

INSTITUTE OF PHARMACY
LAHORE COLLEGE FOR WOMEN UNIVERSITY, LAHORE

SELF-ASSESSMENT REPORT

Pharm-D

Submitted to

Quality Enhancement Cell,
Lahore College for Women University, Lahore

Dated: _____

Program Team Members:

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Director of the Institute:

Prof. Dr. Humera Majeed Khan.

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THE INSTITUTE OF PHARMACY

The Institute of Pharmacy was established in 2002 as Department of Pharmacy when the first batch was admitted in Pharm - D with the aim of providing a free access of education to female students desirous of acquiring knowledge of Pharmacy in a friendly environment.

The globally recognized profession of Pharmacy is an essential and integral part of a National Health Care system of any country. This profession is concerned with the Art and Science of preparation of drugs followed by safe delivery and rational use.

CRITERION 1: PROGRAM MISSION, OBJECTIVES AND OUTCOMES

Standard 1-1:

Improve health through innovative education, pioneering research, and interdisciplinary practice development that attends to the diverse needs of the people of the Pakistan and the world. Our mission is to advance societal health through female leadership in pharmacy education, research, community engagement, and improved patient care.

The pharmacist is the only person who is in a unique position of exercising complete drug expertise and its application. Keeping in view of the growing demand and job opportunities of pharmacist at National and International level and the significance of this profession, Lahore College for Women University is the pioneer female institute to undertake this noble task of offering Pharm - D, (five years degree program) and M.Phil program in the subjects of Pharmacology & Pharmacy Practice.

Department of Pharmacy has been up-graded to an Institute of Pharmacy in 2014 which is comprised of the following departments.

1. Department of Pharmacology
2. Department of Pharmaceutics
3. Department of Pharmaceutical Chemistry
4. Department of Pharmacognosy
5. Department of Pharmacy Practice

OBJECTIVES	HOW MEASURED	WHEN MEASURED	IMPROVEMENTS IDENTIFIED (Based on outcome Examination)	IMPROVEMENTS MADE
1. Concept building	Regular assessment of student knowledge and ability to exhibit the skills by the teacher.	Twice a year through send up and final term examinations. Monthly class tests and assignments.	Regularity of attendance required. Improving writing skills. Enhancing teaching skills. Students counseling and guidance. Incorporation of IT skills.	Attendance rules applied more strictly. Teacher training and development courses are arranged by the institute and university.
2. Development of logical and Analytical skills	<ul style="list-style-type: none"> • Class assignments • Presentations • Case studies 	Periodically throughout the year.	<ul style="list-style-type: none"> • Performance • Confidence • Faculty feedback 	More credible to handle practice problems.
3. Research based learning experience.	Through clinical, industrial and retail pharmacy projects/internships.	As per course requirements once during the programme.	Through viva /project evaluation.	Workshops and Seminars/conferences arranged regularly.

Table 4.1 Program Objectives Assessment**Standard 1.2: Pharm - D****Learning Objectives**

- (1) To get high quality education based on latest standards and facilities for adequate training of personnel in the field of pharmacy.
- (2) To learn the Art and Science of manufacturing, preparation and compounding of drugs.
- (3) To be able to check the quality control of pharmaceutical products, this is concerned with purity, strength and quality of the product.

Outcomes

- (1) Work in Pharmaceutical Industry, Hospital Pharmacy, Retail Pharmacy, government offices including Drug Control Administration and any other pharmacy related field.
- (2) Involve in scientific research as a necessary component of education with special emphasis on exploration of medicinal plants of Pakistan.
- (3) Provide female leadership and innovation in drug delivery system, pharmaceutical care and practice of pharmacy in the interest of Pakistan.
- (4) Establish drug information center for the benefit of students & general public.

Table 4.2: Outcomes versus Objectives

Program Objectives	Program Outcomes										
	1	2	3	4	5	6	7	8	9	10	11
1	*	*	*	*							
2	*	*	◇	◇							
3	*	*	◇	◇							

Legend: *Denotes **Substantial** Contribution to the objectives

◇ Denotes **Moderate** Contribution to the objectives

Denotes No Contribution to the objectives

Standard 1.3: The results of program's assessment and the extent to which they are used to improve the program must be documented.

Actions Taken on the basis of Assessment:

- 1) Faculty development (Professional trainings, workshops, and seminars conducted for students and faculty).
- 2) Infrastructure development (Improvement of current lab facilities, especially research labs)

Future Plans:

- 1) Initiation of evening Pharm-D programme.
- 2) To start Ph.D program in coming years.
- 3) To arrange national/international conference
- 4) To organize workshops and academic events.

Strengths of Department:

- 1) Team work
- 2) Work environment
- 3) Research collaborations

Standard 1.4: The department must assess its overall performance periodically using quantifiable measures.

1.4.1 Performance Measures:

Table 3: No. of Students Enrolled

Program	Session	No. of Students
Pharm - D	2012-2017	97
	2013-2018	89
	2014-2019	70

ii) Table 4: Student-Faculty Ratio

Year	No. of Students	No. of Faculty Members	Student-Faculty ratio
2014-2015	350	14	1:25
2013-2014	350	15	1:23
2012- 2013	350	14	1:25

iii) Table 5: No. of Students Passed Out

Program	Passing out Year	No. of Students
Pharm - D	2017	47

iv) **Table 6: Percentage of Honor Students & Attrition Rate**

Year	%age of Honor Students Criteria: CGPA 3.75 and above	Attrition Rate ($\frac{\text{Admitted - pass out}}{\text{Admitted}} \times 100$)
2017	37/49	4.08

v) **Table 7: Faculty Training, Seminars and workshops (Appendix A)**

Year	No. Of Trainings, Seminars and workshops
2017	List attached.

vi) **Papers Published at National & International Level**

Table 8: Number of Publications (Appendix B)

Year	Papers published
2017	List attached

vii) **Books in Library**

2400

Research Areas

The Faculty is involved in research in the following areas:

- Pharmacology
- Pharmacy practice

Collaborations

MoUs with the reputable pharmaceutical Companies/Industries and Universities

The Institute of Pharmacy has signed MoUs with the following reputable pharmaceutical Companies/Industries and Universities:

- Pharmawise (Pvt.) Limited, Lahore.
- MICKO Industrial Chemicals Company (Pvt.) Limited, Lahore.
- Himont Laboratories (Pvt.) Limited, Lahore.
- BM (Private) Limited, Lahore.
- King Edward Medical University, Lahore.
- University of Veterinary and Animal Sciences, Lahore.
- Punjab Institute of Preventive Ophthalmology, Lahore.
- Pak Heim International (Pvt) Limited, Lahore.

Departmental Achievements (others)

Active Citizens programme

The students of the Institute of Pharmacy are being trained in various aspects of community service and engage in community projects and policy dialogues to seek solutions for betterment of our nation. Furthermore students from the Institute of Pharmacy visit abroad through ISV every year.

Lahore Journal of Pharmaceutical Sciences (LJPS) (in process)

The Institute of Pharmacy has recently launched Lahore Journal of Pharmaceutical Sciences, a peer reviewed, biannual multi-disciplinary pharmaceutical sciences journal. LJPS publishes original research articles, reviews, case studies and short communications in Pharmaceutical and Allied health sciences.

Honors and Awards

Ms. Munaza Riaz, lecturer awarded Fullbright scholarship 2017.

CRITERION 2: CURRICULUM DESIGN AND ORGANIZATION

Provide the following information about the program's curriculum:

A. Pharm-D.

Curriculum is designed by the Pharmacy Council of Pakistan. Copy is attached.

Department of Pharmacy has been up-graded to an Institute of Pharmacy in 2014 which is comprised of the following departments.

- a) Department of Pharmacology
- b) Department of Pharmaceutics
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- d) Department of Pharmacognosy
- e) Department of Pharmacy Practice

Department of Pharmacology

Learning Objectives & Outcomes

- Our graduates would be able to familiarize with all the techniques used in Pharmacological Research in the fields of Ethno pharmacology, Molecular Pharmacology and Clinical Pharmacology. Furthermore, their knowledge would be updated with the recent advances in these areas of Pharmacology.

Department of Pharmaceutics

Learning Objectives & Outcomes

- This department has a mission to focus on formulation, characterization and optimization for better drug delivery and maximum therapeutic efficacy of drugs to patients.
- To develop bio- equivalence center of international repute to have comparative study on national level.
- To familiarize student with pilot plant scale up techniques and have productive collaboration with Pharmaceutical Industry to carry out research of global standards.

Department of Pharmacognosy

Learning Objectives & Outcomes

- To explore the Medicinal Plants and discover new secondary metabolites as lead compounds.
- To familiarize students with basic skills and techniques required to do research in different areas of this subject.

Department of Pharmaceutical Chemistry

Learning Objectives & Outcomes

- The overall aim of the qualification is to develop knowledge and understanding, cognitive skills, key skills and practical and professional skills in the study of Medicinal Chemistry with particularly emphasis on molecular aspects and development of drugs.

- To know the proper procedures and regulations for safe handling and use of chemicals and follow the proper procedure and regulations for safety when using chemicals.
- To use a broad variety of modern instrumentation and classical techniques in the course of experimentation.

Department of Pharmacy Practice

Goals & Objectives

Profession Specific Outcomes

- Patient Assessment - The student shall contribute to the database of information about the Patient Pharmaceutical Care Plan Development- The student shall develop pharmaceutical care plans that maximize the patients' response to drug therapy and prevent or resolve drug-related problem(s) in order to ensure positive outcome(s).
- Drug Therapy Evaluation - The student shall assess and monitor the patient's drug therapy, including a consideration of the chemical, pharmaceutical, pharmacokinetic, and pharmacological characteristics of the administered medications.
- Systems Management -The student shall use and evaluate acquisition, inventory control and distribution systems, while documenting and maintaining quality. The student shall plan, organize, direct and control pharmaceutical care systems and human, material, and financial resources, utilizing management theories and information technology.

General Education Outcomes:

- Communication Skills - The student shall read, write, speak, listen and use multimedia to communicate effectively. The student shall counsel and educate patients, as well as communicate with other health care professionals.
- Critical Thinking - The student shall acquire, comprehend, apply, analyze, synthesize, and evaluate information. The student shall integrate these abilities

to identify, resolve, and prevent problems and make appropriate decisions. The student shall understand the research process.

- Professional ethics and Responsibility - The student shall represent the profession in an ethical manner. The student shall identify, analyze and resolve ethical problems.
- Social Interaction, Citizenship, Leadership, Professionalism - The student shall demonstrate appropriate interpersonal behaviors. The student shall provide service to the profession, as well as the community. The student shall be proactive in collaborating with other health care professionals.
- Life-long Learning - The student shall continuously strive to expand his or her knowledge to maintain professional competence.
- Information Management - The student shall apply technology to pharmacy practice and science. The student shall demonstrate the ability to interpret and evaluate data for the purpose of assessing the suitability, accuracy, and reliability of information from reference sources.

Aims & Objectives of the Pharm.D. Program: (given by the pharmacy Council of Pakistan)

The aims and objectives of Doctor of Pharmacy (Pharm.D.) curriculum are to prepare graduates who will have the capacity, up-to-date knowledge, strong ethical values, behavior, communication, writing and social skills that will enable them to pursue careers in:

1. Pharmaceutical care in health systems and community environment where appropriate medication usage and patient's safety is paramount.
2. Pharmaceutical industry and its quality systems.
3. Academia, research and development.

Aims: To prepare pharmacy graduates whose scientific knowledge and skills enable them to work with the pace to ensure the quality in the design, manufacture, distribution and safe and effective use of pharmaceuticals in the society and clinical setting.

Objectives:

1. To keep pace with the advancements in the modern sciences.
2. To prepare the students to fulfill the industrial needs and they should be well versed with the basic medical and pharmaceutical sciences in order to prepare a dosage regimen for an individual patient.

3. Community pharmacy practice should be comprehensive.
4. Internship in various disciplines of Pharmacy should be implemented.
5. Update the syllabi of the Pharmacy keeping in view the current proposals, requirements and the Needs of the profession.
6. To make our graduates more skillful, competitive and knowledgeable both practically and theoretically.
7. To cater the local and international pharmacy needs.
8. Uniformity in the curriculum of Pharmacy at national level.
9. Credit hours should be harmonized i.e. practical and theory credit hours.
10. To make a health care practitioner who is expert in the use of medicine in all practical fields and are capable of disease state management specially to improve public health at large.
11. Upon graduation, the graduates should have the capacity, knowledge and capability to undertake career in;
 - a) Enhance patient safety to safe medication usage in community and health care systems
 - b) To work in the pharmaceutical industry and its quality system
 - c) To engage in academics and research i.e. Practice and Academics.
 - d) To prepare students as good human beings in serving the community i.e., ethics, communication skills, writing skills, behavior etc.
 - e) After graduation, he should become a member of health care team.
 - f) To help the stakeholders of pharmacy about the implications of WTO and TRIPS.
12. The syllabi should be more practical rather theoretical.
13. To include new things regarding OTC Pharmacy (Patient Pharmacist interaction).
14. To prepare pharmacy graduates for better pharmacy practice in the areas including clinical pharmacy, community pharmacy, hospital pharmacy and industrial pharmacy.
15. To add further in the curriculum clinical oriented areas as per demand of Pharm.D degree.
16. To update the current syllabi according to the needs of the national and international demand.
17. To develop graduates capable of catering the needs of national and international health organizations or authorities to help adapt the paradigm shift in the health care system.
18. To bring uniformity in the contents of the syllabi in line with International trends/ international universities imparting Pharm.D education.

19. To produce the graduates to meet the challenges of 21st century of health care problems.

Degree Program Offered

Pharm - D (5 Years Professional Degree)

Eligibility

- (1) F.Sc. Pre -Medical group with minimum 60% marks, and 'A' level students with Pre - Medical subjects (with minimum 60% equivalence marks) are eligible to apply for Pharm - D admission (on merit).
- (2) All other requirements as per university policy (Please see university admission criteria for Pharm - D).

Courses of Study (Annual System of Examination)

The courses of study are prepared within Jurisdiction of HEC and Pharmacy Council of Pakistan vide F.No. 1 - 2 / 2001 - pcl dated 5 -7- 2003 and duly approved by the Board of Studies.

1st Professional

Theory	Marks
Paper 1 Pharmaceutical Chemistry - 1 (Organic)	100
Paper 2 Pharmaceutical Chemistry - II (Biochemistry)	100
Paper 3 Pharmaceutics - 1 (Physical Pharmacy)	100
Paper 4 Physiology	100
Paper 5 Anatomy & Histology	
50	
Paper 6 English	100

Practical

Paper 8	Pharmaceutical Chemistry - 1 (Organic)	100
Paper 9	Pharmaceutical Chemistry - II (Biochemistry)	100
Paper 10	Pharmaceutics - 1 (Physical Pharmacy)	100
Paper 11	Physiology	100
Paper 12	Anatomy & Histology	
50		

Total **1000**

2nd Professional

Theory **Marks**

Paper 1	Pharmaceutics - II (Dosage Form Science)	
100		
Paper 2	Pharmacology and Therapeutics - I	
100		
Paper 3	Pharmacognosy - I (Basic)	100
Paper 4	Pharmaceutics - III (Pharmaceutical Microbiology & Immunology)	100
Paper 5	Pakistan Studies and Islamiat Studies (Compulsory)	
100		
Paper 6	Pharmacy Practice -I (Pharmaceutical Mathematics & Bio Statistics)	100

Practical

Paper 7	Pharmaceutics - II (Dosage Form Science)	
100		

Paper 8	Pharmacology and Therapeutics - I	
100		
Paper 9	Pharmacognosy - I (Basic)	100
Paper 10	Pharmaceutics - III (Pharmaceutical Microbiology & Immunology)	
100		
Total		1000

3rd Professional

Theory

Paper 1	Pathology	50
Paper 2	Pharmacology and Therapeutics - II	
100		
Paper 3	Pharmacognosy -II (Advanced)	100
Paper 4	Pharmacy Practice - II (Dispensing, Community, Social & Administrative Pharmacy)	100
Paper 5	Pharmaceutical Chemistry - III (Pharmaceutical Analysis)	
100		
Paper 6	Pharmacy Practice-III (Computer and its Applications in Pharmacy)	50

Practical

Paper 7	Pathology	50
Paper 8	Pharmacology and Therapeutics - II	
100		
Paper 9	Pharmacognosy - II (Advanced)	100

Paper 10	Pharmacy Practice - II (Dispensing, Community, Social & Administrative Pharmacy)	100
Paper 11	Pharmaceutical Chemistry - III (Pharmaceutical Analysis)	100
Paper 12	Pharmacy Practice-III (Computer and its Applications in Pharmacy)	50

Total		1000
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4th Professional

Theory		Marks
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Paper 1	Pharmacy Practice - IV (Hospital Pharmacy)	100
Paper 2	Pharmacy Practice - V (Clinical Pharmacy- I)	100
Paper 3	Pharmaceutics - IV (Industrial Pharmacy)	100
Paper 4	Pharmaceutics - V (Biopharmaceutics & Pharmacokinetics)	100
Paper 5	Pharmaceutics - VI (Pharmaceutical Quality Management)	100

Practical

Paper 6	Pharmacy Practice - V (Clinical Pharmacy - I)	100
Paper 7	Pharmaceutics - IV (Industrial Pharmacy)	100
Paper 8	Pharmaceutics - V (Biopharmaceutics & Pharmacokinetics)	100

Total 800

Grand total Marks 4700

Table 4.3 Curriculum course requirements

Standard 2.1:The curriculum must be consistent and supports the program's documented objectives.

Courses or Group of Courses	Program Outcomes			
	1	2	3	4
1. Pharmaceutics	✓	✓	✓	✓
2. Pharmacology	✓	✓	✓	✓
3. Pharmacy Practice	✓	✓	✓	✓
4. Pharmaceutical chemistry	✓	✓	✓	✓
5. Pharmacognosy	✓	✓	✓	✓

Table- 4.4: Courses versus Program Outcome

Standard 2.2:Theoretical background, problems analysis and solution design must be stressed within the program's core material.

Table 13: Elements of Courses

Elements	Courses	No of Courses
Theoretical background	Pharmacology, pharmaceutics, pharmacognosy, pharmacy practice, pharmaceutical chemistry.	26
Problem solving and Solution design	Pharmacology, pharmaceutics, pharmacognosy, pharmacy practice, pharmaceutical chemistry.	20

Standard 2.3:The curriculum must satisfy the core requirements for the program, as specified by the respective accreditation body.

Curriculum satisfies the core requirements for the program, as specified by the Pharmacy Council of Pakistan.

Standard 2.4:The curriculum must satisfy the major requirements for the program as specified by the respective accreditation body.

Curriculum satisfies the major requirements for the program as specified by the Pharmacy Council of Pakistan.

Standard 2.5:The curriculum must satisfy general education, arts, and professional and other discipline requirements for the program, as specified by the respective accreditation body/council.

The curriculum satisfies general education, arts, and professional and other discipline requirements for the program, as specified by the Pharmacy Council of Pakistan.

Table A.1 Minimum Requirements for Each Program

Annual system

Standard 2.6:Information technology component of the curriculum must be integrated throughout the program.

- Information technology component:
 - Computer and its applications
 - Pharmaceutical technology
 - Pharmacy informatics. (pharmacy practice)

Standard 2.7: Oral and written communication skills of the student must be developed and applied in the program.

- Indicate the courses within the program that will satisfy the standard.
 - English
 - Pharmacy practice
- Presentations, assignments and case studies.

CRITERION 3: LABORATORIES AND COMPUTING FACILITIES

Minimum requirements / criteria for laboratories given by the Pharmacy Council of Pakistan for degree programme in pharmacy. (list attached)

Standard 3.1: Manuals/documentation/instructions for experiments must be available and readily accessible to faculty and students.

- Manuals/documentation/instructions for experiments are available to faculty and students.
- Laboratories are similar to departments in reputable institutions.

Standard 3.2: There must be adequate support personnel for instruction and maintaining the laboratories:

- Support personnel: laboratory attendants are available. One for each lab.
- Instructional support: demonstrators/lecture assistants are lacking.
- Laboratory technicians are lacking.

Standard 3.3: The university computing infrastructure and facilities must be adequate to support program's objectives:

- Adequate computing facilities support the computing component of program.
- Similar to departments in reputable institutions.

CRITERION 4: STUDENT SUPPORT AND ADVISING

Standard 4.1: Courses must be offered with sufficient frequency and number for students to complete the program in a timely manner:

- Department strategy for course offering is from lower level to higher level e.g. Pharm -D and M.Phil.
- The courses are offered yearly.
- Course outline is provided before the start of each session which includes the structure of course work to be studied in the session.

Standard 4.2: Courses in the major area of study must be structured to ensure effective interaction between students, faculty and teaching assistants:

- Presentations
- Quizzes
- Assignments

Standard 4.3: Guidance on how to complete the program must be available to all students and access to academic advising must be available to make course decisions and career choices:

- Class coordinators and other faculty members inform advice and counsel students about program requirements.
- Students get professional counseling when needed.
- Students have access to professional counseling through seminars, workshops, and different events organized by the institute.
- Students interact with practitioners at various events organized inside and outside the university and have memberships in technical and professional societies.

CRITERION 5: PROCESS CONTROL

Standard 5.1: The process by which students are admitted to the program must be based on quantitative and qualitative criteria and clearly documented. This process must be periodically evaluated to ensure that it is meeting its objectives:

- Program admission criteria are given by the Pharmacy Council of Pakistan.

Standard 5.2: The process by which students are registered in the program and monitoring of students' progress to ensure timely completion of the program must be documented. This process must be periodically evaluated to ensure that it is meeting its objectives:

- Students are registered in the program based on criteria given by the Pharmacy Council of Pakistan.
- Academic progress is monitored periodically through examinations (send up and final), presentations, assignments and other tasks.
- Students having low grades are guided by the faculty members so that they can improve and achieve the required GPAs.

Standard 5.3: The process of recruiting and retaining highly qualified faculty members must be in place and clearly documented. Also processes and procedures for faculty evaluation, promotion must be consistent with institution mission statement. These processes must be periodically evaluated to ensure that it is meeting its objectives:

- HEC and the Pharmacy council of Pakistan appointment criteria are strictly followed for hiring faculty members.
- An Annual confidential report (ACR) is initiated by HOD annually for each staff member.
-

Standard 5.4: The process and procedures used to ensure that teaching and delivery of course material to the students emphasizes active learning and that course learning outcomes are met. The process must be periodically evaluated to ensure that it is meeting its objectives:

- Examinations, class tests and assignments.
- Teacher evaluation by QEC.
- Internship reports and viva of research projects are evaluated by the external examiners.
- Evaluation is done twice in each session, in send up and final term examinations. Moreover class tests are conducted regularly by respective subject teachers.

Standard 5.5: The process that ensures that graduates have completed the requirements of the program must be based on standards, effective and clearly documented procedures. This process must be periodically evaluated to ensure that it is meeting its objectives.

- The program is based on high standards to ensure that outgoing students have completed program requirements.

- The university rules and regulations are strictly followed by the Institute and the Director of the Institute ensures their compliance.

CRITERION 6: FACULTY

Standard 6.1: There must be enough full time faculty who are committed to the program to provide adequate coverage of the program areas/courses with continuity and stability. The interests and qualifications of all faculty members must be sufficient to teach all courses, plan, modify and update courses and curricula. All faculty members must have a level of competence that would normally be obtained through graduate work in the discipline. The majority of the faculty must hold a Ph.D. in the discipline:

Program Area of Specialization	Courses in the Area and Average Number of Sections per Year	Number of faculty Members in Each Area	Number of Faculty with Ph. D Degree
Pharmaceutics	06	02	None
Pharmacology	05	03	01
Pharmacy Practice	09	05	02
Pharmaceutical chemistry	04	01	None
Pharmacognosy	02	01	None
Total	26	12	03

Table 4.6: Faculty Distribution by Program Areas

Standard 6.2: All faculty members must remain current in the discipline and sufficient time must be provided for scholarly activities and professional development. Also, effective programs for faculty development must be in place:

- Faculty development programs are conducted routinely at the departmental and university level. Various trainings, workshops and seminars conducted by DFDI are very effective in achieving faculty development.
- Faculty programs are evaluated by QEC and the evaluation results are used for improvement.

Standard 6.3:All faculty members should be motivated and have job satisfaction to excel in their profession:

- Promotions and research incentives..
- Faculty Survey is conducted by QEC.

CRITERION 7: INSTITUTIONAL FACILITIES

Standard 7.1:The institution must have the infrastructure to support new trends in learning such as e-learning

- Laboratories and seminar room.
- Adequate facilities are available.

Standard 7.2:The library must possess an up-to-date technical collection relevant to the program and must be adequately staffed with professional personnel:

- Adequate number of books on each subject is available.
- Seminars and workshops are conducted by the library section to support students and faculty.

Standard 7.3:Class-rooms must be adequately equipped and offices must be adequate to enable faculty to carry out their responsibilities:

- Teaching aids, sufficient sitting arrangements are available.
- Adequate facilities are available in faculty offices.

CRITERION 8: INSTITUTIONAL SUPPORT

Standard 8.1: There must be sufficient support and financial resources to attract and retain high quality faculty and provide the means for them to maintain competence as teachers and scholars:

- Research incentives and rewards.
- Adequate secretarial support, technical staff and office equipment.

Standard 8.2: There must be an adequate number of high quality graduate students, research assistants and Ph.D. students:

Given at standard 1.4

Standard 8.3: Financial resources must be provided to acquire and maintain Library holdings, laboratories and computing facilities:

Financial resources are provided by the University to acquire and maintain Library holdings, laboratories and computing facilities

Appendix A

1. Conference/Seminar/Workshops/Lecture Series/Trainings (Organized by The Institute of Pharmacy)

Title	Funding Agency/Sponsor	Date
Pharmacy Practice Research Day	LCWU, LHR	21 st April, 2017
Introduction to Pharmaceuticals; Manufacturing to marketing	Searle pvt. Limited. Saffrin Skin care. Sharooq Pharma	3 rd May, 2017
Hands on workshop on computational methods for drug discovery.	LCWU, LHR.	11 th October, 2017 to 13 th October, 2017

2. Conference/Seminar/Workshops/Lecture Series/ Trainings at National level
(Participated by Faculty Members)

Name of Faculty	Title	Organized by	Date
<ul style="list-style-type: none"> • Ms. Marriam Zaka ullah Butt • Ms. Bushra Ali Sherazi 	Moving Mountains through effective speaking	LCWU, LHR	15 th March-15 th April 2017
<ul style="list-style-type: none"> • Dr. Saleha Siddiqua • Dr. Humaira M. Khan • Ms. Surraya Naheed • Ms. Hafsa Afzal • Dr. Attiya Afzal • Ms. Fatima amin • Ms. Marriam zaka • Ms. Bushra Ali sherazi 	Pharmacy Practice Research day	Institute of Pharmacy. LCWU	21 st April, 2017

<ul style="list-style-type: none"> • Ms. Munazza Riaz • Ms. Bazgha Gul • Ms. Nabeela Tabassum • Ms. Farah Batool 			
<ul style="list-style-type: none"> • Dr. Humaira M. Khan • Dr. Saleha Siddiqua • Ms. Surraya Naheed • Ms. Hafsa Afzal • Dr. Attiya Afzal • Ms. Fatima amin • Ms. Marriam zaka • Ms. Bushra Ali sherazi • Ms. Munazza Riaz • Ms. Bazgha Gul • Ms. Nabeela Tabassum • Ms. Farah Batool 	Introduction to Pharmaceuticals; Manufacturing to marketing	Pharmaceutical Industry	3 rd May, 2017
<ul style="list-style-type: none"> • Dr. Saleha Siddiqua • Ms. Bushra Ali Sherazi • Ms. Munazza Riaz 	Research in Pharmacy Practice	Lahore Pharmacy College, LMDC. LHR	30 th May, 2017

Appendix B

Number of Research Papers Published In HEC Recognized Journals (X, Y, Z)

Sr. No.	Paper Title	Name of Author/s	Year	Name of Journal	ISSN #	Category of Journal (X, Y, Z)	Volume #	Page #
1.	Clinical profile, potential therapies and Psychological Impact of Vitiligo in Children and Adolescents.	Noshaba Maqsood , Mahpara Bashir, Bushra Ali Sherazi.	January-March 2017	Medical Channel	1681-5491	Y	Vol. 23 - No.1	78- 83
2.	Study of Risk Factors Leading to Breast Cancer.	Zujajah Gull, Zahra Anwar, Bushra Ali Sherazi.	July - August 2017	Isra Medical Journal	2073-8285	X	Vol. 9- Issue 4	226-228
3.	Pathophysiology , Etiology, Prevention and Control Strategies for Nosocomial Infections in Tertiary care Hospital.	Kanza Hashmi, Fatima Afzal, Bushra Ali Sherazi, Shahana Ehsan, Saniya Faisal.	July-September 2017	Medical Channel	1681-5491	Y	Vol. 23 - No.3	31- 36
4.	Prescribing pattern of Anti-Diabetics in teaching hospitals of Lahore.	Maria Ibrar, Qurat-ul-ain, Dr. Fatima Amin.	April -June 2017	Medical Channel	1681-5491	Y	Vol. 23 - No.2	66- 70
5.	Evaluation of the advertising claims made by pharmaceutical	syeda Amina Hanif, Ms.	2017	Medical Channel	1681-5491	Y	Vol.23- No.1	72-77

	companies in drug promotional materials in Pakistan.	Fatima Amin.						
6.	Effect of field of education on KAP regarding breast cancer and its screening methods: A cross-sectional survey.	Ayesha Rizwan, Zikria Saleem, Saleha Sadeeqa	2017	Medical Channel.	1681-5491	Y	23(03)	92-98.
7.	Prevalence and pharmacotherapy of Hypertension in different teaching hospitals of Lahore.	Masoora maqbool bari, Ayesha shaheen , Fatima Amin	2017	Medical Channel.	1681-5491	Y	23(03)	86-91
8.	(Accepted) Availability and Affordability of Statins in Management of Hyperlipidemia in Public Hospitals of Lahore.	Masooma Ijaz, TaqdeesYounas, Fatima Amin, Munaza Riaz.	2017	Annals of PMC.	2077-9151	Z	-	-
Total		08						

Number of Research Papers Published In Other Journals

Sr. No	Paper Title	Name of Author/s	Year	Name of Journal	ISSN #	Volume #	Page #	National	International
1.	Prevalence, risk factors, outcomes and management of nosocomial	Vardazafar, Yusranwar, Eeshasajid and	2017	European Journal of Pharmaceutical	2394-3211	4(12)	110-114	-	International

	infections in intensive care units of public and private sector hospitals of Lahore, Pakistan.,	Dr. Bushra Ali Sherazi.		and Medical Research					
2.	Assessment of Health related quality of life in liver disease patients: review article.	Neelam liaquat, Bushra Ali Sherazi.	2017	World journal of pharmacy and pharmaceutical sciences	2278-4357	Vol. 6- Issue 12	200 - 213	-	International
3.	Herbal Medicine: Trend of practice, perspective and Limitations in Pakistan.	Hafsa kanwal, Bushra Ali Sherazi.	October - December 2017	Asian pacific journal of health sciences	2349-0659	Vol. 4 - Issue 4	6 - 8	-	International
4.	Prevalence, causes, diagnosis and treatment of pregnancy related RLS in Pakistan.	Omm-e-farwa, Mehreen younas, Bushra Ali Sherazi.	November 2017	International journal of scientific and engineering research	2347-3878	Vol. 8 - Issue 11	763 - 770	-	International
5.	Evolutionary role of the community pharmacist: A review.	Firdous Fatima, Bushra Ali Sherazi.	October - December 2017	Asian pacific journal of health sciences	2349-0659	Vol. 4 - Issue 4,	136 - 139	-	International
6.	Prescribing trends, Affordability and Compliance to Osteoporosis pharmacotherapy in Private and Public sector	Arfa Hameed, Iqra zafar, Bushra Ali Sherazi, Munazari az.	December 2017	International journal of scientific and research publications	2250-3153	Vol. 7, Issue 12	502 - 507	-	International

	Hospitals of Lahore.								
7.	Rational use of drugs in the management of Typhoid fever.	Rabia sana, Nimra nasir, Bushra Ali Sherazi, Munazari az.	2017	World journal of pharmacy and pharmaceutical sciences	2278-4357	Vol. 6- Issue 17	200 – 213	-	International
8.	Polypharmacy and Medication compliance in patients with Type-II Diabetes.	Sehar Waheed , Maleeha Jamal and Fatima Amin	2017	IJPSR	0975-8232	Vol. 8, Issue 5	2298-2301	-	International
9.	Incidence and Severity of Adverse Drug Reactions and Spontaneous Adverse Drug Reporting in Hospital Settings of Lahore.	Kashmala Kousar, Dania Nisar and Fatima Amin.	May 2017	International Journal of Scientific and Research Publications.	2250-3153	Vol. 7, Issue 5	655-661	-	International
10.	Prevalence and management of Headache & its associated factors among female undergraduate pharmacy and non pharmacy students of LCWU.	Minahil Tahir, Rafia Mubashir, Fatima Amin.	Nov 2017	IJSRP	2250-3153	Vol. 7, Issue 11	424-435	-	International
11.	Effectiveness of Sofosbuvir in treating patients with Hepatitis C – Risks Vs Benefit Ratio.	Abeera Tariq, Ayesha Khawer, Fatima Amin.	December 2017	IJSRP	2250-3153	Vol. 7, Issue 12	83-89	-	International

12.	Prevalence and management of obesity related Hypertension.	Nusrat Fatima, Afshan Naseem & Fatima Amin	December 2017	Indian Journal of Medical Research and Pharmaceutical Sciences	2349-5340	4(12)	5-12	-	International
13.	Prevalence and impact of heavy menstrual bleeding.	Syeda aqsa ,mariam zaka.	November 2017	IAJPS	2349-7750	4(10)	3491-3493	-	International
14.	A review on 3 rd generation cephalosporins.	Asma riaz, Mariam Zaka.	October 2017	EJPMR	2394-3211	4(8)	117-119	-	International
15.	Various treatment modalities for breast cancer; a review.	Nosheen Mustafa, Mariam Zaka.	September 2017	EJPMR	2394-3211	4(7)	840-842	-	International
16.	Impact of formula feeding verses breast feeding, on prevalence of gastroenteritis, otitis media and lower respiratory tract infections among infants.	Saleha Sadeeqa, Rabia Ali, Anam Saleem	2017	International Journal of Innovative Healthcare Research	2340-2950	5(1)	7-19.	-	International
17.	Risk and cost analysis of injectable medications in pediatrics.	Saleha Sadeeqa, Marriyum Khan, Mehwish Sikandar	2017	European Journal of Pharmaceutical and Medical Research	2394-3211	4(4)	193-202.	-	International
18.	Polycystic ovaries	Tasweeb Tanveer, Sabahat	2017	European Journal	2394-3211	4(4)	253-256	-	International

	syndrome and its effect on fertility.	Zaki,Saleha Sadeeqa		of Pharmaceutical and Medical Research					
19.	Effectiveness of ceftriaxone in the treatment of post surgical infections: Alone and in combination with ascorbic acid.	Saleha Sadeeqa, Aneela Anwar, Naila Nawaz	2017	Indo American Journal of Pharmaceutical Sciences.	2349-7750	4(03)	626-635.	-	International
20.	Occurrence and management of uremic cardiomyopathy .	Farhana Iftikhar, Ayesha Shaikh, Saleha Sadeeqa.	2017	Indo-American Journal of Pharmaceutical Science	2349-7750	4(03)	726-729	-	International
21.	Rational use of non-steroidal anti inflammatory drugs in benign prostatic hyperplasia.	Farhana Iftikhar, Ayesha Shaikh, Saleha Sadeeqa	2017	Indo-American Journal of Pharmaceutical Science,	2349-7750	4(03)	730-733	-	International
22.	Prevalence and management of diabetic nephropathy.	Sabahat Zaki,Tasweeb Tanveer, Saleha Sadeeqa.	2017	Indo-American Journal of Pharmaceutical Science.	2349-7750	4(03)	734-739	-	International

23.	How family history of the disease affects KAP regarding breast cancer and its screening methods.	Ayesha Rizwan, Zikria Saleem, Saleha Sadeeqa.	2017	World Journal of Pharmacy and Pharmaceutical Science	2278-4357	6(5)	08-18	-	International
24.	Evaluation of self medication trends among pharmacy and medical students.	Syeda Amina Hanif, Ammara Azmat, Saleha Sadeeqa.	2017	European Journal of Pharmaceutical and Medical Research	2394-3211	4(05)	51-54	-	International
25.	Evaluation of dental prescriptions in various dental hospitals/clinics of Punjab, Pakistan.	Sidra Irshad Khan, Asma Imam and Saleha Sadeeqa.	2017	European Journal of Pharmaceutical and Medical Research	2394-3211	4(05)	115-118.	-	International
26.	Hepatotoxicity in anti-tuberculosis therapy: An observational study.	Neelam Liaqat, Hafsa Kanwal, Madeeha Latif, Iqra Rafique and Saleha Sadeeqa	2017	.Indo-American Journal of Pharmaceutical Scienc.,	2349-7750	4(05)	1186-1190.	-	International
27.	Management of renal colic in	Anam Jawad, Anum	2017	Indo-American	2349-7750	4(07)	2114-2119	-	International

	patients with renal calculus..	Yousaf, Saleha Sadeeqa		Journal of Pharmaceutical Scienc					
28.	Management of Rheumatoid Arthritis and Effectiveness of Disease Modifying Anti-Rheumatic Drug Therapy. 1(4): 000124.	Hayat T, Iqbal N and Sadeeqa S	2017	Virology & Immunology Journal		1(4)	000124	-	International
29.	Prevalence and prescribing trends in stable angina in Lahore: A cross-sectional study	Ayesha Siddiq, Aamna Sajid, Asia Iqbal, Naheed Bano and Saleha Sadeeqa.	2017	Indo American Journal of Pharmaceutical Sciences	2349-7750	4 (11)	4212-4218.	-	International
30.	How Level of Education Relates to Knowledge, Attitude and Practices regarding Breast Cancer and Its Screening Methods.	Ayesha Rizwan, Zikria Saleem and Saleha Sadeeqa.	2017	Journal of Advances in Medicine and Medical Research	2456-8899	24(8)	1-8	-	International
31.	Evaluation of Inappropriate Prescribing trends of	Shaima Rana, Hina shabeer, Rida Abid	2017	International Journal of	2395-5775	3(11)	892-896	-	International

	Antibiotics in Upper respiratory tract infections, among outpatients.	and Saleha Sadeeqa.		Current Innovation Research					
32.	Role of Pharmacist in Prevention of Medication errors in Hospitals and Community settings.	Ayesha Ishfaq, Shazmin Javed and Saleha Sadeeqa.	2017	World Journal of Pharmacy and Pharmaceutical Sciences	2278-4357	6(12)	53-63	-	International
33.	Significance of HbA1C in the diagnosis and management of diabetes mellitus.	Mahrukh Talat, Ammara Iftikhar and Saleha Sadeeqa.	2017	World Journal of Pharmacy and Pharmaceutical Science.	2278-4357	6(12)	1772-1784		International
34.	Economic Impact of Rheumatoid Arthritis and Cost Effectiveness Analysis of Disease Modifying Antirheumatic Drugs in the Management of Rheumatoid Arthritis.	Iqra Rasheed, Hafiza Amna Rafiqand Saleha Sadeeqa.	2017	International Journal of Applied Research	2411-6610	3(12)	222-226.	-	International

35.	Comparison of Efficacy of Oral Drug Therapy with Interferon in Hepatitis C.	Areeba Pervaiz, Shumaila Zahoor, Saleha Sadeeqa.	2017	International Journal of Scientific and Research Publications.	2250-3153	7(12)	603-11	-	International
36.	Schizophrenia- A Case Study.	Khokhar A and Sadeeqa S.	2017	Virology and Immunology Journal.		1(6)	000134	-	International
37.	Prevalence and Management of Periodontal disease in Lahore. (Accepted).	Hadia Tahir, Hina Ameen and Saleha Sadeeqa.	2017	International Journal of Dental and Health Sciences.	2348-5280	-	-	-	International
38.	(Accepted) Prescribing trends and utilization of Anti-Asthmatic drugs in tertiary care hospitals of Lahore Pakistan.	Sameera Nazeer, Farah Gul and Fatima Amin	2017	IJMRPS	2349-5340	-	-	-	International
39.	Effect of family income on knowledge, attitude and practices regarding breast cancer and its screening methods	Ayesha Rizwan, Zikria Saleem, Saleha Sadeeqa	2017	Journal of Applied Pharmaceutical Sciences,	2231-3354	7(8)	28-33	-	International

	amongst women of Lahore, Pakistan.								
40.	Liposomal co-delivered oleanolic acid attenuates doxorubicin-induced multi-organ toxicity in hepatocellular carcinoma	Muhammad Sarfraz, Attia Afzal, Shahid Masood Raza, Sajid Bashir, Asadullah Madni, Muhammad Waseem Khan, Xiang Ma and Guangya Xiang	2017	Oncotarget	1949-2553	8(29)	47136-47153	-	International
41.	Chemical and pharmacological comparison of modern and traditional dosage forms of joshanda.	Sajida parveen, Nadeem irfan bukhari, Naureen shehzadi, Shaista qamar, Ejaz Ali, Surriya naheed, Abidalatif, Alamgeer	2017	Natural product research.	1478-6427			--	International

		Yuchi, and Khalid Hussain.							
Total		41							