



ADVANCED PHARMACY PRACTICE EXPERIENCED MANUAL

Doctor Of Pharmacy

**Abbottabad University of Science & Technology
Abbottabad**

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Doctor Of Pharmacy

Head Of Department Of Pharmacy

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2015

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Introduction

Vision

To provide a high quality of pharmacy education in order to produce competent pharmacists for the community. Mission

1. To provide patient care in cooperation with other members of the health care team based on therapeutic knowledge and disease management skills.
2. To manage and use the resources of the health care system, cooperation with prescribes and other health care providers, to improve the therapeutic outcomes of medication use.
3. To promote health improvement, patient education, compliance, and disease prevention in the community in cooperation with the health care team.
4. To participate in scientific research and develop new hypothesis in disease management for the benefit of healthcare and the community.

Code of Ethics

Code of Ethics (AUST)

Department of Pharmacy was established in March, 2008 at the then Hazara University Havelian Campus (now Abbottabad University of Science & Technology). Its Pharm-D program & course of studies was recognized by Pharmacy Council of Pakistan in 2014 [No. 1-10/2008-PCP \(Pt.II\)/2014](#).

The Havelian campus of Hazara University upgraded to Abbottabad University of Science & Technology by Provincial Government in June 2015 [No. 2-6/2009-PCP on May 30th, 2016](#).

Code of Ethics for Pharmacists

Pharmacists are health professionals who assist individuals in making the best use of medications. This Code, prepared and supported by pharmacists, is intended to state publicly the principles that form the fundamental basis of the roles and responsibilities of pharmacists. These principles, based on moral obligations and

virtues, are established to guide pharmacists in relationships with patients, health professionals, and society.

1. A pharmacist respects the conventional relationship between the patient and pharmacist.
2. A pharmacist promotes the good of every patient in a caring, compassionate, and Confidential manner.
3. A pharmacist respects the autonomy and dignity of each patient.
4. A pharmacist acts with honesty and integrity in professional relationships.
5. A pharmacist maintains professional competence.
6. A pharmacist respects the values and abilities of colleagues and other health professionals.
7. A pharmacist serves individual, community, and societal needs.



Responsibilities

Guiding Principles for Preceptor Engagement

- Accept the responsibility of supervising the student's activities and monitor the achievement of required tasks consistent with course objectives by devoting adequate time for guidance
- Exhibit those qualities which foster a positive professional role model (appearance, attitudes, practice style and accomplishments in practice).
- Provide students with the opportunity to advance their knowledge, skills, and experience in an accelerated timeframe through a structured, practice-based training program aligned with the course syllabus.
- Communicate with the students regarding their appearance, conduct, attitude, scheduling of hours, experience to be gained, and general policies and procedures of the training site
- Never presume the student's capabilities, instead review their work profile and discuss with them their prior experience to better judge their capabilities.
- Provide students with access to available drug information resources.
- Regularly assess the student's performance through constructive evaluation and provide specific recommendations for improvement if needed.

Guidelines for Effective Communication, Confidentiality, and Professional Conduct in Pharmacy Practice:

- Mastery of written, verbal, and non-verbal communication with diverse audiences, including physicians, pharmacists, health professionals, and patients, for various purposes is a fundamental skill expected from all students.
- Students are obligated to uphold strict confidentiality regarding patient conditions and records, a cornerstone principle in pharmacy practice.
- Actively engaging in clinical rotations, students are encouraged to seek continuous guidance and mentoring to strive for excellence.
- Clinical decisions impacting patient care should not be made independently; students must verify and consult with their preceptor.
- Students are prohibited from performing procedures or tasks for which they lack legal authorization or qualification.
- In instances of clinical dilemmas, seeking clarification from all relevant parties is essential for enhanced understanding.
- Discriminatory practices, behavior, or work conditions compromising professional judgment are strictly discouraged.
- Plagiarism in any form, including presenting someone else's work or data as one's own, is strictly prohibited.

- Adherence to the law, the Code of Conduct governing pharmacy practice, and institutional policies, rules, and regulations is a non-negotiable expectation for all students.
- Students must NOT make any clinical decisions that affect patient care without verifying it with the preceptor.

Clinical Rotations

The Advanced Pharmacy Practice Experience (APPE) has been designed to provide students with experience in various clinical pharmacy practice areas, including hospitals, community pharmacies, and health institutions like **District Headquarter Haripur, Ayub Teaching Hospital Complex Abbottabad and Combined Military Hospital (CMH)**. The major goal is to prepare students to develop independent judgment skills and to integrate their fundamental knowledge with clinical applications. In this one year, students are required to visit hospital regularly for clinical rotations. It is mandatory that the total time period of these rotations should not be less than one year.

Main Objectives

1. To prepare students to review, evaluate, implement, and monitor therapeutic outcomes associated with a pharmaceutical care plan for patients. In doing so, students will acquire hands on experience using their knowledge of therapeutics, disease processes, and pharmaceutical products.
2. To help students to develop a solid knowledge of medical terminology, communication skills, drug monitoring skills, provision of drug information, therapeutic planning skills, and the ability to assess and interpret physical and laboratory findings.
3. To foster and incubate student ideas for innovation that will advance professional clinical pharmacy services which will lead to improving local and global health service quality, delivery, and productivity.

Main Objectives

1. Mastering Practical Therapeutics:

- It aims to equip students with the practical skills needed to translate their theoretical knowledge of therapeutics, disease processes, and pharmaceuticals into tangible patient care. Students will actively participate in reviewing, evaluating, implementing, and monitoring therapeutic outcomes associated with personalized pharmaceutical care plans, gaining invaluable hands-on experience in optimizing patient health.

2. Building Clinical Competency:

Students will cultivate a robust foundation in key clinical skills. They will:

- Sharpen medical terminology: Gain mastery of medical language for clearer communication and accurate documentation.
- Develop effective communication skills: Learn to interact with patients and healthcare professionals, fostering trust and understanding.
- Hone drug monitoring skills: Become adept at identifying and managing potential drug

- interactions and adverse effects.
- Become proficient in drug information dissemination: Develop the ability to clearly and concisely communicate medication details to patients.
 - Master therapeutic planning: Learn to design and implement individualized treatment plans tailored to each patient's specific needs.
 - Strengthen physical and laboratory assessment skills: Acquire the ability to evaluate clinical data and interpret lab results for informed care decisions

3. Cultivating Innovation for Improved Healthcare:

This provides a platform for students to nurture their innovative spirit and contribute to the advancement of clinical pharmacy services. Interns will be encouraged to:

- Explore and propose novel ideas: Brainstorm and develop creative solutions to enhance the quality, delivery, and efficiency of pharmacy services.
- Contribute to local and global health outcomes: Consider the wider impact of their proposed innovations, aiming to improve healthcare not just within their immediate setting but potentially on a broader scale.
- By achieving these objectives, this empowers students to transition from theoretical knowledge to practical proficiency, contributing to their development as confident and impactful clinical pharmacists.

General Description

The APPE experience consists of nine rotations. The five mandatory rotations include:

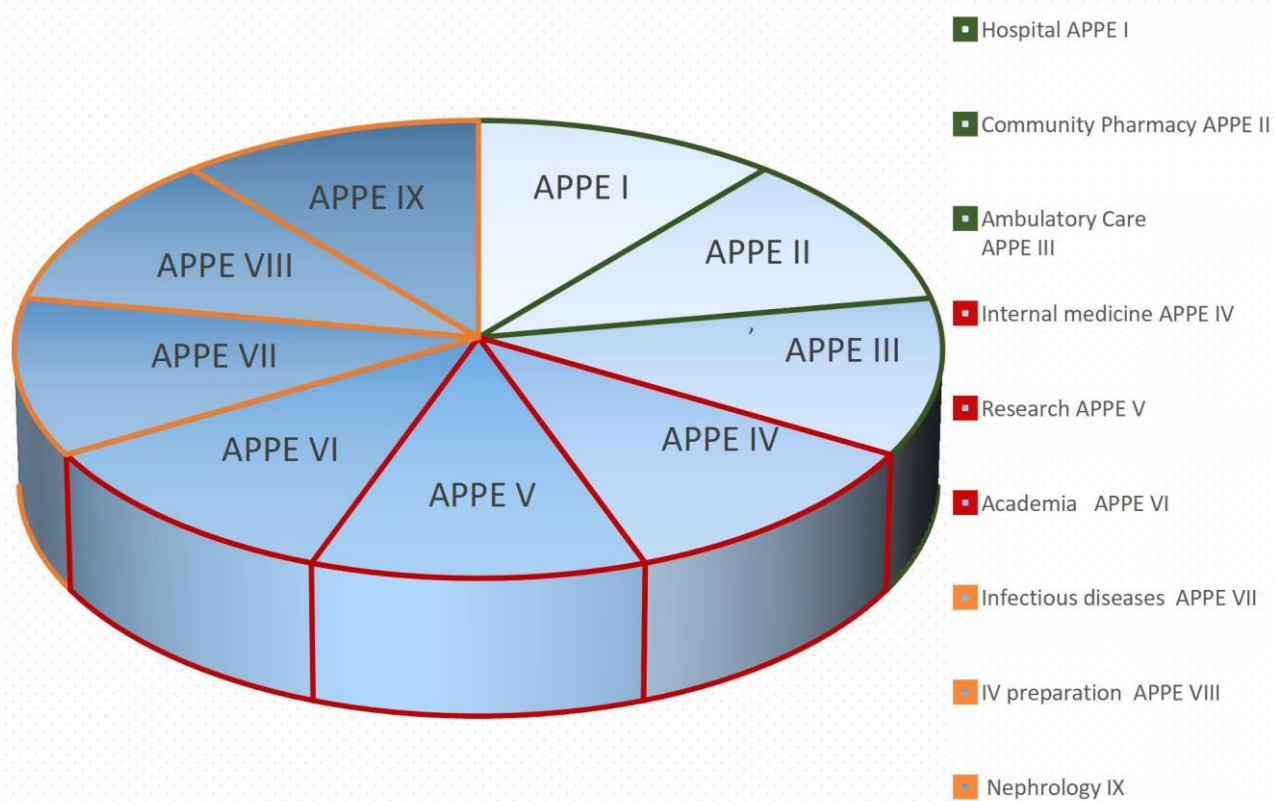
- Hospital or health-system rotation
- Community pharmacy rotation
- Ambulatory care rotation
- Internal medicine or acute care rotation
- Research rotation

The other four rotations are elective; examples of the elective rotations include:

- Academia
- Infectious diseases
- IV preparation & total parenteral nutrition (TPN)
- Nephrology
- Oncology
- Pediatrics

The duration of each rotation is 5 weeks (a total of 1800 hours for all 9 rotations). These are distributed throughout the sixth year as follows:

1 YEAR CLINICAL ROTATIONS



Clinical Rotation Outcomes

By the end of their 6th year, students will be equipped to:

1. Deliver High-Quality Patient Care:

- Collaborate seamlessly with prescribers, nurses, pharmacists, and other healthcare professionals.
- Leverage therapeutic principles and evidence-based data, ensuring medication regimens are optimized for each patient.
- Consider and navigate legal, ethical, social, and economic aspects of healthcare, including the impact of evolving sciences on treatment outcomes.

2. Optimize Healthcare Resource Management:

- Utilize healthcare system resources effectively in collaboration with healthcare providers.
- Provide accurate medication consultations, promoting healthy practices and maximizing therapeutic benefits.
- Advocate for optimal medication use to drive positive clinical outcomes.

3. 3. Champion Health Promotion and Disease Prevention:

- Partner with patients, communities, and vulnerable populations to promote personal health, well-being, and disease prevention strategy.

4. Extend Care Beyond Individual Patients:

- Develop and deliver preventive and supportive health services to the broader community.

5. Lead with Confidence and Purpose:

- Cultivate leadership skills to thrive as a valuable member of the healthcare team, contributing to effective health and family welfare services.

6. Master Clear and Effective Communication:

- Communicate clearly and compassionately with patients and the community, building trust and understanding.





DEPARTMENT OF PHARMACY
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No. AUST/Pharmacy/2022/216

Date: 20/01/2022

MEMORANDUM OF UNDERSTANDING

Between

**MEDICAL SUPERINTENDENT OFFICE
DISTRICT HEADQUARTER HOSPITAL, HARIPUR**

**&
DEPARTMENT OF PHARMACY
ABBOTTABAD UNIVERSITY OF SCIENCE AND TECHNOLOGY**



This Memorandum of Understanding (MoU) is made on _____, 2022 between District Headquarter Hospital (DHQ), Haripur which is represented by its Medical Superintendent herein named as "Party I" and HoD/Registrar/Vice Chancellor, Abbottabad University of Science and Technology, here in named as "Party II", District Headquarter Hospital (DHQ) is a government sector hospital. This MoU is made to achieve the training objectives of Pharm-D program in the best interest of students. The parties hither to agree as follows:

RESPONSIBILITIES OF PARTY (I)

1. It shall facilitate the students of Doctor of Pharmacy with their clinical pharmacy training.
2. The prospective students shall be provided training opportunity in the specialties under the guidance of hospital pharmacist or where the hospital administration deems appropriate as per its policy, need and available facilities:
3. The duty Rota of the students shall be prepared by pharmacy department in consultation with hospital pharmacist and can be changed as per need.

RESPONSIBILITIES OF PARTY (II)

1. Required guidance for Pharm-D course shall be provided as per the Pharmacy Council of Pakistan (PCP) norms and shall conduct the program in consultation with the hospital pharmacist/administration.
2. Complete course content of clinical pharmacy shall be provided to the hospital pharmacist of DHQ.

This agreement shall be effective from February 01st, 2022 for the session 2022-23, of Pharm-D students. This MoU will be extended with mutual consent of both parties at the start of every session.

Signature & Seal
Medical Superintendent
DHQ Hospital Haripur

Signature & Seal
HoD, Pharmacy
Abbottabad University of Science & Technology

Signature & Seal
Vice Chancellor
Abbottabad University of Science & Technology
Registrar/Vice Chancellor
Abbottabad University of Science & Technology



Seraph Pharmaceutical

Memorandum of Understanding

Between

Seraph Pharmaceutical, Plot # 210, Industrial Triangle, Kahuta Road, Islamabad,; and,

Dr. Rizwan ul Haq, Associate Professor, Department of Pharmacy, Abbottabad University of Science & Technology, Abbottabad, Pakistan.

This agreement is made and entered into this 13th day of June 2022, between Seraph Pharmaceutical (SP), Industrial Triangle, Kahuta Road, Islamabad,; and, Dr. Rizwan ul Haq (RUH), Department of Pharmacy, Abbottabad University of Science & Technology, Abbottabad, Pakistan.

WHEREAS, SP is engaged in the research and development of Pharmaceutical products and has state of the art analytical equipment and expertise.

WHEREAS, RUH is a research-oriented academician having expertise in basic and experimental Pharmacology and drug discovery.

WHEREAS, both parties recognize the benefits of collaboration and cooperation in the advancement of scientific knowledge and research.

NOW, THEREFORE, the parties hereby agree as follows:

- 1) The parties will collaborate on the development of joint research grant proposals, which might be submitted for funding to National, International or any other suitable funding agencies.
- 2) Each party will be responsible for seeking funds to support its involvement in the cooperation activities under this agreement and all such activities will be dependent upon the budgetary appropriations of the parties.
- 3) This agreement will be in effect for a period of one (1) year and may be extended by mutual agreement(s). Alternatively it may be terminated by a notice of at two six months by any collaboration partner. In case of any termination notice, all collaborating partners must be fully informed.
- 4) Each collaboration partner will own all rights, titles and interests in and to any invention, whether or not patentable, invented solely by its employees.

Dr. Rizwan ul Haq
Collaborator
Associate Professor
Department of Pharmacy
Abbottabad UST

Dr. Khalid Mehmood
Chairman
Associate Professor
Department of Pharmacy
Abbottabad UST

Qazi Abdur Rashid
Collaborator
Seraph Pharmaceutical
Plot # 210, Industrial
Triangle, Kahuta Road,
Islamabad



Policies

Professional Conduct and Etiquette

- Pharmacy students are expected to uphold the highest standards of professionalism and ethical conduct throughout their training. This includes adhering to the Islamic ethical code, as well as all relevant regulations set forth by the College and the training site. Any breach of these standards may be reported to the EEO by the preceptor, with final decisions regarding disciplinary action resting with the Head of department.

Maintaining a Professional Appearance

- As representatives of the pharmacy profession, students must strive for a professional demeanor and dress code befitting their role. This means adhering to the dress code guidelines established by the training site to which they are assigned. Here are some key expectations:

Proper Attire: College uniform and a clean, well-maintained white coat displaying the university logo are mandatory throughout your time at the training site.

Visible Identification: Your pharmacy ID card should be worn at all times, either clipped to an outer garment or around your neck.

Neat and Tidy: Ensure your clothing is clean, ironed, and in good condition.

Professional Hairstyle: Avoid overly casual or distracting hairstyles. Head coverings should be neat and unobtrusive.

Appropriate Footwear: Choose professional shoes or canvas sneakers. Sandals, slippers, and high heels are not permitted.

Site-Specific Guidelines: Be mindful of any additional dress code requirements established by the specific training site.

- By consistently following these guidelines, you will present yourself as a responsible and dedicated pharmacy student, leaving a positive impression on your preceptors, patients, and colleagues.

Immunizations

- It is the responsibility of students to meet the immunization requirements of the training sites prior to the beginning of APPE. Failure to fulfill the requirements in advance may result in the cancelation of rotation. Therefore, it is highly recommended that students have proof of immunization ready for submission upon request at the training site. The most common required immunizations are polio, tetanus/diphtheria, pertussis, varicella, chicken pox, seasonal flu vaccine, and the hepatitis B vaccine series. Students may also need to show proof that they

are free from tuberculosis, hepatitis B, and rubella.

Absence Policy

- Students must complete the required training period (at least 200 hours per rotation) in the allocated time.
- The daily attendance sheet, provided by the Department, should be signed by the intern every day and submitted to the Department, along with the evaluation form.
- Students must inform their preceptor of any absence or lateness one day before its occurrence, and the preceptor should inform the Department of any unexcused absence.

Confidentiality Guidelines

As future healthcare professionals, upholding patient confidentiality is paramount. To ensure the privacy and trust of individuals under your care, please adhere to the following guidelines:

- **Maintain Strict Discretion:** Patient information, including names, diagnoses, and details of their health, must be treated with the utmost confidentiality. Sharing this information with anyone outside of the necessary healthcare team is strictly prohibited.
- **Respect Privacy in Public Spaces:** Avoid discussing patient cases within earshot of others, regardless of their perceived connection to the matter.
- **Anonymize Case Presentations:** When presenting patient cases for educational purposes, ensure all identifiers like names and file numbers are removed to protect privacy.
- **Handle Documents Securely:** Treat confidential documents with care. Avoid leaving them unattended in public places and refrain from taking them home without explicit authorization.
- **Professional Patient Interactions:** Maintain appropriate professional boundaries with patients. Personal relationships are discouraged to protect both you and the patients entrusted to your care.
- **Honoring Agreements:** If the training site requests you to sign a confidentiality statement, be prepared to do so willingly and uphold its terms.
- **Site-Specific Protocols:** Be mindful of any additional confidentiality rules or regulations established by the specific training site you are assigned to.

Plagiarism

Plagiarism, the act of presenting another's work as your own, undermines the fundamental principles of academic honesty. This includes copying assignments, research, or other materials from students, authors, or any other source without proper attribution. Engaging in such activities will result in:

- **Immediate nullification:** The preceptor or EEO will nullify any plagiarized assignments or research, awarding a zero grade.
- **Potential consequences:** Depending on the severity of the offense and any prior incidents, further disciplinary action may be taken by the EEO, including probation or even dismissal from the program.

Cancellation of Rotation

The EEO reserves the right to cancel a student's rotation due to concerns regarding their professionalism or attitude. If such occurrences happen:

- **Rotation repeat:** The student will be required to repeat the canceled rotation at a later date within their program schedule.
- **Two-strike policy:** In the event of a second complaint, the EEO will escalate the matter to the HOD for review. They may then consider potential consequences, including program dismissal, based on the student's overall conduct and adherence to professional standards.

Failure of Rotation

Students are expected to demonstrate satisfactory performance throughout their rotations. However, if a student falls short of achieving the required learning outcomes for a specific rotation, the following may occur:

- **Remediation plan:** In some cases, the preceptor and EEO may develop a customized remediation plan for the student to address specific areas of weakness and demonstrate improvement. Successful completion of the plan may allow the student to continue their current rotation.
- **Repeat rotation:** If remediation is deemed unsuccessful or not applicable, the student may be required to repeat the same rotation type after completing their existing schedule. This will unfortunately result in a delay in graduation. Depending on the program structure and individual circumstances, the potential delay could range from one semester to a longer period.

Required Rotations



Health-System Rotation

- The Hospital Pharmacy Rotation offers unique opportunities for students to immerse themselves in the dynamic world of inpatient pharmacy practice. From preparing and dispensing medications to collaborating with healthcare teams and utilizing cutting-edge pharmacy technology, this rotation provides a comprehensive hands-on experience across various aspects of inpatient pharmacy.

Key Areas of Focus:

- **Delivering Drug Products:** Students gain practical experience in preparing and dispensing medications for patients and other hospital departments, ensuring accuracy and efficiency throughout the process.
- **Clinical Pharmacy Services:** Engage in patient care activities like medication reconciliation, clinical reviews, and drug therapy monitoring, contributing to optimal therapeutic outcomes.
- **Pharmacy Informatics:** Explore the role of technology in pharmacy practice, learning how electronic health records and other systems streamline medication management and enhance patient safety.
- **Pharmacy Management:** Gain insights into the administrative and operational aspects of hospital pharmacy, including inventory control, budgeting, and quality assurance practices.

Goals and Objectives:

- By the end of the Hospital Pharmacy Rotation, students will achieve significant learning outcomes across various domains:

1. *Medication Order Processing:*

- **Hands-on Experience:** Gain comprehensive exposure to processing medication orders in different pharmacy settings, including patient care areas, satellite pharmacies, and the central inpatient pharmacy.
- **Order Entry and Screening:** Actively participate in entering and screening orders to ensure accuracy and appropriateness, complying with institutional protocols and regulations.
- **Critical Evaluation:** Develop skills to assess orders for completeness, appropriate indication, dosing, route of administration, potential interactions, allergies, and adherence to formulary guidelines.
- **Patient Profiles and Order Entry:** Learn to create and modify patient profiles, ensuring accurate medication histories and facilitating efficient order entry and product selection.

2. Medication Therapy Management (MTM):

- **Patient Interviewing:** Master the art of conducting patient interviews to gather key information necessary for comprehensive MTM interventions, including medication and disease history, allergies, and potential medication-related problems.
- **Information Gathering and Evaluation:** Learn to effectively analyze data from various sources, including paper and electronic medical records, medication administration records, laboratory reports, and other relevant documents.
- **Clinical Documentation:** Develop strong documentation skills to accurately record clinical services and interventions provided during patient care, adhering to established institutional procedures.
- Overall, the Hospital Pharmacy Rotation provides a valuable platform for students to develop the knowledge, skills, and confidence needed to excel in various inpatient pharmacy settings. This rotation serves as a crucial step in preparing future pharmacists for impactful contributions to patient care within the complex and ever-evolving healthcare landscape.

A pharmacist using a pharmacy dispensing robot to accurately prepare medications.

- A pharmacist conducting a clinical review of a patient's medication regimen on a computer screen.
- A team of healthcare professionals, including a pharmacist, discussing a patient's treatment plan at the bedside.
- A pharmacist utilizing an electronic health record system to access patient information and medication history.
- These visuals can provide a more engaging and interactive learning experience for students, and can add context and clarity to the text-based information.

3. Pharmacy Management:

- **Immerse in Operations:** Gain valuable insights into the behind-the-scenes world of pharmacy management through 1-2 days of exposure to key activities.
- **Inventory Expertise:** Learn essential inventory procedures, including procurement, storage, and proper billing practices.
- **Equipment Management:** Understand the importance of maintaining pharmacy equipment through hands-on learning about procurement and upkeep.
- **Compliance Matters:** Gain insight into the complexities of regulatory compliance by observing and participating in departmental and institutional meetings, such as staff meetings and the Pharmacy & Therapeutics committee.
- **Safety First:** Be exposed to adverse event monitoring and medication error reporting procedures, emphasizing patient safety at every step.

4. Controlled Substances:

- **Secure Handling:** Equip yourself with the knowledge and skills necessary for securely managing controlled substances. This includes understanding

procurement, storage, and inventory procedures.

- **Tracking Expertise:** Learn meticulous drug tracking techniques to ensure accurate and accountable distribution.

5. Preparation and Distribution of Products:

- **Experience Unit Dose:** Work alongside pharmacy technicians to gain practical experience in various tasks, including Pyxis machine operations, cart filling, and delivery.
- **Labeling and Repackaging:** Master the art of accurately labeling and repackaging medications, converting bulk supplies to unit doses and managing bulk dispensing with meticulous recordkeeping.
- **Non-Sterile Compounding:** Develop essential skills for non-sterile compounding, including accurate calculations, precise measurements, and the use of appropriate ingredients and procedures to guarantee safe and effective final products.
- **Sterile Compounding (Optional):** If available, acquire valuable knowledge and skills in sterile compounding, including aseptic technique maintenance, accurate calculations and measurements, and the fundamentals of IV compounding, compatibility, and stability.
- **Cytotoxic Agents (Optional):** If applicable, receive dedicated training on aseptic technique for handling cytotoxic agents, focusing on maintaining a sterile environment and utilizing appropriate personal protective equipment.

6. Investigational Drugs (Optional):

- **Research and Development:** If available, understand the pharmacist's role in investigational drug programs within the institution, gaining awareness of proper storage, distribution, and recordkeeping practices for these drugs.
- This revised text provides more focus and clarity to each activity, highlighting key learning objectives and emphasizing the practical experiences offered in the Hospital Pharmacy Rotation. It also differentiates optional experiences, like sterile compounding and cytotoxic agents, for program flexibility

Activities

- Reviewing patient charts.
- Attending morning meetings and daily rounds.
- Detailed case presentation.
- Patient counseling.
- Journal club.
- Any other activities assigned by the preceptor.

Community Pharmacy Rotation

- The Community Pharmacy Rotation offers invaluable experience in the dynamic world of dispensing medications and providing clinical services directly to patients. Students will gain exposure to a diverse range of activities, equipping them with the knowledge and skills to thrive in this critical healthcare setting.

Goals and Objectives:

- By the end of the Community Pharmacy Rotation, students will:

1. *Master Medication Dispensing:*

- **Navigate Legal and Site-Specifics:** Understand and adhere to legal requirements and specific practice site protocols for handling prescriptions received through various channels.
- **Sharpen Clinical Judgment:** Evaluate prescriptions for completeness, appropriate indication, dosing, route of administration, patient allergies, potential interactions, and legal compliance.
- **Collect and Manage Information:** Collect missing information efficiently, create and modify patient profiles accurately, and generate clear labels for dispensed medications.
- **Inventory & Selection:** Select appropriate containers, identify products from inventory, and accurately count/measure dispensed quantities.
- **Compounding Expertise (Optional):** For compounding activities, learn accurate calculations, ingredient selection, precise measurements, and good laboratory practices. Understand and follow legal requirements and documentation procedures for compounded products.
- **Cytotoxic & Hazardous Handling:** Recognize and safely handle cytotoxic and hazardous medications.

2. *Become a Medication Therapy Management Expert*

- **Communication Mastery:** Master the art of patient counseling using appropriate terminology, asking open-ended questions, actively listening, demonstrating empathy, and verifying understanding.
- **Drug Information Guru:** Learn to answer questions from patients and healthcare providers, clarify uncertainties, consult appropriate references, and formulate clear, concise, and accurate responses.
- **Documenting with Precision:** Document interventions, patient interactions, and healthcare provider communications precisely and comprehensively.
- **Prescription Problem Solver:** Develop the ability to identify and resolve prescription problems through patient interviews, caregiver consultations, and effective communication with physicians and other healthcare professionals.

3. *Manage Controlled Substances*

- Understand and implement procedures for secure procurement, storage, and inventory control of controlled substances.
- Master the protocols for filling-controlled substance prescriptions and proper disposal of expired drugs.

4. Over-the-Counter (OTC) Product Advisor

- **Patient Assessment Skills:** Learn to collect key information from patients to accurately assess their needs and determine the suitability of OTC treatments.
- **Expert OTC Guidance:** Provide knowledgeable advice on selecting appropriate OTC products across various categories, including analgesics/antipyretics, topical medications, cough/cold/allergy products, vitamins, and more.
- **Technology Savvy:** Understand and explain the importance and proper use of therapy monitoring devices to patients.

5. Unveiling Pharmacy Management

- Gain exposure to essential pharmacy management tasks, including inventory procedures (procurement and storage), billing processes, equipment maintenance, regulatory compliance, adverse event monitoring, and medication error reporting.
- This revised text emphasizes active learning and skill development, highlighting the student's role in patient care and community health. It also uses clear and concise language while maintaining essential information. The optional sections provide flexibility for program specifics.

Activities

- Detailed case presentation.
- Patient counseling.
- Journal club.
- Any other activities assigned by the preceptor.

Ambulatory Care Rotation

- The Ambulatory Care Rotation equips students with the skills and experience to excel in diverse roles where pharmacists contribute significantly to patient care in outpatient settings. This rotation fosters the development of clinical expertise, communication excellence, and an understanding of ambulatory clinic operations.

Goals and Objectives:

- By the end of the Ambulatory Care Rotation, students will:

1. *Become a Medication Therapy Management (MTM) Expert:*

- **Communication Pro:** Master the art of patient counseling, utilizing appropriate terminology, asking open-ended questions, actively listening, demonstrating empathy, and verifying understanding.
- **Drug Information Guru:** Become adept at answering questions from patients and healthcare providers, clarifying uncertainties, consulting relevant references, and formulating complete, accurate, and concise responses.
- **Documentation Master:** Develop precise and comprehensive documentation skills for recording interventions, patient interactions, and communication with healthcare providers.
- **Prescription Problem Solver:** Hone the ability to identify and resolve prescription problems through patient interviews, caregiver consultations, and effective communication with physicians and other healthcare providers.

2. *Enhance Patient Care Skills:*

- **Patient Educator:** Gain experience educating patients about their disease states, prescribed therapies, monitoring methods, and follow-up care procedures.
- **Treatment Efficacy & Safety Monitoring:** Learn to perform monitoring activities to assess the effectiveness and safety of prescribed drug therapies.
- **Precise Documentation:** Master documenting patient care activities according to established clinic processes and procedures.

3. *Deepen Disease State & Therapeutic Knowledge:*

- **Exposure and Expertise:** Build sufficient knowledge of common medical conditions encountered in ambulatory care settings.
- **Individualized Therapy Analysis:** Develop the ability to identify opportunities for pharmacists to positively impact patient care and recognize situations where standard therapies might not be suitable for specific individuals. This includes recommending alternative solutions as needed.

4. *Navigate Clinic Management:*

- **Operational Insights:** Gain valuable exposure to various management activities within the ambulatory care clinic, understanding its operational structure and the roles of clinic personnel. This includes exploring the interrelationships between different team members and how they collaborate with the pharmacist.

5. *Activities:*

- **Chart Review:** Analyze patient medical records to contribute to informed clinical decisions.
- **Morning Meetings and Rounds:** Actively participate in daily team meetings and

patient rounds, learning from and collaborating with experienced healthcare professionals.

- **Case Presentations:** Develop communication and analytical skills by preparing and delivering detailed case presentations.
- **Patient Counseling:** Build personalized medication treatment plans through effective patient consultations.
- **Journal Club:** Engage in critical thinking and stay current with research by participating in journal club discussions.
- **Preceptor-Directed Activities:** Be open to exploring diverse opportunities as assigned by your preceptor, expanding your learning through unique tasks and challenges.



Internal Medicine or Acute Care Rotation

The primary goal of this rotation is to provide students with an understanding of the common disease states and pharmacotherapy options for patients in internal medicine or acute care settings. The secondary goal is to allow students to develop the skills to effectively collect and disseminate information and communicate them with patients and other healthcare practitioners.

Goals and Objectives

- By the end of this rotation, students will:
- **Identify and Analyze Drug-Related Problems:** Hone your skills in recognizing and addressing drug-related problems in patients with acute and chronic conditions.
- **Demystifying Pathophysiology:** Gain a deep understanding of the underlying pathophysiology of various illnesses encountered in the internal medicine or acute care setting.
- **Therapeutic Plan Expertise:** Analyze and discuss patients' existing therapeutic plans, identifying potential areas for optimization and improvement.
- **Monitoring and Intervention:** Develop skills in monitoring prescribed drug therapy, recognizing and managing adverse drug reactions, and implementing necessary interventions.
- **Clear and Concise Documentation:** Master the art of writing complete and concise drug therapy consult notes for effective communication with healthcare providers.
- **Patient Empowerment:** Equip patients with comprehensive education about their medications, including their use, expected outcomes, and potential side effects.
- **Collaborative Healthcare:** Foster strong collaborative relationships with other healthcare professionals to ensure the efficacy and safety of drug therapy regimens.

Expected areas of training

Due to the variability in patient populations at different practice sites, it is hard to define specific areas of emphasis. However, some areas of emphasis that could be consistent between sites may include, but not limited to:

1. *Infectious Diseases*

- Respiratory infections
- Immunocompromised hosts
- Sepsis syndrome
- Skin, soft tissue, joint, and bone infections

2. *Cardiology*

- Myocardial infarction
- Angina
- Hypertension
- Congestive heart failure
- Arrhythmias
- Thromboembolism

3. *Pulmonary*

- Asthma
- COPD

4. *Renal*

- Acute renal failure
- Chronic renal failure

5. *Oncology/hematology*

- Anemias
- Solid tumors
- Leukemias
- Lymphomas

6. *Endocrinology*

- Diabetes
- Hypothyroidism/hyperthyroidism
- Adrenal diseases

Activities

- Reviewing patient charts.
- Attending morning meetings and daily rounds.
- Detailed case presentation.
- Patient counseling.
- Journal club.
- Any other activities assigned by the preceptor.

CLINICAL PROFORMA FOR THE STUDENTS OF DOCTOR OF PHARMACY
AT DISTRICT HEADQUARTER HARIPUR

case#

Diagnosis =

Patient Identification and Demographics

Patient name	Age	Ward	Bed
Gender	Hospital	Height	Weight
Address	Occupation	Others	
DOA	TOA	MOA	DOD

HISTORY

Chief complaints:
History of present illness
Past medical history:
Past surgical history:



Family history:
Socio-economic status:

PHYSICAL EXAMINATION

Cardiovascular
Gastrointestinal:
Respiratory
Nervous system:

RESULTS OF RELEVANT LABORATORY TESTS

RFT'S

TEST	RANGES	RESULT
BUN		
Scr		

Blood Sugar testing

TEST	RANGES	RESULTS
RBS		
FBS		

TREATMENT AT HOSPITAL

Start-date	dosage form, brand (generic),dose,route,frequency and duration	stop-date

2015

الہیستاد آباد یونیورسٹی آف سائنس اینڈ ٹیکنالوجی

Daily progress report

DPR date	DPR Date:
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CASE ANALYSIS/DISCUSSION CASE ANALYSIS/DISCUSSION

Medication used before admission to hospital

Number of drugs before admission to hospital:

Names of drugs used:

Allergy:

PATIENT EDUCATION/COUNCELING & DRUG INFORMATION

DRUG INTERACTIONS

EVALUATION COMMENTS BY RESEARCH SUPERVISOR

