

Public Teaching Hospitals:

1. Mayo Hospital, Lahore
2. Jinnah Hospital, Lahore
3. Services Hospital, Lahore
4. Punjab Institute of Cardiology, Lahore

Private Tertiary Care Hospitals:

1. Shaukat Khanum Memorial Cancer Hospital & Research Centre, Lahore
2. Doctors Hospital, Lahore

3. Saleem Memorial Hospital, Lahore
4. Evercare Hospital, Lahore
5. Farooq Hospital, Lahore

Retail and Community Training Module

1. Clinix+ Pharmacy
2. Fazal Din Pharmacy
3. Green+ Pharmacy

Description of Training Program

4th Year (Professional PharmD):

- **150 contact hours** in hospital settings.
- Students monitor **patient cases, dose adjustments, and drug interactions**.
- **Departmental Lab Work:** 2 hours per week.

5th Year (Professional PharmD):

- **200 contact hours** in hospital settings.
- **Medical rounds, exposure to hospital management systems, and weekly patient case presentations** following standard treatment guidelines.
- **Clinical Pharmacy Project:** Short research projects to enhance analytical and communication skills for effective patient care.

Clinical Training Evaluation

4th Year (Professional PharmD):

- **External Examiner Assessment** of collected patient cases.
- **Written Exam** on clinical pharmacy topics.
- **Viva-Voce Examination.**
- **Total: 100 Marks.**

5th Year (Professional PharmD):

- **External Examiner Evaluation** of student research projects.
- **Comprehensive Research Project Completion**, demonstrating:

ü Project management and organization.

ü Literature appraisal and data analysis.

ü Research evaluation and effective presentation.

ü Objective assessment by an **external examiner** for unbiased evaluation.

Internship Requirement

A mandatory internship is required for degree completion, with students selecting one of the following specialized tracks:

- ✓ Pharmaceutical Industry
- ✓ Community Pharmacy
- ✓ Hospital/Clinical Pharmacy
- ✓ Pharmaceutical Marketing & Management
- ✓ Regulatory Affairs

Total Internship Duration: 350 hours

Programme Duration

Total Duration: 5 Years

The Clinical Pharmacy Clerkship Training at the University of the Punjab, College of Pharmacy ensures that graduates are well-prepared to excel in clinical, industrial, academic, and research-based pharmaceutical careers at both national and international levels.

Note: Pass percentage in both theory and Practical examinations of Pharm. D. is 50%. The Theory and Practical Examination in each subject will be treated separately.