



Princess Nourah bint Abdulrahman University

College of Pharmacy

Training & Internship Unit

Advanced Pharmacy Practice Experience Manual

Year 2020 - 2021



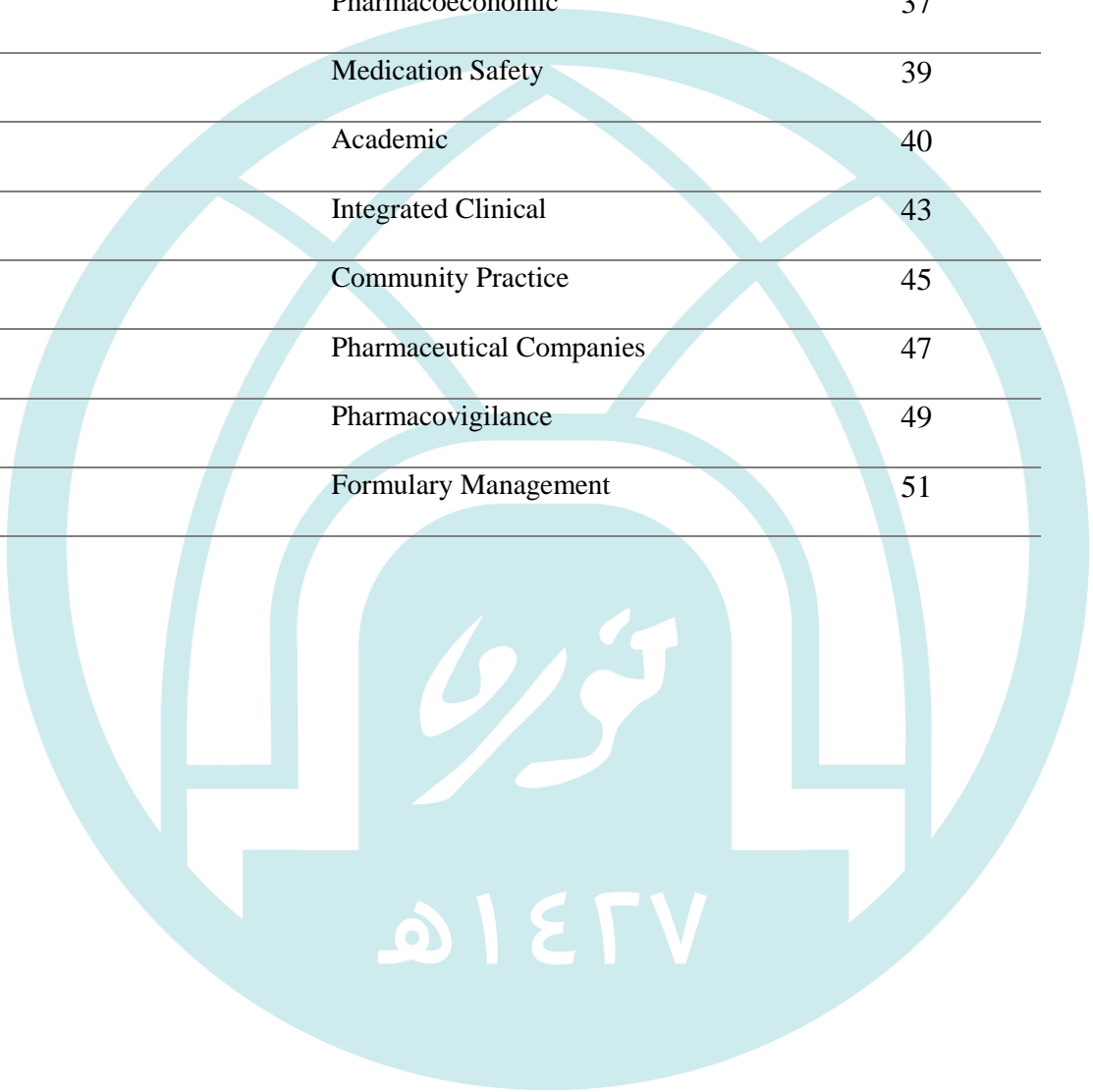
Princess Nourah bint
Abdulrahman University
College of Pharmacy

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Introduction

The Doctor of Pharmacy program at Princess Noura bint Abdulrahman University (PNU) offers a one-year Advance Pharmacy Practice Experience (APPE) that occur in the final year of the curriculum. The APPE is designed to amend student clinical and pharmaceutical skills that seek to provide high-quality care that is evidence-based, cost-effective and individualized to each patient, emphasizes patient safety and introduce the interns to different pharmacy career paths. The APPE's are structured with outcome expectations designed to reflect the attainment of practice related competencies as set forth by the international standards (ACPE & CCAPP). It is consists of nine cycles these are commonly referred to as "rotations", each 5-weeks long at different training sites.

Contact Information

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College of pharmacy Vision and mission

The college Vision

The College of Pharmacy at Princess Nourah University has committed itself to be a pioneering women's college in both education and research areas in which might contribute to the community service.

The college Mission

To graduate qualified, locally and internationally competitive pharmacists according to the highest sciences and professional criteria by accreditation programs, creative applied researches, and international partnerships, so they can contribute to make the healthcare better in our community.

PharmD Program Mission

To prepare competent pharmacists capable of providing high quality pharmaceutical services and striving for excellence and innovation in patient care, research and community wellness.

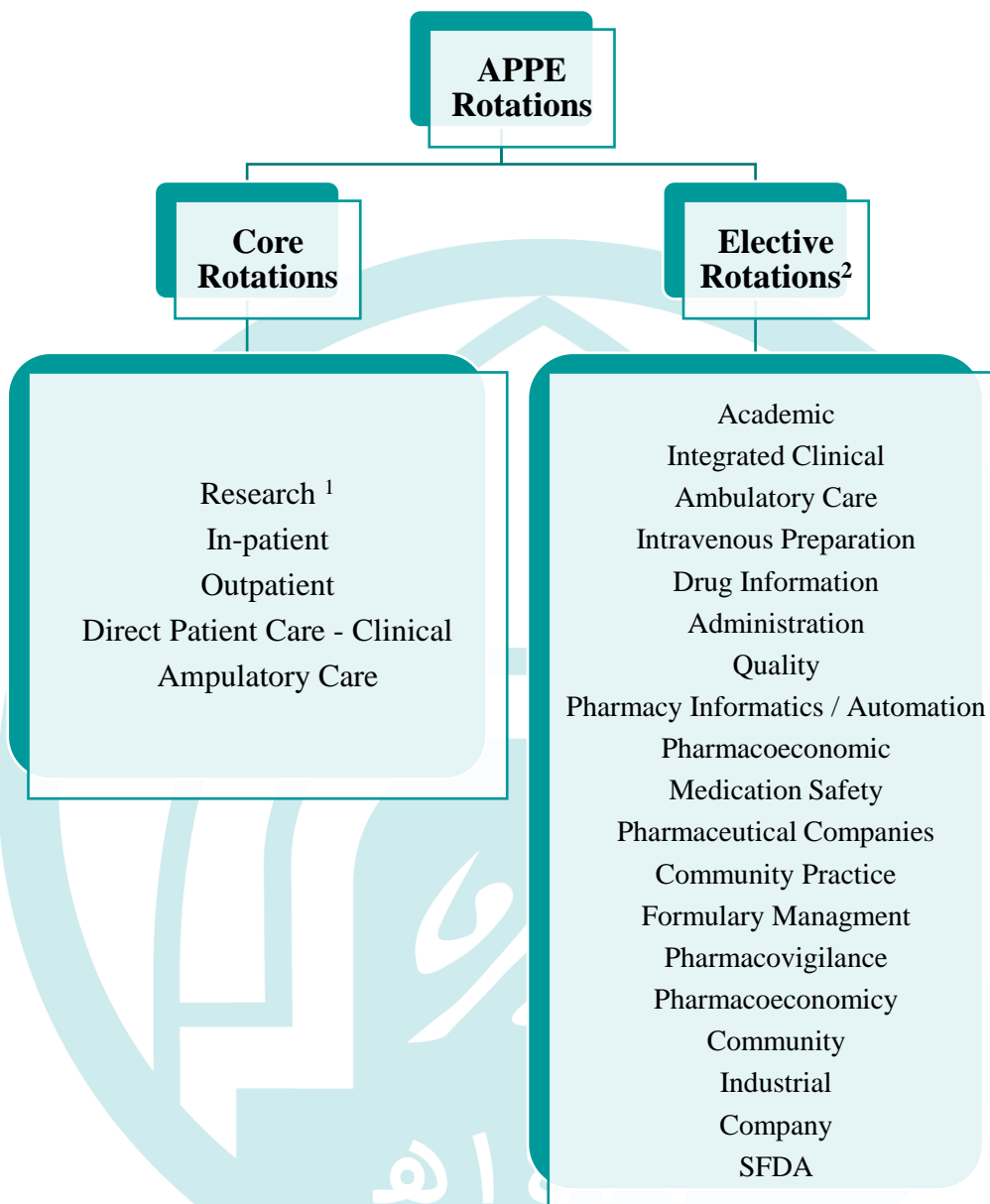
PharmD Program Goals and Objectives

Goals	Objectives
Excellence in pharmacy education and community wellness.	The Pharm.D. program prepares graduates to: <ol style="list-style-type: none">1. Apply scientific knowledge in pharmaceutical practice to provide optimum patient care.2. Demonstrate proficiency in medication management to improve health outcomes of individuals and community.
Distinction in leadership skills and pharmaceutical research.	<ol style="list-style-type: none">3. Apply fundamental principles and skills in conducting pharmaceutical research.4. Demonstrate effective communication and collaboration in various professional settings.5. Practice life-long learning and demonstrate self-awareness to enhance themselves and their profession.

**Advance Pharmacy Practice Experience Calendar for the academic year
2020/2021**

Rotation Number	Start Date Y-M-D	End Date Y-M-D
Research Week	2020-05-03	2020-05-07
Rotation 1	2020-07-05	2020-08-06
Rotation 2	2020-08-09	2020-09-10
Rotation 3	2020-09-13	2020-10-15
Rotation 4	2020-10-18	2020-11-19
Rotation 5	2020-11-22	2020-12-24
Rotation 6	2020-12-27	2021-01-28
Rotation 7	2021-01-31	2021-03-04
Rotation 8	2021-03-07	2021-04-08
Rotation 9	2021-04-11	2021-05-13

Advance Pharmacy Practice Experience Rotation Types



¹Please refer to graduation research project for pharmacy intern for more information

²Elective rotations depend on intern preference and the sites availability

Training Sites

Training seat numbers for each rotation depends on the site availability and site requirements

Traning sites examples:

Hospitals	<ul style="list-style-type: none">• King Abdullah bin Abdulaziz University hospital• Prince Sultan Military Medical City• Security Forces Hospital• Dr. Sulaiman Al Habib Medical Group• King Fahad Medical City
Community	<ul style="list-style-type: none">• Whites
Pharmaceutical companies	<ul style="list-style-type: none">• Tamer Group• Merck & Co• Riyadh Pharm• SIPMACO
PNU college of pharmacy	<ul style="list-style-type: none">• Academic
PNU Simulation & Skills Development Center	<ul style="list-style-type: none">• Integrated Clinical
Other	<ul style="list-style-type: none">• Saudi Food and Drug Authority

Internship Policies

Documents Submission to the Training and Internship unit

Pre-internship requirements

1. Intern personal data: link sent by the training and internship unit
2. Copy of Saudi ID or Iqama
3. IBAN stamped from the bank
4. Copy of Mother ID for non-Saudi interns from a Saudi mother
5. Copy of Passport
6. CV

During internship requirements

Any other requirement requested by the training and internship unit for training sites and research rotation (e.g., interview, C.V, GPA)

End of internship requirements

Internship portfolio

Rotation Scheduling

The Training and internship unit assigns interns based on their preferences, the preceptor/site availability and requirements.

Schedule Changes

Rotation changes will only be made in the case of medical, family emergencies or cancelled rotations.

Attendance and absence policy

The pharmacy intern is expected to observe a policy of consistent, timely attendance. In the case of illness or tiredness, it is the pharmacy intern's obligation to notify the preceptor.

When any absence of more than two days occurs, the intern will notify the training and internship unit. Pharmacy intern's may be asked to provide documentation to verify reason for absence.

Time missed will be made up at the preceptor's discretion, and when necessary in consultation with the course administrator.

- Unexcused absences are NOT tolerated and risk the student's successful completion of the program
- Unexcused absences will result in the assignment of a failing grade or grade reduction in the corresponding experiential course

Failure to notify training unit and your preceptor of your need to be absent, arrive late or leave early due to illness or an emergency will result in an unexcused absence.

Anticipated delay

- If the intern expects being late due to any issue, she MUST call and notify the preceptor as soon as possible prior to the scheduled arrival time to the site

Emergency absences

- In unexpected event where the intern became sick or in the case of family emergency (death of a close family member), the intern's obligation to notify the preceptor promptly on that day, and on every day they will be absent
- When any absence of more than two days occurs, the intern will notify the training and internship unit as well
- Intern will be asked to provide documentation to verify reason for absence
- Time missed will be made up at the preceptor's discretion, and when necessary in consultation with the training and internship unit

Unexcused absences

- Are NOT tolerated and risk the student's failure to complete the program
- Unexcused absences will result in exposing the student not passing the training course
- Failure to notify the training unit and preceptor of your need to be absent, arrive late or leave early due to illness or an emergency will result in an unexcused absence

Vacations and Holidays

- 10 days annual leave (not to exceed 5 days per one rotation)
- 3 days educational leave (to participate or attend conferences/ workshops)
- 5 days emergency leave
- 2 weeks maternity leave
- Eid Al Fitr and Eid Al Adha Holidays depends on the training site

How to apply for Vacation

- Complete the leave form and make sure it is signed and approved by the rotation preceptor.
- The student submits the application to the training unit at least two weeks before the start of the vacation/ leave.
- In the event of a medical leaves, excuses are raised for the training unit and will be discussed by the College Excuses Committee to be accepted or rejected.
- In the case that the medical leaves are accepted, the student will reimburse the training hours later under the coordination of the training unit
- In the case that the medical leaves are not-accepted, the absent will be treated as unexcused absent.



General Responsibilities

Training and internship unit

1. Regulate the internship and scheduling process
2. Arrange training seats to provide good quality of training
3. Communicate and coordinate with training sites and preceptors
4. Collect the APPE rotation evaluation and document the grade

Intern

1. Submit all the required forms (e.g., research document, portfolio)
2. Adhere to training site policies
3. Protect the patient and site confidentiality
4. Follow the site/preceptor instructions
5. Follow the vacations and leave policy
6. Inform the training and internship unit in case of emergency situations
7. Commit to the rotations offered by training and internship unit (any seat that is provided by the intern herself will not be considered)
8. Make sure that the preceptor has done the evaluation at the end of the rotation
9. Exhibit a professional demeanor in manner, dress and adherence to professional standards at all times
10. Follow the Princees Noura University dress code at all times, unless expressly directed to do otherwise by their preceptor

Preceptor

1. Follow the rotation objectives
2. Guide the intern throughout the rotation
3. Maintain the intern confidentiality
4. Provide an oral mid and final evaluation to the intern
5. Submit the evaluation

Training Site:

1. Provide an intern access or ID to be able to enter and practice at the site
2. Orient the intern to the training site
3. Communicate with the preceptor / team to start the training
4. Provide appropriate communication with PNU training and internship unit whenever needed

Evaluation and Grading system

APPE Evaluation

The intern's performance evaluation is based upon the following rating scale:

1	2	3	4
Unsatisfactory	Marginal	Good	Very Good
needs extensive interventions; unable to complete the assigned task.	needs consistent interventions. The preceptor must provide directed questioning in a problem-solving manner.	requires only occasional interventions consisting of single limited prompt.	requires no intervention; performs within expectations.

Assessment of Student Performance

- The preceptor according to the evaluation form will assess the student.
- Students are to be formally assessed twice during the rotation, at the midpoint and at the end of the rotation.
- Students will be graded as PAS (pass) or FAL (fail)
- The training unit has 10% of the intern's evaluation which is allocated to professionalism and internship portfolio completion.

Student Feedback Surveys on APPE year

Students will have the opportunity to confidentially evaluate the rotation and preceptor at the end of each rotation, it is important that feedback is obtained on the quality of the experience and preceptor.



Appendix

Core Rotations

Graduation Research Project

Description

The research project is a longitudinal experience throughout the internship year of the pharmacy school in which students engage in a research project under the mentorship of a faculty member who will follow their progress throughout the entire longitudinal experience.

Students will enroll in a five weeks research rotation for data collection. Prior to starting a research, students must go through the proposal stage, during which students will develop their proposal and have it reviewed by his/her research advisor in the beginning of their internship year. This means that students need months of planning and background research work before the starting data collection stage. Students are not allowed to enroll in a research course without an approved proposal.

During the proposal stage, students should discuss their research interests with their advisor, identify a research topic, conduct preliminary literature review and develop a project proposal. The proposal should discuss problem statement, objectives, research methodology, research activities, and a time schedule in about 3-5 pages. A sample proposal is attached here for your reference.

During data collection and data analysis stage, students will have an assigned five weeks rotation and should have their IRB approval. If the IRB approval is not ready or get rejected, students will develop a research project that does not necessarily need an IRB (review article, survey).

The objectives of the research project are to:

1. Develop basic research skills
 - Conduct literature review
 - Design study methodology
 - Improve scientific writing skills
 - Develop research question
 - Conduct statistical analysis
 - Improve research integrity

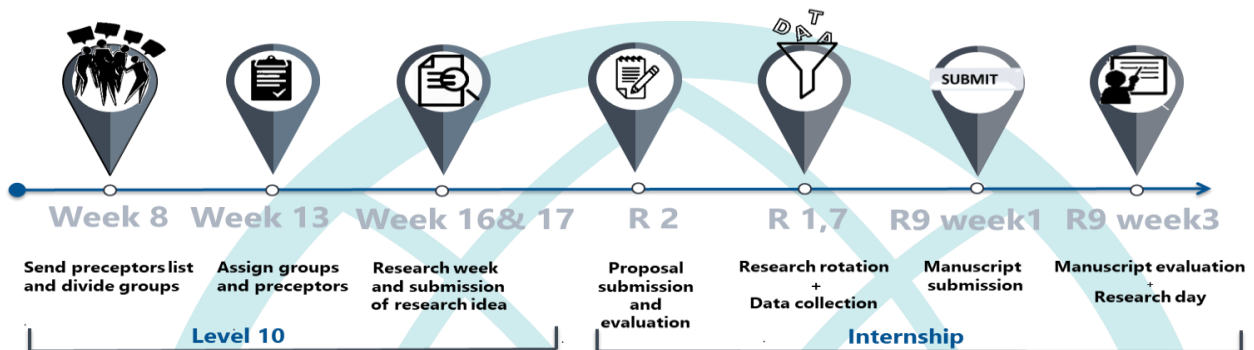
- Critical appraisal and interpretation of published journals
 - Search in database
1. Foster analytical thinking skills and the development of tools for rational decision making for our students.
 2. Provide training in the scientific research method that will translate into future careers involving research and/or clinical practice.
 3. Provide role models, mentorship, and guidance for students regarding research process.
 4. 5. Enhance the pharmacy school culture of self-directed and peer group-fostered learning.
 5. Enhance the oral and written communication skills of graduating students.

	100 %	Examiner	Module objective	Assessment
Proposal	10%	Internal and external supervisors	<ul style="list-style-type: none"> • Develop a research question and understand the background of the project. • Design a research plan to successfully and answer their research question. Get IRB approval	Average grades of proposal evaluation performed by the internal and external preceptors
Research Rotation Evaluation	20%	Internal and external supervisors	<ul style="list-style-type: none"> • Individual evaluation of each student performance during the longitudinal experience • Students knowledge development during the year • Students skills and competences 	Average grades of rotation evaluation performed by the internal and external preceptors
Poster	30%	Examiner	<ul style="list-style-type: none"> • Summarize, design and present the final research project results in a poster format 	Average grade of poster evaluation done by the two assigned examiners*
Manuscript	40%	Examiner committee*	<ul style="list-style-type: none"> • Follow standard format or structure which allows readers to easily find the information • Structure of manuscript <ul style="list-style-type: none"> - Title, abstract and keywords - Introduction, methods and results - Discussion and conclusions - Figures and tables - Acknowledgments and references 	Average grade of manuscript evaluation done by the two assigned examiners*

*Examiner committee is assigned by the dean of collage of pharmacy

**Submission of the research idea, proposal, poster, and manuscript is linked to the blackboard and will be locked by the deadlines, and any student fail to adhere to the deadlines will automatically lose 5% of the document mark.

Timeline:



General rules:

1. 2-4 interns in each research group
2. Maximum 8 interns per preceptor
3. In case of not getting an IRB approval prior to the research rotation, conduct a project that doesn't require an IRB approval (i.e. literature analysis, systematic review)

Intern responsibilities:

1. Intern should fill and sign the AGREEMENT FORM
2. The training and internship unit should be informed about the following:
 - Date of the IRB approval
 - In case of any concern and/or issue with the internal or external preceptor
3. Complete data collection in the assigned rotation
4. Submit the required materials in a timely manner (research idea, proposal, poster and manuscript)
5. Kindly remind the preceptors to do the evaluation

Internal Preceptor responsibilities:

1. Provide the training and internship unit with the research area of interest.
2. Sign the research agreement form.
3. Coordinate and guide the research project.
4. Facilitate the IRB approval process.
5. Attend the research week workshop to discuss the graduation research idea and proposal.
6. Meet regularly with the intern (at least 4 meetings).
7. Perform and facilitate the proposal evaluation (internal and external).

Unit responsibilities:

1. Matching.
2. Coordination and Consultation.
3. Collection and recording the mark.

Matching:

1. Each group required to prioritize their three different potential supervisors.
2. The selection of preceptors will depend on the earlier application.
3. The final confirmation of the research group matching is referred to the training and internship unit.

In-patient pharmacy

Goals and objectives:

The Advanced Pharmacy Practice Experience (APPE) in-patient pharmacy rotation aims to allow pharmacy interns to describe the concept, procedure, and policy of the department's distribution systems including floor stock, unit dose, narcotic control in the inpatient area, and Intravenous preparation (IV).

The in-patient rotation allows pharmacy interns to achieve the following:

General rotation goals.

1. Describe the following for all medication administered to assigned patients:
 - Indications for use and appropriateness of therapy
 - Dosage and schedule
 - Routes of administration and precautions
 - Mechanism(s) of action
 - Alternative treatment available
 - Onset and duration of action
 - Drug-drug interactions, drug-lab interactions
 - Pharmacokinetics and biopharmaceutics
 - Influence of disease state on drug absorption
 - Therapeutic and toxic levels [if available]
 - Adverse effects
 - Appropriate patient information
 - Formulation and compatibilities [I.V. admixtures]
2. Demonstrate an understanding of workflow, policies and procedures related to in-patient pharmacy department
3. Participate in the process of preparing, labeling, dispensing and counseling for inpatient and discharged patients
4. Utilize appropriate resources to provide drug information and assess patient
5. Demonstrate the ability to prioritize medication orders (i.e. STAT vs routine orders)

6. Identify strategies to reduce medication errors and participate in their implementation (e.g. high alert and look alike sound alike (LASA) medication)
7. Recognize medication storage regulations and how to access information related to appropriate medication storage
8. Acquire skill in managing non-formulary, shortage and withdrawn medication
9. Demonstrate an understanding of crash cart: medication list, layout, log sheet and pharmacist role
10. Outline the hospital medication distribution system
11. Practice prepackaging, compounding, calculation and extemporaneous preparation under supervision [if available]
12. Demonstrate cultural competency in caring for patients and in interacting with other healthcare providers
13. Demonstrate professional attitudes and behaviors that characterize a professional pharmacist

IV goals (if applicable).

1. Demonstrate an understanding of the USP 797 regulations
2. Prepare IV medication under supervision
3. Utilize aseptic techniques related to IV compounding
4. Calculate the quantity of active ingredient needed for each preparation
5. Identify the process of checking, labeling and storage of IV component
6. Utilize proper disposal techniques of Hazardous Material/Waste

Narcotic goals.

1. Summaries the laws and regulations of narcotic and controlled medication in Saudi Arabia
2. Recognize storage of narcotic and control medication regulations
3. Identify the process of prescribing narcotics and control drugs by nursing units, inpatient and outpatient
4. Recognize the process of disposing of narcotic and control drugs
5. Explain the process of dealing with expired and returned narcotics
6. Practice dealing with incidents related to narcotics and control drugs

Student Responsibilities

- 1- Attend on time
- 2- Complete all assigned tasks by the preceptor
- 3- Provide at least 1 activity (e.g., in-service, presentation) to the pharmacy or patient care team
- 4- Demonstrate the ability to think rationally & logically
- 5- Display professional comportment: appearance, attitude and behavior
- 6- React Positively to Constructive Criticism

Preceptor Responsibilities

- 1- Orient the student to the practice site, schedule, break, evaluation method and overall responsibilities
- 2- Monitor student progress to ensure stated objectives are adequately met
- 3- Provide mid and final evaluation

Site Responsibilities.

1. Orient the student to the practice site including hospital system, policy and procedure, direction, parking, etc
1. Provide a student ID to be able to enter and practice at the site
2. Communicate with the hospital team/service to start the training
3. Provide appropriate communication with PNU training and internship unit whenever needed

Goals and objectives

The goal of this five-week rotation is to provide pharmacy interns with the opportunity to experience clinical services and patient care initiatives within the hospital and community pharmacy settings.

The out-patient rotation allows pharmacy intern to:

1. Describe the following for all medication administered to assigned patients:
 - i. Indications for use and appropriateness of therapy
 - ii. Dosage and schedule
 - iii. Routes of administration and precautions
 - iv. Mechanism(s) of action
 - v. Alternative treatment available
 - vi. Onset and duration of action
 - vii. Drug-drug interactions, drug-lab interactions
 - viii. Pharmacokinetics and biopharmaceutics
 - ix. Influence of disease state on drug absorption
 - x. Therapeutic and toxic levels [if available]
 - xi. Adverse effects
 - xii. Appropriate patient information
2. Demonstrate an understanding of workflow, policies and procedures related to out-patient pharmacy department
3. Participate in the process of preparing, labeling, dispensing and counseling for outpatient
4. Demonstrate an understanding of a refill medication
5. Identify strategies to reduce medication errors and participate in their implementation (e.g. high alert and look alike sound alike (LASA) medication)
6. Recognize medication storage regulations and how to access information related to appropriate medication storage
7. Inspect and make use of auxiliary labels and expiry dates of the medications
8. Acquire skill in managing non-formulary, shortage and withdrawn medication

9. Calculate an appropriate dose, syringe, tables...etc.,
10. Utilize appropriate resources to provide drug information and assess patient
11. Demonstrate cultural competency in caring for patients and in interacting with other healthcare providers
12. Demonstrate appropriate team behaviors and professionalism
13. Promote self-directed learning through a self-initiated, proactive, evidenced based clinical pharmacy practice
14. Conduct topic discussion based on rotation requirement and student interest

Student Responsibilities

1. Attend on time.
2. Complete all assigned tasks by the preceptor
3. Provide at least 1 activity (e.g., in-service, presentation) to the pharmacy or patient care team
4. Demonstrate the ability to think rationally & logically
5. Display professional comportment: appearance, attitude and behavior
6. React positively to constructive criticism

Preceptor Responsibilities

1. Orient the student to the practice site, schedule, break, evaluation method and overall responsibilities
2. Monitor student progress to ensure stated objectives are adequately met
3. Provide mid and final evaluation

Site Responsibilities

1. Orient the student to the practice site including pharmacy system, policy and procedure, direction, parking, etc.
2. Provide a student ID to be able to enter and practice at the site
3. Provide appropriate communication with PNU training and internship unit whenever needed

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) clinical rotation provides practical experience for clinical pharmacy interns. The experience they get familiarizes them with the role of the clinical pharmacist in the hospital setting. They also obtain expertise in working with an interdisciplinary team as well as optimizing pharmacotherapeutic management. Further, APPE enables interns to gain knowledge of improving patient care and safety. Pharmacy students who participate in this rotation acquire knowledge, skills, and abilities beneficial to their professional careers.

Direct patient care rotation allows pharmacy interns to:

1. Describe the state of common diseases in the clinical area and their pathophysiology
2. Perform clinical presentation, diagnosis, and provide an evidence-based pharmacotherapy plan
3. Collect patient information, including medication history, home medication, lab, and allergy, among others
4. Recommend changes to the drug therapy regimen through monitoring and assessing/reassessing patient information
5. Identify adverse drug reactions and interactions such as drug-drug, drug-food, drug-disease, or drug-lab
6. Develop collaborative professional relationships and demonstrate excellent communication skills when providing verbal information, presentations, and recommendations to the medical team
7. Effectively communicate the drug treatment plan to the patient with the appropriate precautions and expectations
8. Conduct topic discussions based on the requirement of rotation & student interests
9. Promote self-directed learning through a self-initiated, proactive, and evidenced-based clinical pharmacy practice
10. Demonstrate cultural competency in caring for patients and in interacting with other healthcare providers that are encountered in a primary/ambulatory care setting.
11. Demonstrate professional attitudes and behaviors that characterize a professional pharmacist

Intern Responsibilities

1. Attend and participate in rounds
2. Work up patients through patient care process
3. Present new patient(s), recommendations and care plan to preceptor
4. Use monitoring plan to follow-up daily with existing patients
5. Present to preceptor any important medication therapy related updates on existing patients
6. Conduct medication review(s), reconciliation and patient education (as required)
7. Answer relevant drug information questions as requested by patients, inter-professional team
8. Display professional comportment: appearance, attitude, and behavior
9. Provide at least 1 activity (e.g., in-service, presentation) to the pharmacy or patient-care team
10. Document of all pharmacy interventions and all ADRs

Preceptor Responsibilities

1. Orient the student to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities
2. Assign patients to the student for work up
3. Discuss medication-related interventions and recommendations for approval
4. Monitor student progress to ensure stated objectives are adequately addressed and met
5. Guide and answer student questions and share knowledge and skills with the student
6. Maintain student confidentiality
7. Provide mid evaluation at the beginning of third week and final evaluation at the end of rotation

Site Responsibilities

1. Orient the student to the practice site including hospital system, policy and procedure, direction, parking, etc.
2. Provide an intern ID to be able to enter and practice at the site
3. Provide appropriate communication with PNU training and internship unit whenever needed

Ambulatory Care

This rotation is 5-weeks advanced pharmacy practice experience in a primary care setting. This rotation requires the student to assume an active role on caring for patients who present with disorders and diseases seen.

Goals and objectives

Under the supervision of the preceptor, the student should be able to:

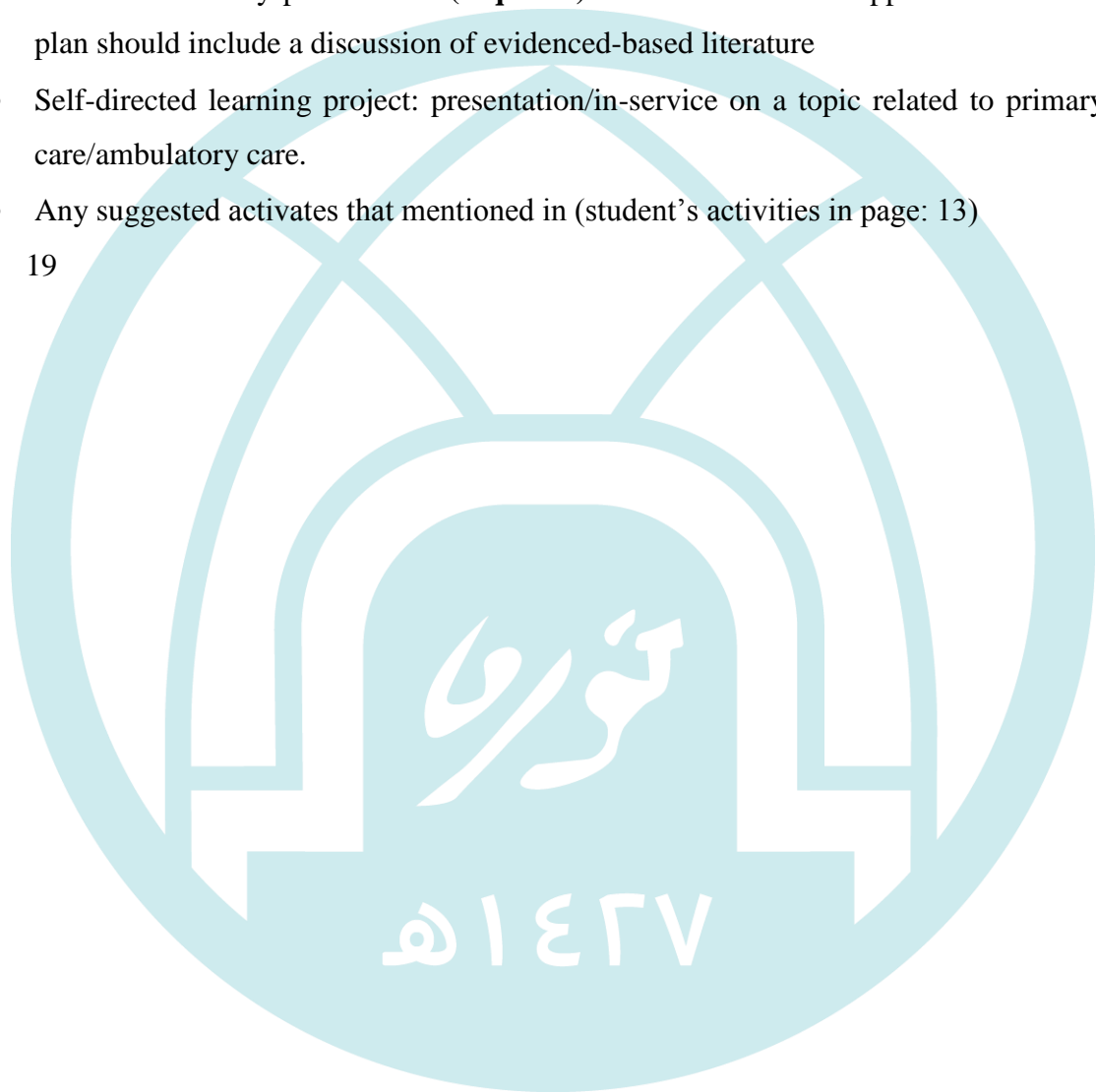
- Providing patient-centered care by collaborating with prescribers, and other members of the inter-professional health care team.
- Initiate and implement care plans for patient with disorders that are frequently encountered in the primary/ambulatory care setting.
- Promoting health by participating in various activities, such as quality assurance processes related to drug use, health education activities, and health-policy decision-making processes.
- The student will also be demonstrating cultural competency in caring for patients and in interacting with other healthcare providers that are encountered in a primary / ambulatory care setting and professional attitudes and behaviors that characterize a professional pharmacist.
- Assess patient medical history to identify signs and symptoms of common disease encountered in primary care and/or potential drug therapy problems and organize it in SOAP format
- Formulate therapeutic plan to include drug, route, dose, interval, therapeutic endpoint, and monitoring parameters
- Describe the following:
 - Mechanism of action
 - Pharmacodynamics and pharmacokinetics
 - Toxicities and adverse drug reactions
 - Clinically significant drug interactions
- Demonstrate ability to interpret laboratory values and adjust the medications accordingly
- Demonstrate ability to research, review, and critically evaluate pertinent literature respond to drug information questions.

- Demonstrate the ability to communicate with patients and other healthcare providers regarding specific therapy
- Identify cultural, psychological, and economic barriers which may inhibit compliance

Required Tasks:

- Patient care plans
- Patient/case study presentation (**required**): recommendations supported in the care plan should include a discussion of evidenced-based literature
- Self-directed learning project: presentation/in-service on a topic related to primary-care/ambulatory care.
- Any suggested activities that mentioned in (student's activities in page: 13)

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Elective Rotations

Intravenous Preparation Rotation

Goals and objectives:

The Advanced Pharmacy Practice Experience (APPE) intravenous preparation rotation aims to allow pharmacy interns to describe the concept, procedure, and policy of intravenous preparation area (IV).

The IV rotation allows pharmacy interns to achieve the following:

- 1- Understand policy and procedure related to the intravenous preparation area (Knowledge)
- 2- Able to implement standards for preparing compounded sterile medications (USP 797).
(skill)
- 3- Critically use available information to ensure safe and effective IV medication use.
(cognitive)

Student Responsibilities:

1. Attend on time
2. Complete all assigned tasks by the preceptor
3. Provide at least 1 activity (e.g., in-service, presentation) to the pharmacy or patient care team
4. Be Initiative and show ability to Think Rationally & Logically
5. Display professional comportment: appearance, attitude and behavior
6. React Positively to Constructive Criticism

Preceptor Responsibilities:

1. Orient the student to the practice site, schedule, break, evaluation method and overall responsibilities
2. Monitor student progress to ensure stated objectives are adequately met
3. Provide mid and final evaluation

Site Responsibilities:

1. Orient the student to the practice site including hospital system, policy and procedure, direction, parking, etc.
2. Provide a student ID to be able to enter and practice at the site.
3. Communicate with the hospital team/service to start the training.
4. Provide appropriate communication with PNU training and internship unit whenever needed

Drug Information Rotation**Goals and objectives.**

The goal of Advanced Pharmacy Practice Experience (APPE) is to provide experience and understand the scope of Drug Information (DI) services, as well as develop skills to provide drug information, evidence-based practice, and medication use policy services.

The drug information rotation allows pharmacy students to:

1. Understand the structure and workflow of a Drug Information Service
2. Be able to analyze the most appropriate drug information resources including primary, secondary, and tertiary sources for answering questions related to clinical practice
3. Be aware of the similarities and differences of secondary and tertiary information resources for specific types of drug or medical information
4. Identify the appropriate search strategy for a given DI question that will result in high-quality literature retrieval
5. Develop strategies for accessing information pertaining to adverse drug reactions and pharmacovigilance
6. Identify role of DI pharmacist in managing drug shortages, including identifying alternative treatments, developing protocol for restrictive use, and addressing formulary concerns
7. Identify the role of drug information pharmacist in participating in pharmacy and therapeutic committee
8. Learn about the excellent oral and written communication skills

Student Responsibilities

1. Attend on time.

2. Complete all assigned tasks by the preceptor
3. Provide at least 1 activity (e.g., in-service, presentation) to the pharmacy or patient care team
4. Display professional comportment: appearance, attitude and behavior

Preceptor Responsibilities.

1. Orient the student to the practice site, schedule, break, evaluation method and overall responsibilities
2. Supervision and guidelines of students when handling drug information questions and consultations
3. Monitor student progress to ensure stated objectives are adequately met
4. Provide mid and final evaluation

Site Responsibilities.

1. Orient the student to the practice site including hospital system, policy and procedure, direction, parking, etc.
2. Provide a student ID to be able to enter and practice at the site
3. Provide access to appropriate drug information resources
4. Communicate with the hospital team/service to start the training
5. Provide appropriate communication with PNU training and internship unit whenever needed

Administration Rotation

Goals and objectives

This rotation serves to introduce the interns to core elements of hospital pharmacy practice, management functions and pharmacy leadership styles, providing them the opportunity to experience and learn from the many unique challenges facing hospital pharmacy management teams in today's complex health care environment. The intern will work assigned pharmacy leadership and will acknowledge the different scopes and roles in pharmacy leadership from department-specific leadership and personnel management, to system pharmacy leadership and other levels of leadership. Interns will be exposed to different job responsibilities in order to gain confidence, critical thinking, leadership skills and a better appreciation of the role of pharmacy director/manager in the provision of healthcare to be an effective team player.

Administration rotation allows pharmacy interns to:

1. Understand the mission, vision, goals and the organizational structure of the department of pharmacy
2. Understanding the organization Hierarchy and List the departments, organizations and/or businesses that the pharmacy department must work with in order to achieve its goals and objectives
3. Understanding the pharmacy chain of command and line of authority and responsibilities as per pharmacy Departmental structure
4. Explain various aspects of leadership, including leadership styles and management functions like planning, organizing, directing, and controlling
5. Explain the process of staff recruiting, development including pharmacy residency program (if applicable)
6. Quality improvement principles and KPI management in pharmacy, to learn how to develop new ideas and approaches to improve quality or overcome barriers to advance the pharmacy department and the profession in general
 - a. How to assign and follow up KPIs
 - b. How to conduct quality improvement projects
 - c. Complete management-focused mini projects, as assigned

- d. Perform information gathering and critical analysis as part of projects assigned during the experience
7. Describe how legal, regulatory, and/or accrediting agencies affect the activities of the pharmacy department.
8. Role of pharmacy administration in hospital committees: e.g.
 - a. PTC (Pharmacy and therapeutic committee) those roles applied but not limited to:
 - i. Describe the process for approval of treatment guideline/protocol, pre-printed medication orders and drug policy development
 - ii. Describe the drug formulary review process including pharmacist involvement in P&T Committees
 - iii. Understands the difference between formulary, non-formulary, patient's own medications, narcotics, controlled and investigational drugs
 - b. Explain the pharmacy role in codes and medical emergencies in the hospital
 - c. Medication /Patient Safety committee
 - d. Pharmacovigilance
9. Understand and Demonstrate Effective leadership skills e.g effective and appropriate written, verbal and nonverbal communication that's including how to chair/call for meeting, taking minutes and Participate in hospital-wide meetings with preceptors
10. Introduction to Informatics and pharmacy automation from a managerial angle
11. Understands the importance of role modeling, mentorship, continuing professional development and education policies in building pharmacy leaders
12. Have an idea about third-party billing, legal requirements in general if applicable or Tender or medication procurement decisions

Intern Responsibilities

1. Adhere to the rotation schedule and deadlines for assignments

2. Consistent and proactive in experiential education, which necessitates active participation and communication
3. Report all the activities (including the completion of an assignment) to the preceptor
4. Attend and participate (if applicable) in hospital-wide meetings with the preceptor
5. Take minutes for all Meetings attended
6. Display professional comportment: appearance, attitude, and behavior
7. Provide a mini project and at least 1 activity (e.g., in-service, presentation, community or hospital service) to the pharmacy or patient-care team
8. Deliver a presentation on specific topics as assigned by preceptor

Preceptor Responsibilities

1. Orient the intern to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities including departmental manual, Policies and procedures, etc.
2. Assign a mini project and activity for the intern to start working on it.
3. Give the intern the opportunity to attend meeting for example P&T committee
4. Arrange a meeting other pharmacy managers/leader to discuss the responsibilities to discuss their role if possible
5. Discuss the topics mentioned in the objectives with the intern
6. Monitor intern progress to ensure stated objectives are adequately addressed and met
7. Guide and answer intern questions and share knowledge and skills with the student
8. Maintain intern/department confidentiality
9. Provide final evaluation at the end of the week.

Site Responsibilities

1. Orient the intern to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities including departmental manual, Policies and procedures, etc.
2. Assign a mini project and activity for the intern to start working on it
3. Give the intern the opportunity to attend meeting for example P&T committee
4. Arrange a meeting other pharmacy managers/leader to discuss the responsibilities to discuss their role if possible
5. Discuss the topics mentioned in the objectives with the intern

6. Monitor intern progress to ensure stated objectives are adequately addressed and met
7. Guide and answer intern questions and share knowledge and skills with the student
8. Maintain intern/department confidentiality
9. Provide final evaluation at the end of the week

Mini Project and Activities Suggestions

1. Identifies the need for a new service or program, or improvements to an existing service or program
2. Ways of improving the waiting time in outpatient pharmacy
3. How to reduce the returned/missing medications from the wards
4. Improving work environment for staff
5. Review of medication use policy that is not followed in the hospital
6. Other

Quality Rotation

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) Quality Rotation aims to introduce the pharmacy intern to the fundamental concept of the quality, policy, and procedure undertaken to ensure the quality of the pharmaceutical products. Additionally, it aims to enhance the pharmacy intern experience and knowledge in preventing and managing medication-related problems

Pharmacy Quality Rotation allows pharmacy intern to become familiar with:

1. The fundamental concept and structure of quality control
2. Reviewing the policy and procedure undertaken to ensure the quality of the pharmaceutical products and workplace
3. Recognition of the accreditation standards and processes that the organization needs to meet
4. Identification of quality improvement tools and techniques
5. Review and the analysis of objective data and use these data to develop quality action plans
6. The participation of all regulatory inspections for the pharmacy and wards

7. The involvement in product evaluation and selection process
8. The action taken if stock is damaged, contaminated, beyond the expiry date, or has an inconsistent batch number
9. Identification of the storage requirements of different types of products and hazardous medication
10. Perceived action taken if the company recalls or drug alerts following agreed guidelines
11. Demonstration professional attitudes and behaviors that characterize a professional pharmacist
12. Demonstration self-directed learning abilities during the rotation

Intern Responsibilities

1. Attending and participating in daily activities
2. Attendance of the quality-related committees and team meetings
3. Ensuring the product packaging, distribution, and storage meet the quality specifications
4. Addressing and reporting product quality concerns
5. Suggesting solutions to resolve medication-related problems
6. Displaying professional comportment: appearance, attitude, and behavior
7. Providing at least one activity (e.g., in-service, presentation)

Preceptor Responsibilities

1. Orientation of the intern to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities
2. Assigning duties to the intern for workup
3. Discussion of the quality concepts with the intern
4. Monitoring the intern progress to ensure that the stated objectives are adequately addressed and met
5. Guiding and answering intern questions and sharing knowledge and skills with the intern
6. Maintaining intern confidentiality
7. Providing mid and final evaluation at the end of the week

Pharmacy Informatics/Automation Rotation

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) in pharmacy informatics will provide a practical understanding of the language and concepts of information technology (IT) thereby exposing the intern to the interdisciplinary environment of informatics project teams. The purpose of this experience is to advance the understanding of the intern to the professional duties and responsibilities of a pharmacy informatics specialist.

Pharmacy informatics/automation rotation allows pharmacy interns to:

1. Familiarize with pharmacy automation solutions and informatics systems used in the pharmacy
2. Understands the advantages and limitations of pharmacy automated solutions and informatics systems
3. Describe the roles and responsibilities of pharmacy informatics specialist
4. Explain how pharmacy automated solutions and informatics systems affects patient safety and pharmacy workflow

Student Responsibilities

1. Attend daily to the assigned area

2. Participate in the various discussion activities and meetings
3. Display professional comportment: appearance, attitude, and behavior
4. Complete all activities and tasks assigned by the preceptor

Preceptor Responsibilities

1. Orient the intern to the practice site, staff, schedule (days and hours), break, evaluation methods
2. Monitor intern progress to ensure stated objectives are adequately addressed and met
3. Provide hands on training if applicable
4. Guide and answer intern questions and share knowledge and skills with the intern
5. Maintain intern confidentiality
6. Provide final evaluation at the end of the rotation

Site Responsibilities

1. Communicate with the preceptor about the starting date.
2. Provide access and ID to the intern
3. Provide appropriate communication with PNU training and internship unit whenever needed

Pharmacoeconomic Rotation

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) Pharmacoeconomic rotation aims to introduce the pharmacy intern to the fundamental concept of the pharmacoeconomic, planning process and cost-effective analysis. Besides, it aims to improve the pharmacy intern experience and knowledge to enhance therapeutic decision making.

Pharmacoeconomic rotation allows pharmacy intern to:

1. Understand the fundamental concept and terms of pharmacoeconomic
2. Identify the types of health economic evaluation (cost-benefit analysis, cost-effective analysis and cost-utility analysis)
3. Identify the financial planning and horizon scanning of new medicines.
4. Describe the sensitivity analysis technique
5. Understand the decision analysis technique for comparing alternative treatment

options

6. Design strategy to avoid the costs associated with non-adherence medication, unused medication or adverse drug of medications
7. Utilize the appropriate pharmacoeconomic resources and references.
8. Assess the cost of medication and therapeutic intervention
9. Engage in drug pricing evaluation and comparisons
10. Demonstrate professional attitudes and behaviors that characterize a professional pharmacist.
11. Demonstrate self-directed learning abilities during the rotation

Intern Responsibilities

1. Attendance and participation in daily activities
2. Attending the pharmacoeconomic related committees and team meetings
3. Suggestion of solutions to minimize the costs associated with the unused medication
4. Participating in assessing the cost of medical products and services.
5. Using the appropriate pharmacoeconomic resources
6. Performing information gathering and critical analysis as part of projects assigned during the experience
7. Displaying professional comportment: appearance, attitude, and behavior
8. Providing at least one activity (e.g., in-service, presentation)

Preceptor Responsibilities

1. Orientation of the intern to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities
2. Assigning duties to the intern for workup
3. Discussion of the quality concepts with the intern
4. Monitoring the intern progress to ensure stated objectives are adequately addressed and met
5. Guiding and answering intern questions and sharing knowledge and skills with them
6. Maintaining intern confidentiality

7. Providing mid and final evaluation at the end of the week

Medication Safety Rotation

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) Medication safety rotation aims to provide interns with a broad perspective of the types of activities involved in managing medication safety related issues in a health-system.

Medication safety rotation allows pharmacy intern to become familiar with:

1. Reviewing adverse drug events including medication-related significant safety events
2. Reporting Medication Error Data and Adverse Drug Reaction data to the Pharmacy and Therapeutics Committee
3. Reviewing policies and procedures that have medication safety implications
4. Ensures compliance with medication safety regulations and standards
5. Participate in a medication use evaluation
6. Tools and methods that are used to improve medication Safety

Student Responsibilities

1. Attendance and participation in daily activities
2. Attending all medication safety related committees and team meetings
3. Suggestion of solutions to minimize medication errors

4. Participating in assessing the cost of medical products and services
5. Performing information gathering and critical analysis as part of projects assigned during the experience
6. Displaying professional comportment: appearance, attitude, and behavior
7. Providing at least one activity (e.g., in-service, presentation)

Preceptor Responsibilities

1. Orientation of the intern to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities
2. Assigning duties to the intern for workup
3. Discussion of the quality concepts with the intern
4. Monitoring the intern progress to ensure stated objectives are adequately addressed and met
5. Guiding and answering intern questions and sharing knowledge and skills with them
6. Maintaining intern confidentiality
7. Providing mid and final evaluation at the end of the week

Academic Rotation

Goals and objective

The Advanced Pharmacy Practice Experience (APPE) Academic rotation aims to provide the pharmacy intern to observe and participate in teaching, administrative and academic experience for considering a career in academia. In addition, it enhances the pharmacy intern knowledge, problem-solving skills, critical thinking and decision-making skills.

Academic rotation allows pharmacy intern to:

1. Understand the structure, role and responsibility of the academic staff
2. Determine the appropriate learning, teaching and assessment methods (e.g., large classroom instruction, small group instruction, discussion-based teaching)
3. Identify different teaching and assessment tools
4. Prepare and develop teaching material based on the course description
5. Define and differentiate the various domains of learning

6. Know how to write and score assignments and quizzes
7. Perceive quality standards in teaching/learning programs
8. Participate in administrative duties and related meetings
9. Demonstrate the ability to effectively answer student inquiries
10. Demonstrate professional attitudes and behaviors that characterize a professional pharmacist
11. Demonstrate self-directed learning abilities during the rotation

Student eligibility:

In order to be eligible for academic rotation, intern must meet the following requirements:

1. GPA should not be lower than 4
2. Display professional attitude and behavior
3. Display leadership skills e.g., appreciation letter, class or group leader, club member, research, event organizer etc.,
4. The intern record should be free from any warning letter and disciplinary board

Note: the training and internship unit has the authority to select the interns and make exceptions

Student Responsibilities:

1. Sign confidentiality for
2. Review the course description and outline
3. Participate in taking the attendance, observing the teaching skills and involve in the class activity
4. Attended all assigned lectures
5. Complete all assigned reading materials & discussed it with the preceptor
6. Prepare exit project
7. Prepare and deliver at least one lecture
8. Attend at least one lab and two meetings
9. Participate in administrative work
10. Communicate with students and answer their questions under supervision
11. Display professional appearance and follow the dress code

12. Prepare portfolio
13. Participate in writing/scoring assignments and/or quizzes only under supervision (optional)
14. Participate in research and project (optional)
15. Participate in community services, OSCE organization, simulation and standardized patient, events, research day, and others (optional)

Faculty Responsibilities:

1. Orient the intern to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities and deadline
2. Assign duties and deadlines for the student that align with the rotation objectives
3. Involve the intern in teaching and administrative tasks if appropriate
4. Orientate the intern to the college structure (<https://pnu.edu.sa/ar/Faculties/Pharmacy/Pages/structure.aspx>).
5. Mentor the intern throughout her academic rotation and be actively available when needed
6. Maintain the intern confidentiality
7. Provide mid and final evaluation

Unit Responsibilities:

1. Match the intern with the assigned faculty
2. Receive student portfolio

Integrated Clinical Rotation

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) integrated rotation is a clinical rotation supported by simulation. It combines simulation and direct-patient care as an educational environment to enhance the pharmacy student clinical knowledge, problem-solving skills, and non-technical skills in safe environment.

Integrated Clinical rotation allows pharmacy interns to:

1. Prepares the pharmacy interns with basic clinical knowledge and skills and apply it

to practice and simulation

2. Provides an in-depth knowledge base regarding common internal, cardiology and infectious disease problems
3. Applies therapeutic drug monitoring and provide appropriate documentation
4. Describes the mechanism of action, therapeutic response, dosing, potential drug interactions, and adverse effects for the most common medications
5. Monitors daily progress of the patient's disease state(s) and drug therapy based upon relevant laboratory data, physical findings, and subjective findings
6. Selects and discuss the rationale for treatment for various disease state based on the best evidence available
7. Identifies existing or potential adverse reactions and/or treatment of failures, provide assessment and recommend management approaches.
8. Enhances pharmacy intern's clinical skills including patient presentation, medication reconciliation, patient counseling, etc.
9. Utilizes appropriate drug information resources to develop responses to information requests
10. Evaluates the quality of the literature utilized in making recommendations
11. Understands and apply the hospital policy and protocol
12. Develops effective communication skills with patient and health care team
13. Develops self-assessment skills and take responsibility for lifelong learning and professional development in pharmacy

Student Responsibilities

In simulation center

1. Prepare and discuss the assigned scenario with the group
2. Attend and participate in the assigned scenario at the day of simulation
3. Discuss and debrief the scenario with the group
4. Prepare group activity at the end of the week

In hospital

1. Attend and participate in rounds
2. Work up patients through patient care process
3. Present new patient(s), recommendations and care plan to preceptor

4. Use monitoring plan to follow-up daily with existing patients
5. Present to preceptor any important medication therapy related updates on existing patients
6. Conduct medication review(s), reconciliation and patient education (as required)
7. Answer relevant drug information questions as requested by patients, inter-professional team
8. Display professional comportment: appearance, attitude, and behavior
9. Provide at least 1 activity (e.g., in-service, presentation) to the pharmacy or patient-care team
10. Document of all pharmacy interventions and all ADRs

Preceptor Responsibilities

In simulation center (SSDC)

1. Prepare and send the scenario form to the simulation center for booking confirmation
2. Arrange a dry run with simulation center
3. Send the assigned topic and guideline to the students before the starting date
4. Facilitate the scenario during the session
5. Discuss the case with the students
6. Provide final evaluation at the end of the week

In hospital (KAAUH)

1. Orient the student to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities
2. Assign patients to the student for work up
3. Discuss medication-related interventions and recommendations for approval
4. Monitor student progress to ensure stated objectives are adequately addressed and met
5. Guide and answer student questions and share knowledge and skills with the student
6. Maintain student confidentiality
7. Provide final evaluation at the end of the week

Site Responsibilities

In simulation center (SSDC)

1. Facilitate the dry run and session
2. Providing information technology (IT) support during session

3. Book room if needed

In hospital (KAAUH)

1. Orient the student to the practice site including hospital system, policy and procedure, direction, parking, etc.
2. Provide a student ID to be able to enter and practice at the site (VDI account and Track care)
3. Provide access to appropriate medical, nursing, and pharmacy records to support the learning objectives and activities for the rotation
4. Communicate with the hospital team/service to start the training
5. Provide appropriate communication with PNU training and internship unit whenever needed

Community Practice Rotation

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) Community Practice Rotation is a 5-week rotation in a community pharmacy. The rotation will primarily focus on patient care services and secondarily on patient-focused dispensing functions in these pharmacies. These services will focus on the identification, resolution, and prevention of medication-related problems dealing with general medical issues and medication therapy management.

Community practice rotation allows pharmacy interns to be familiar with:

1. The properties and formulations of common prescription drugs, nonprescription medications, dietary supplements, traditional non-drug therapies, and natural products
2. Interpretation and processing of medication orders accurately and efficiently
3. Various brands and generic drug names, manufacturer, and dosage forms.
4. Performance of accurate calculations to dispense and compound medications if applicable
5. The appropriate drug reference; sources for drug information and apply it in responding to questions
6. Recalling and conducting effective counseling on prevention and treatment of common chronic diseases in the Saudi Arabia community

7. The communication of relevant, concise, and timely information in a clear manner. This is done through the appropriate use of terminology and vocabulary for the intended audiences, e.g. patients, caregivers, pharmacists, technicians, and healthcare providers
8. Identifying and reporting medication errors and adverse drug reactions and address issues related to medication safety
9. Describing and participating in the various aspects of managing a community pharmacy, e.g., policies and procedures, inventory, reports, personnel, marketing, career options, etc.
10. Developing the sense and responsibility towards health promotion to the community
11. Demonstrating communications, attitudes, behaviors, and appearance that is culturally sensitive and comply with the pharmacy image
12. Recognition of patient's beliefs, biases, economic status, and social situation influence the provision of pharmacy care and incorporate into decision making
13. Demonstrating professional attitudes and behaviors that characterize a professional pharmacist
14. Demonstrating self-directed learning abilities during the rotation

Intern responsibilities

1. Attends daily to the assigned shift
2. Participates in various community pharmacy activities, e.g., counseling, dispensing, and inventory
3. Answers relevant drug information questions as requested by patients, Preceptor, or pharmacy team
4. Displays professional comportment: appearance, attitude, and behavior
5. Completes all activities and tasks assigned by the Preceptor

Preceptor Responsibilities

1. Orient the intern to the practice site, staff, schedule (days and hours), break, evaluation methods
2. Explains prescription workflow, drug information resources, front store layout and stock arrangement, policies and procedures, dress code, and expectations
3. Discuss the pharmacist role in community pharmacy

4. Monitoring intern progress to ensure stated objectives are adequately addressed and met
5. Guiding and answering intern questions and sharing knowledge and skills with them
6. Maintains intern confidentiality
7. Provides a final evaluation at the end of the rotation

Site Responsibilities

1. Communicating with the pharmacy chain team/service to start the training
2. Providing appropriate communication with PNU training and internship unit whenever needed

Pharmaceutical Companies Rotation

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) pharmaceutical companies' rotation exposes the interns to the responsibilities and opportunities within the pharmaceutical companies and prepare them with advanced soft skills, problem-solving skills, and non-technical skills relating to the pharmaceutical industry that are applicable to other pharmacy careers as well.

Pharmaceutical companies' rotation will allow the intern to become familiar with:

1. Develop an appreciation of various roles of pharmacists in the industry field
2. Develop an awareness of corporate organizations, national and international regulatory constraints in the pharmaceutical industry
3. List the core functions and responsibilities of professional staff within departments of the pharmaceutical industry
4. Understand the impact of advertisement, post-marketing surveillance and pharmacovigilance on products within the healthcare industry
5. Develop certain transferable skills (nonspecific to a pharmacy degree) including organization, ingenuity, leadership, and collaboration
6. Develop advanced professional and inter-professional skills including communication skills

Intern Responsibilities

1. Actively engaged in all the tasks and activities requested for this rotation
2. Attend hospital site visits with preceptor or assigned employee
3. Follow the company policies

Preceptor Responsibilities

1. Orient the student to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities
2. Discuss policies, procedures, roles and responsibilities for the assigned department
3. Monitor student progress to ensure stated objectives are adequately addressed and met
4. Guide and answer student questions and share knowledge and skills with the student
5. Maintain student confidentiality
6. Provide mid evaluation at the beginning of third week and final evaluation at the end of rotation

Site Responsibilities

1. Provide a trainee ID or access permission to be able to enter and practice at the site
2. Inform the intern about hospital visits 24 hrs. ahead if applicable especially when the intern is using her own transportation
3. Provide access to hospital sites when visiting
4. Provide appropriate communication with PNU training and internship unit whenever needed

Pharmacovigilance Rotation

Goals and objectives

The Advanced Pharmacy Practice Experience (APPE) Pharmacovigilance rotation guides the pharmacy interns to detect, assess and prevent adverse drug reaction "ADR". It also provides the interns with fundamental knowledge and experience of ADRs risk and/or benefit analysis. Furthermore, it enhances the pharmacy students' knowledge, problem-solving skills, and non-technical skills.

Pharmacovigilance rotation allows pharmacy interns to:

1. Understand the structure and responsibility of pharmacovigilance in Saudi Food and Drug Administration (SFDA)
2. Understand the fundamental knowledge of pharmacovigilance
3. Recognize the adverse drug reactions (ADRs) when they occur
4. Participate in the actions taken in the prevention of ADRs when possible
5. Identify the risk factors and possible mechanisms underlying adverse reactions
6. Involve in the estimation of quantitative aspects of benefit/risk analysis and dissemination of information needed to improve drug prescribing and regulation
7. Manage the management of ADRs, including communication skills
8. Demonstrate the ability to report ADRs
9. Utilize the drug quality surveillance
10. Determine the type of ADRs reporting system available in Saudi Arabia
11. Identify the types of ADRs that should be documented
12. Review of the established process related to ADRs analysis
13. Utilize the international institutions working in pharmacovigilance

14. Demonstrate professional attitudes and behaviors that characterize a professional pharmacist
15. Demonstrate self-directed learning abilities during the rotation

Intern Responsibilities

1. Attend and participate in daily activities
2. Present ADRs and recommendations to preceptor
3. Conduct medication review(s), reconciliation and patient education (as required)
4. Answer relevant drug information questions as requested by preceptor or sFDA team
5. Display professional comportment: appearance, attitude, and behavior
6. Provide at least 1 activity (e.g., in-service, presentation)
7. Document of all interventions and all ADRs

Preceptor Responsibilities

1. Orient the student to the practice site, schedules (days and hours), break, evaluation methods, and overall responsibilities
2. Assign duties to the student for work up
3. Discuss pharmacovigilance management topics with the student.
4. Monitor student progress to ensure stated objectives are adequately addressed and met
5. Guide and answer student questions and share knowledge and skills with the student
6. Maintain student confidentiality
7. Provide final evaluation at the end of the week

Site Responsibilities

1. Orient the student to the practice site including system, policy and procedure, direction, parking, etc.
2. Provide a student ID to be able to enter the practice site
3. Provide access to the system to support the learning objectives and activities for this rotation

4. Communicate with PNU training and internship unit whenever needed

Formulary Management

Goals and objectives:

The formulary management rotation aims to allow pharmacy interns to understand the role of the pharmacist within the Pharmaceutical and Therapeutic Committee (P&T committee) when dealing with hospital formulary.

The formulary management rotation allows pharmacy interns to achieve the following:

- 1- Understand basic formulary management principles (knowledge)
- 2- Implement evidence base medicine to drive decision making (cognitive)
- 3- Ability to summarize and interoperate complex evidence in a logical manner (Skill)

Student Responsibilities

1. Attend on time
2. Complete all assigned tasks by the preceptor
3. Provide at least 1 activity (e.g., in-service, presentation) to the preceptor
4. Display professional comportment: appearance, attitude and behavior
5. React positively to constructive criticism

Preceptor Responsibilities.

1. Orient the student to the practice site, schedule, break, evaluation method and overall responsibilities
2. Monitor student progress to ensure stated objectives are adequately met
3. Provide mid and final evaluation

Site Responsibilities.

1. Orient the student to the practice site including policy and procedure, direction, parking, etc.
2. Communicate with the hospital team/service to start the training
3. Provide appropriate communication with PNU training and internship unit whenever needed

