



Advanced Pharmacy Practice Experience *Hospital / Health System Syllabus*

Course Number:	PHA 3020
Course Title:	Hospital / Health System Pharmacy Practice
Credit Hours:	5 Hours
Prerequisites:	P3 Standing
Date Syllabus Prepared:	January 13, 2010

Course Description:

This is a required 5-week advanced practice experience that prepares the student to function within a hospital or health-system of integrated pharmaceutical services. The student will develop an appreciation for all aspects of pharmaceutical care, both traditional and direct patient care responsibilities.

Background:

The emergence of new pharmacist roles in the health care setting and innovative technological advances in drug distribution systems has prompted the need for pharmacy graduates who can practice in integrated pharmacy environment. In order to provide pharmaceutical care, the practitioner must be able to confidently identify, prevent, and solve both drug-distribution and patient-specific drug-related problems.

Practice Description and Setting:

This course will take place within a hospital or health-system setting. In most settings, the pharmacy department will be using innovative automated distribution systems and providing a variety of services that reduce patient morbidity and mortality. Examples of such services include medication reconciliation, therapeutic pathways, antibiotic surveillance, patient counseling about appropriate use of medications, pharmacokinetic monitoring, parenteral nutrition consults and discharge counseling. When possible, both inpatient and outpatient experiences will be made available.

Outcomes and Goals

The Advanced Pharmacy Practice Experience Manual outlines the core outcomes and goals that are to be achieved by the end of the course. During the Hospital/Health System Pharmacy Practice experience, a special focus will be made on the following outcomes and goals:

Develop and Manage Medication Distribution and Control Systems - The student shall specify, develop, use and evaluate acquisition, inventory control and distribution systems, while documenting and maintaining quality.

- A. Meet with the pharmacy management staff and key staff practitioners and identify their roles and responsibilities.
- B. Review the Mission Statement, Strategic Plan, and Management Plans of the pharmacy department.
- C. Review the department's human resources and identify staff development that is occurring or needed in order to accomplish the Departmental Mission.
- E. Learn how equipment, such as automated drug distribution systems, functions.
- F. Develop a working knowledge of the medication control and distribution systems so that one can function within the pharmacy department's system.
- G. Review the institution's formulary system including standard drug administration times and drug protocols.
- H. Review policies and procedures for maintaining an accurate pharmacy/medication profile and accept responsibility for this during each rotation.
- I. Review the department's policies and procedures pertaining to the detection, evaluation, and report adverse medication errors and demonstrate the ability to follow these policies and procedures.
- J. Review the department's policies and procedures pertaining to the detection, evaluation, and reporting of adverse drug reactions and accept responsibility for following these procedures.
- K. Review the pharmacist's responsibilities during medical emergencies such as codes and cite the dosages and appropriate use of medications administered during a code and then assisting a pharmacist when called to a code.
- L. Identify strategies that the department is using to monitor and evaluate the cost of drug therapy and assisting the pharmacists in achieving these goals.
- M. Use an inventory control system to maintain fiscal goals and meet patient's needs.
- N. Perform drug control, storage, and security functions in pharmacy distribution.
- O. Properly store drugs, which are required to be stored in a secured area.
- P. Apply federal, state, and local laws and related regulations in making decisions about drug control, patient care, and pharmacy management.

Compounding / Preparation of Medications – The student shall develop proficiency in the use of equipment and devices for compounding medication products and in the preparation of sterile products.

- A. Collects and assembles the correct components for products that require compounding.
- B. Demonstrates competency in preparing a variety of intravenous medications using appropriate aseptic techniques.
- C. Demonstrates the proper procedure for maintaining the sterility of materials being assembled for compounding a sterile product.
- D. Demonstrates the proper use of equipment and devices used in compounding sterile products including horizontal and vertical laminar flow hoods.
- E. Perform proper preparation of total parenteral nutritional products (TPN).
- F. Compounds non-sterile products using the appropriate technique.
- G. Compounds cytotoxic and/or other hazardous drug products using the appropriate techniques.

Drug Therapy Assessment and Management – The student shall assess the appropriateness of patient’s drug therapy, including consideration of the chemical, pharmaceutical, pharmacokinetic, and pharmacological characteristics of the administered medications and develop a therapeutic plan for the patient.

- A. Assess each acute and chronic medical problem.
- B. Identify the following drug-related problems:
 - i. Drug therapy is needed for untreated indications.
 - ii. Patient is receiving a drug that has no indication and/or there is therapeutic duplication.
 - iii. There is a better choice of drug based on patient/disease characteristics, formulary, cost, etc.
 - iv. Drug therapy needs optimization (population and patient-specific pharmacokinetic and pharmacodynamic data indicate a drug regimen is not optimized).
 - v. Medication non-adherence.
 - vi. Drug induced disease/medical conditions.
 - vii. Socio-behavioral and economic barriers to effective drug therapy.
 - viii. Adverse drug reactions that are substantiated by laboratory, test, and physical findings.
 - ix. Routes of administration that are not the best, safest, and most cost-effective.
 - x. Drug interactions that are substantiated with pharmacokinetic/dynamic and compatibility information.
- C. Evaluate and prioritize each drug-related problem.
- D. Interpret the appropriateness of a medication order/prescription before preparing or permitting the distribution of the first dose to patients.
- E. Schedule medications so that they are in congruence with patient care, facility procedures, and are feasible.
- F. Ensure that consideration has been given to medications in the institution’s formulary.
- G. Establish desired therapeutic outcomes.
- H. Consider drug and non-drug therapy alternatives.
- I. Develop drug therapy plans that are patient-specific, comprehensive, logical, practical, consider current evidence-based medicine recommendations, include strategies for prevention, and include patient education.
- J. Establish a plan for therapeutic drug monitoring that includes accurate documentation of population and patient-specific parameters, dosing history/administration times, monitoring parameters, and daily SOAP notes/plans.
- K. Develop and implement the pharmacotherapeutic plan promptly, efficiently, accurately, and effectively.
- L. For drugs that have a narrow therapeutic range, assess the appropriateness of dosages that patients are receiving and recommend an appropriate regimen based on patient response.
- M. Use an effective patient monitoring system (monitoring forms).
- N. Monitor the patient and follow up at appropriate intervals.
- O. Revise drug therapy plans on an ongoing basis.
- P. Provide drug information and education for patients and care givers.
- P. Ensure continuity of pharmaceutical care to and from the acute and ambulatory care patient care settings where applicable.

The student should receive a schedule at the beginning of the month that will provide a time-line for completion of the rotation objectives. Some responsibilities may require the student to be present during evenings and weekends. The student’s daily responsibilities will involve

medication acquisition, preparation and dispensing-related activities, as well as patient assessment, monitoring, and drug therapy management.

Typical Rotation Schedule *(To be completed by preceptor and student)*

Times	Monday	Tuesday	Wednesday	Thursday	Friday	Weekends
7-8 am						
8-9 am						
9-10 am						
10-11 am						
11-12pm						
12-1 pm						
1-2 pm						
2-3 pm						
3-4 pm						
4-5 pm						

Rotation Activities

1. **Orientation to rotation** – During the first day of the rotation, the student will be oriented to the pharmacy services and hospital/health-system. Pertinent policies and procedures will be reviewed. The student should:
 - a. Tour the hospital and pharmacy and meet appropriate personnel. The preceptor will explain the personnel member’s role within the institution and duties to the student (if applicable) and the student’s responsibilities as a student pharmacist within the institution.
 - b. The student and preceptor should discuss rotation and institutional specific policies and procedures. Specific discussion points should include:
 1. Confidentiality including HIPAA
 2. Appropriate Dress
 3. Lines of Authority
 4. Student’s schedule
 5. Available drug information resources
 - c. Learn about the preceptor’s practice philosophy regarding professional responsibilities and pharmaceutical care.
 - d. Learn how to access computer and library resources within the practice site.
 - e. The student and preceptor should review and discuss the student’s professional portfolio.
2. **Student Responsibilities:**

- a. Establish rapport with the personnel of the pharmacy department and other health care providers responsible for the patient care as appropriate to facilitate patient-centered pharmaceutical care.
 - 1. The student is expected to be assertive and self-directed in establishing a working relationship with the health care providers and identifying the most effective ways to contribute to patient care.
- b. Discuss with the preceptor any drug-related issues that occur with patients that are being monitored.
- c. Develop a patient database, assess drug therapy, and develop a pharmacotherapy plan for assigned patients. This should be documented in your portfolio.
 - 1. The preceptor will observe the students medication history skills.
 - 2. The student is expected to explain and provide rationale for his/her database, drug therapy assessment, and pharmacotherapy recommendations.
 - 3. Students should review prescription orders, patient profiles and collect data to identify, resolve, or prevent drug related problems (DRP). Students should document a minimum of 10 DRPs involving prescription medications for which they intervened on the patient's behalf using the DRP Intervention sheet.
 - 4. The student is expected to conduct and document at least two (2) pharmacotherapy dosing consults for an inpatient. The documentation should be in the form of a brief SOAP note with pertinent patient information noted. The calculations and process used to obtain the dosing recommendation should be clearly documented and reviewed by the preceptor.
 - 5. The student is expected to conduct at least two (2) patient counseling sessions in the presence of the preceptor. A **patient counseling checklist** is provided in the APPE Manual.
- d. The student is expected to develop proficiency in the use of equipment and devices for compounding medication products and in the preparation of sterile products and multiple dosage forms.
 - 1. Demonstrates competency in preparing a variety of intravenous medications using appropriate aseptic techniques and mathematical calculations.
 - 2. The student is expected to prepare a minimum of 10 different parenteral preparations. The preceptor will observe for proper aseptic technique.
- e. Provide answers to drug information questions that arise during the rotation. All drug information responses must be reviewed with the preceptor before communication with other health care practitioners.
 - 1. Each drug information response should be supported by primary literature (when appropriate) and placed in the learning portfolio.
- f. If asked by the preceptor, give a formal Journal Article Presentation.

1. A copy of the presentation and faculty evaluation forms should be placed in your learning portfolio.
 2. The preceptor may assign additional literature analysis learning experiences as part of a weekly journal club.
- g. Give at least one (1) formal Patient Case Presentation to an audience that will be selected by the preceptor.
1. A copy of the presentation and faculty evaluation forms should be placed in your learning portfolio.
- h. Document all patient care activities, projects, and presentations in your portfolio as outlined in the Advanced Practice Experience Manual.
1. The preceptor will assess entries such as SOAP notes, interventions, presentations, and projects by the end of the rotation.
- i. The preceptor may require completion of an independent self-directed project (e.g., preparation and delivery of a health consumer presentation, presentation to health professionals, paper) or additional activities as appropriate for the practice site.
- j. Perform self-assessments by: corroborating midpoint and final rotation self-assessment ratings with those of the preceptor and writing a reflective self-evaluation at the end of the rotation.
- k. Demonstrate use of a core library of journals, reference books and databases that comprise your personal library.

Activities Checklist

Rotation Requirements	Minimum Expectation	Completed
Drug related problem interventions	10	
Patient counseling	2	
Pharmacotherapy consult / SOAP note	2	
Parenteral medication preparation	10	
Formal presentation	1	
Others:*		

* The preceptor may list additional activities as a required component of this course.

Additional Activities

Up to three (3) additional activities may be selected for each rotation. If core activities listed above are unable to be completed at the site then please select applicable replacement activities from the list provided below or document other applicable activities in the space provided.

- Participate in a MUE / DUE.
- Complete at least two (2) Adverse Drug Reaction (ADR) reports.
- Complete at least two (2) Occurrence Reports involving a medication error.
- Present at least one (1) journal article and prepare a written summary.

- Attend a Pharmacy and Therapeutics meeting and type a one page (double-spaced) reflective summary of the experience.
 - Prepare and present at least one (1) drug monograph.
 - Prepare an article for publication.
 - Create and reference a therapeutic drug protocol or pathway.
 - Prepare a case report (e.g. unique clinical finding, adverse drug event, drug interaction).
 - Participate in the development or revision of a departmental or institutional policy.
 - Create and present one (1) brochure or pamphlet for patient education (e.g. food-drug interactions).
 - Complete a project assigned by the preceptor.
 - Participate in blood pressure screening for at least 10 patients.
 - Participate in diabetes screening for at least 10 patients.
 - Participate in osteoporosis screening for at least 5 patients.
 - Administer immunizations and provide appropriate patient education.
 - Participate in a home visit with a home health provider and type a one page (double-spaced) reflective summary of the visit experience.
 - Compound at least five (5) different non-intravenous medication preparations.
 - Conduct a mock Board of Pharmacy inspection.
 - Participate in a mock JCAHO pharmacy inspection and type a one page (double-spaced) reflective summary of the experience.
 - Other:
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Textbooks / Resources

The student is expected to build a personal library of text resources. The following list outlines topics of resources to be included in the personal library; the student is expected to select a specific text or reference that covers the stated topic:

- Pharmacotherapy Book/Reference
- General Drug Information Reference
- General Medicine Book/Reference
- Physical Assessment Book/Reference
- Laboratory Interpretation Book/Reference
- Pharmacokinetics Book/Reference
- Adverse Drug Reaction Book/Reference

The student is expected to be self-directed in obtaining drug literature pertinent to patient care issues and is expected to have Internet access in order to utilize the College of Pharmacy library resources. The preceptor may assign additional required/suggested readings based on conference topics and patient care issues.

Students are expected to check their email and have internet access on a daily basis.

Grading and Assessment

Please complete the *APPE Student Competency Evaluation*.

Traditional Score	Equivalent Rubric Score	Final Letter Grade
90-100	4.75-5.00	A

80-89	4.25-4.749	B
70-79	3.00-4.249	C
<70	2.99 or below	F

Policies

Specific policies pertaining to all Advanced Practice Experiences are found in the *Appalachian College of Pharmacy, Advanced Pharmacy Practice Experience Manual*. A copy of this comprehensive manual is available on our website at www.acpharm.org under the Experiential Education section. Students are required to be at the rotation site a minimum of 40 hours/week. As a professional, the student is expected to stay beyond the usual work hours when patient care still needs to be completed.