PHRX 5101
Professional Experience in
Institutional Pharmacy

Revised September 2016
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Introduction and Use of This Manual

This manual is designed to guide both preceptors and students through PHRX 5101: Advanced Pharmacy Practice Experience in Institutional Pharmacy. It has been written and revised incorporating contributions from both preceptors and students with the aim of making it useful and user friendly. Students are required to read this resource to help them efficiently fulfill the objectives of this important experiential rotation while both students and preceptors are additionally encouraged to refer to it as needed. Use of the manual will help provide structure to the rotation while at the same time allowing important flexibility. This manual should be considered a supplement to the general administrative policies and procedures common to all APPE’s which are documented in the Professional Experience Program Manual.

While students participating in an Institutional pharmacy rotation will have the benefit of almost continuous contact with their preceptor, it is suggested that the preceptor and student schedule specific times to discuss and evaluate the student’s progress on a regular basis during the program. At a minimum three formal sessions at the start, midpoint, and end of the rotation are strongly suggested:

- The first session will orient the student to the preceptor and vice versa with the objective of sharing information about the site, the preceptor and the student.
- The second formal meeting should be scheduled at about the midway point of the rotation to share with the student information about their progress and noting areas of achievement as well as opportunities for improvement or growth. A midpoint evaluation needs to be submitted utilizing RxPreceptor.
- The third and final formal meeting with the student and preceptor are important to discuss the student’s achievements during the rotation and present them with their final grade. Student evaluations and approval of attendance logs need to be completed by this final meeting utilizing RxPreceptor.

Using the approach above will prevent any of the objectives from going unnoticed or being unnecessarily repeated, as well as afford the student and preceptor opportunities to share important information. Regular discussion and feedback will ensure the student and preceptor each have the benefit of improved communication and professional growth.

Course Description
PHRX 5101 – Advanced Pharmacy Practice Experience in Institutional Pharmacy
The student will apply pharmacy knowledge and skills to the provision of pharmacy services and patient care in institutional settings. Topics include pharmaceutical procurement and distribution, quality control, formulary system, provision of drug information, inpatient and outpatient provision of patient care and administrative aspects of institutional pharmacy.

Curriculum Overview
The curriculum overview provides extensive information on how to prepare yourself to be a successful student at The University of Connecticut School of Pharmacy. In the link provided, you can find preparatory guidelines, scholastic standards, various tracks and programs, as well as what lies beyond graduation.

Purpose
Advanced Pharmacy Practice Experiential (APPE’s) are designed to provide a practice environment that will permit the application of academically acquired fundamentals. The purpose of this rotation program is to provide an overview of contemporary hospital pharmacy practice. It will permit the student to learn basic drug distribution procedures and patient care practices in the eight areas described in the self-assessment section of this manual (Appendix A). These activities will be performed under the supervision of the hospital pharmacy staff. They will permit the application of academically acquired fundamentals to practice so as to provide the student with a structured and comprehensive learning experience.

Professionalism and Conduct
The University of Connecticut Board of Trustees has established a Compliance Program to help faculty and staff adhere to federal, state, and local regulatory requirements. This code of conduct reflects the University’s core values and serves to assure the highest standard of integrity throughout all University activities.

Here is a link providing the faculty and staff Code of Conduct in its entirety:
http://policy.uconn.edu/2011/05/17/employee-code-of-conduct/#letter

Schedule
The Office of Experiential Education (OEE) makes available in RxPreceptor the schedule for the APPE rotation year prior to the first rotation month of June. While there are certain holidays observed by the University, the student is expected to schedule their time at the experiential site consistent with the holidays observed by the rotation site. Occasionally the University may have closures, delays or early dismissals based on adverse weather conditions. Since weather conditions are often variable throughout the state, students and preceptors are advised to modify their schedule as deemed appropriate, and not based on the University’s closings/delays.

The student is responsible for scheduling activities required for completion of the rotation in conjunction with the preceptor. Preceptors are encouraged to create a schedule that offers students the opportunity to benefit from a full range of activities present during the course of the day. Therefore, there is flexibility in creating the schedule; however students are expected to spend a minimum of 8 hours per day 5 days per week 9am to 5pm Monday through Friday at the site or at approved alternate site completing required activities. Students are responsible for notifying their field coordinator of any schedule changes outside these designated times. Any absences from a rotation must be reported and approved by the preceptor utilizing the RxPreceptor system.

Field Coordinators
The University of Connecticut School of Pharmacy employs field coordinators who facilitate communication between preceptors, students and the School of Pharmacy. The field coordinators arrange a schedule to visit students during the course of the year.

During the course of their visits, the field coordinators will speak with the students and preceptors to determine progress, to monitor activities and address their suggestions and comments. Preceptors are encouraged to share, as early as identified, any student issues or concerns with field coordinators or to contact Assistant Dean of Experiential Education.

In cases where a site visit cannot be arranged, the field coordinator will attempt to contact both the student and preceptor and may request an email update from the student regarding aspects of the APPE.
Preparation for Rotations

The preceptor should develop goals and objectives for the student pharmacist to achieve during the institutional experience. A review of the practice site along with a thorough assessment of what makes it unique will go a long way towards helping make the best use of the learning opportunities. To help you evaluate your site, consider the following activities:

- Order processing
- MTM services, if applicable
- Medication reconciliation
- Pharmacokinetic monitoring
- Formulary management
- Inventory management
- Pharmacy management training opportunities
- Interdisciplinary health care services
- Community-based health and wellness services
- Ongoing disease state management programs
- Collaborative relationships with other health care professionals
- Business/contractual relationships with purchasers and vendors

There will likely be many other potential pharmacy related activities underway at your practice site that could also be added to this list with the goal of sharing and getting active student participation. Students who approach their learning opportunities with interest will benefit more from the variety of activities open to them.

Orientation

A thorough orientation benefits both parties by way of the exchange of information needed to set the ground rules of the site and clear the path for learning. An orientation is an excellent opportunity for the preceptor to share with the student a number of factors relevant to the site. This also provides the student an opportunity to discuss their own goals and objectives for this experience.

Recommended orientation topics should include (this list is not all inclusive):

- Expectations
- Workflow
- Drug information resources
- Pharmacy layout and stock arrangement
- Policies and procedures
  - dress code
  - Telephones
  - Coffee/meal/breaks
  - Hours of operation
  - Patient privacy and confidentiality
  - Parking
- Introduction to personnel and their responsibilities
  - Professional staff
  - Technicians
  - Various health care personnel
The student will be familiar with the following topics previously assigned in the institutional rotation curriculum. Therefore, the knowledge of these topics can be applied to patient care during the rotation.

- Commonly used injectable medications
- Nonprescription medications
- Laboratory tests and values
- Handling drug information requests
- Calculations
- Order processing and verification
- Medication reconciliation
- Drug devices (insulin delivery, self-injection devices, inhalers, PCAs)

Feedback
During the course of the rotation, preceptors are encouraged to provide students with insight, advice and additional information to assist them in developing practice skills. While all students receive strong didactic training based on hours of class and laboratory work, there can be great variability in the amount of experience students may have prior to their participation in this experiential rotation. Even students who have received extensive experience in an Institutional environment will benefit from the advice and feedback from another practicing professional. For all these reasons and more, students become better professionals from counsel shared with them during the course of this experience.

To ensure that feedback is timely and most effective, preceptors should schedule time to spend with each student on a regular basis to review the events of the recent past and offer both praise and constructive criticism. In an environment where a student will work with a number of other staff members, the staff should be encouraged to share their observations and concerns with the preceptor so that the preceptor is aware of areas in need of improvement and develop strategies to advance the student’s performance.

Just as practicing professionals continue their growth throughout their career, students will be developing continually during their experiential rotations. Effective feedback will maximize student professional growth and development. While it is important to point out areas of concern with regards to a student’s performance, this information will be more meaningful if advice such as —“here is how I would handle this situation…” goes along with it. Likewise, it is important to share with students positive information as well. Wise preceptors balance their feedback to students by layering both positive information as well as pointing out opportunities and advice for improvement much like a sandwich knowing that a constant stream of positive or negative information soon becomes meaningless to a student. Institutional pharmacy offers ample opportunities for students to assume the role of a pharmacist, and likewise a preceptor to witness the students’ performance first hand during the course of the rotation. It is quite likely that during the course of the rotation the student will grow in proficiency.

Evaluation
Periods of time must be set aside routinely for the student and preceptor to review and plan activities. This is important for both the student and preceptor so they can assess progress and determine which areas require improvement and which competencies have been demonstrated. A minimum of two formal face-to-face evaluation sessions at the midpoint and end of the rotation will be performed. Ongoing informal daily feedback from the preceptor and other staff is highly encouraged.
Student performance will be documented by the preceptor utilizing the evaluation tool available in the RxPreceptor system. Evaluations are to be completed at both the midpoint and at the conclusion of the rotation. The final course grade will be calculated by the RxPreceptor system based on the final evaluation. While the final evaluation determines the student’s grade, the Midpoint evaluation plays an extremely important role in sharing with the student their progress halfway through the APPE and providing them with a plan to build and improve upon the progress made towards successful APPE completion. The preceptor is encouraged to consider input from other pharmacy staff in the evaluation process. The evaluations must be shown and discussed with the student at each review period and the final evaluation should be shared with the student prior to leaving the site on the last day.

A preceptor and site evaluation will be completed by the student utilizing tools established in the RxPreceptor system. These forms will be completed once at the end of the rotation. The student is encouraged to provide constructive feedback on an ongoing basis during the rotation. If the rotation is team-taught, the student is encouraged to recognize the contributions of other personnel involved in your training.

**Student Self-Assessment (See Appendix A)**
The student will complete a self-assessment form at the start, mid-point and at the completion of the rotation. This self-assessment checklist serves several functions:
- It ensures that all areas of experience will be covered during the rotation.
- It demonstrates areas of strength as well as areas that need to be emphasized.
- It allows the experience to be tailored to each student’s needs and interests.

**Program Outline**
The program for the 160-hour hospital pharmacy rotation is divided into eight areas of concentration. These along with a suggested allocation of time are as follows:

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<tr>
<th>AREA</th>
<th>APPROXIMATE* TIME TO BE ALLOCATED</th>
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</thead>
<tbody>
<tr>
<td>Organization (institution &amp; department)</td>
<td>2-4 hours</td>
</tr>
<tr>
<td>Pharmacy practice/Drug distribution</td>
<td>24-32 hours</td>
</tr>
<tr>
<td>Related professional activities</td>
<td>12-16 hours</td>
</tr>
<tr>
<td>Laws, regulations, and procedures for controlled/investigational substances</td>
<td>2-4 hours</td>
</tr>
<tr>
<td>Sterile products/Special formulations compounding</td>
<td>24-40 hours</td>
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<tr>
<td>Procurement and inventory control</td>
<td>4-8 hours</td>
</tr>
<tr>
<td>Clinical activities</td>
<td>24-32 hours</td>
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<tr>
<td>Special assignments</td>
<td>24-40 hours</td>
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</tbody>
</table>

To ensure that all of these activities will be included in the program, the student is required to complete the self-assessment checklist (Appendix A). It is important that there be ongoing assessment of the student understanding and progression in all areas.

*This may vary depending on the institution and, in some cases, the previous experience of the student.
Program Objectives
The objectives relating to the eight areas of concentration are described below. While the goal of the program is to have the student demonstrate a proficiency in all areas, realistically, this may not always be the end result. The student should make every effort to budget time so that as many of the objectives is achieved as possible.

1. Organization (Institution and Department)
   - The student shall be able to describe the philosophy and goals (institutional and departmental) in a contemporary health care institution.
   - The student shall demonstrate an understanding of a health care institution organization and be able to describe the key management personnel (including pharmacy) and their responsibilities. The student shall be able to describe a Pharmacy organizational structure.
   - Given a list of hospital departments the student shall be able to describe their functions and the inter-relationship that may exist with the Department of Pharmacy Services.
   - The student shall be able to describe how the patient fits into the continuity of care concept and the inter relationships of health care providers. "Big Picture".
   - The student shall be able to describe examples of administrative communications and business operations within the health system organization.
   - The student shall be able to demonstrate knowledge of governing accrediting bodies, e.g., JCAHO, State Department of Health, and the Drug Control Division of the Department of Consumer Protection.
   - The student will be able to describe the roles of all pharmacy personnel, their optimal utilization and their required competencies.
   - The student shall be able to describe the concepts of patient care as practiced in the institution.

2. Pharmacy Practice/Drug Distribution
   - The student shall demonstrate the ability to process medication orders including interpretation, assessment and evaluation for appropriateness.
   - The student shall demonstrate ability to accept verbal medication orders, e.g., changing a physician's order and demonstrate knowledge of how to process such orders to appropriate systems.
   - The student shall demonstrate the understanding needed to process the following kinds of drug orders:
     - "after hours" medication acquisition.
     - "stat" medication order
• controlled drug order
• investigational drug order

• The student shall be able to provide the reasons for "automatic stop order" policies and list those types of drugs for which such policies are most commonly seen, e.g., clinical stop, and regulatory stop.

• Given an order for a non-formulary or restricted drug, the student shall know the procedures to satisfy the needs of the prescriber and patient.

• The student shall be familiar with policies and procedures relating to drug shortages.

• The student shall demonstrate familiarity with the drug information resources.

• The student shall demonstrate knowledge on the safe use of automated medication storage and distribution devices. Areas to be covered include access to medications, safety checks, monitoring, surveillance, storage, inventory, security, education and training.

• The student shall become familiar with the distribution systems used to deliver medications and related supplies to patient care areas within the institution. This shall include controlled as well as non-controlled medications and shall also involve appropriate storage of these items.

• In conjunction with a pharmacist or technician, the student shall conduct a routine inspection of a medication storage unit, emergency drug boxes and stat carts; and file a report of the results of said inspection.

3. Related Professional Activities:

• By means of discussions, assigned readings, or observation, the student shall be able to describe and discuss the roles of a pharmacist responding to, and participation in, cardio-pulmonary resuscitation (CPR).

• The student shall be able to describe the benefits and workings of a hospital formulary system.

• The student shall be able to describe the purpose/function and organization of a Pharmacy & Therapeutics (P&T) Committee with special consideration to the role of the pharmacist.

• The student shall demonstrate knowledge of the pharmacist's roles and responsibilities in serving on various hospital committees, e.g., nutritional support, infection control, critical care and medication errors.

• The student shall be able to demonstrate the ability to effectively communicate verbally, and in writing, in a health care environment.

• The student shall be able to describe the pharmacist's role in specialized pharmaceutical services, e.g., clinical pharmacokinetic drug monitoring, anticoagulation, antibiotic stewardship, consult services, etc...
The student shall be familiar with the Med Watch Program, including adverse drug reaction reporting.

The student shall be able to describe the various opportunities for pharmacists to participate in professional and educational activities. These may include continuing education, newsletters, staff development and professional organizations.

4. **Laws, Regulations and Procedures for Controlled/Investigational Substances:**

- The student shall demonstrate familiarity with controlled drug procedures within the institution. This will include record-keeping, labeling, destruction procedures, etc.

- The student shall be able to discuss problems related to Rx security.

- The student shall demonstrate an understanding of drug diversion. This shall include methods to monitor for, and the consequences of diversion.

- The student shall be able to discuss services available for impaired pharmacists, e.g., "Pharmacists Concerned for Pharmacists".

5. **Sterile Products/Special Formulations Compounding:**

- The student shall participate in routine sterile compounding (USP 797 compliant) as conducted in the institution and demonstrate knowledge of sterile technique and operation of the hoods and the record-keeping and quality control procedures employed.

- The student shall be able to demonstrate an understanding of the special handling requirements of chemotherapy compounding.

- Given an order for a TPN solution, the student shall be able to make appropriate calculations necessary for the compounding of the solution.

- The student shall demonstrate the ability to utilize packaging equipment used for sterile and non-sterile unit-dose and conventional packaging within the pharmacy department. This will include familiarity with packaging materials, labeling equipment and expiration dating.

- By utilizing appropriate reference sources the student shall demonstrate knowledge of the characteristics of parenteral drugs, compatibility, administration rates, etc…

6. **Procurement and Inventory Control**

- The student shall be able to describe the drug purchasing system(s) used by the institution. This will include responsibilities and cost savings strategies of group purchasing.

- The student shall demonstrate knowledge of inventory storage/control/reorder procedures used within the institution.
• The student shall demonstrate knowledge of the pharmacy department’s procedures regarding returning goods to a manufacturer/wholesaler, outdated, drug product recalls, or shortage situations.

7. **Other Activities**

• Parenteral Medications – (Top Ten and Three Patient-Focused Write-Ups)
  It is important that the student know as much as possible about the drugs being dispensed and used within the institution. Working in an institution exposes the student to dozens of parenteral medications otherwise not encountered in other areas of pharmacy practice.
  
  o The student will benefit from using the specific resources available relating to the preparation and administration of parenteral drugs.
  o The student is expected to become knowledgeable of the Top Ten list of parenterals and complete three patient-focused write-ups assigned by the preceptor. See Appendix B
    
    Grading of the three (3) patient-focused parenteral write-ups should be incorporated into the preceptor's evaluation of the student.

• Other suggested activities include visits to various departments, interactions with health care professionals in patient care areas, attendance at medical rounds, ambulance rides, etc…

8. **Special Assignments**

The preceptor shall assign one or more project(s) to be completed by the end of the rotation. The problem solving assignment(s) should be meaningful and useful to the Pharmacy Department. If appropriate, the project(s) could be concluded by a presentation to the Pharmacy staff or a Hospital committee. At the time of each of your coordinator’s site visits you should update them on the nature of the assignment(s) and discuss steps you are taking to reach your goal.

**Outreach and Education**

Objective: The student will design and execute one outreach and education project to be determined by mutual agreement between the preceptor and the student.

The student is encouraged to seek opportunities to provide pharmacy support for ongoing institutional initiatives or projects. Below is a small sample list to jump-start your brainstorming. By the end of the first week, the topic and venue will be scheduled in concert with the preceptor. The student will gather resources and write an outline of the planned activity to be shared with, and approved by the preceptor. A practice presentation will be given to the preceptor and pharmacy staff prior to the actual presentation. The presentation will be supervised by the preceptor, particularly if it is off site.

Students are to document all outreach activities in RxPreceptor under the student self-evaluation tab.

**Outreach Activities**

As a public land grant/sea grant university, a third of our mission is service, outreach, and public engagement. Your preparation to become a pharmacist is rich with opportunities to provide stakeholders
with meaningful contributions of your knowledge. Such outreach activities provide a rich opportunity to interact with the public and develop the skills you will call upon throughout your career in the profession of pharmacy.

There are a number of opportunities to provide outreach in an institutional setting. An outreach activity may have as its intended audience: people outside the pharmacy, such as a presentation or activity at a senior center; people working at the pharmacy site, such as a health event held for the benefit of the hospital employees, or on a smaller scale, such as a presentation made to the staff of the pharmacy regarding the pharmacology of a family of drugs. The key point is that students are greatly encouraged to prepare an outreach project of a scale appropriate to provide a resource back to the practice site. Some examples include, but are not limited to:

- Metered Dose Inhaler Technique Checks
- Cardiovascular Risk Factor Check Up
- Blood Pressure Screening
- Women’s or Men’s Health Awareness Day
- Folic acid for women of childbearing age
- Bone Fracture Risk Screening
- Poison Prevention
- File of Life
- Review of a pharmacological class of drugs with the staff

Several national pharmacy associations’ (for example: The National Association of Chain Drug Stores or The American Pharmacists’ Association) web sites have a calendar of health promotion dates and resources that can be used to discover topics. Students are encouraged to develop innovative initiatives during each rotation.

As in any other work in a health care environment, the outreach project must be documented. The student will submit a community outreach report in the RxPreceptor system after completing the activity. Demographic information about the audience can be estimated. Data from these reports will be used to help document our school’s contribution towards the mission of the University.

Please note any outreach activities requiring the student or preceptor to draw blood will need to be conducted in compliance with CLIA regulations.

RxPreceptor Document Library:
Students are encouraged to review the RxPreceptor document library for forms and information relevant to the experiential learning program. For example, a partial list of the resources posted there include:

- Pharmacy Commission and Licensure information
- Health Forms
  - APPE Calendar
- Residency preparation information
Mission Statement of the University of Connecticut
The University of Connecticut is dedicated to excellence demonstrated through national and international recognition. Through freedom of academic inquiry and expression, we create and disseminate knowledge by means of scholarly and creative achievements, graduate and professional education, and outreach. With our focus on teaching and learning, the University helps every student grow intellectually and become a contributing member of the state, national, and world communities. Through research, teaching, service, and outreach, we embrace diversity and cultivate leadership, integrity, and engaged citizenship in our students, faculty, staff, and alumni. As our state’s flagship public University, and as a land and sea grant institution, we promote the health and well-being of citizens by enhancing the social, economic, cultural, and natural environments of the state and beyond.

Mission Statement of the UConn School of Pharmacy
It is the mission of the School of Pharmacy to bring together a diverse group of faculty, staff, and students to advance the quality of health care by providing outstanding professional and graduate education, pioneering research in the pharmaceutical sciences, and committing to excellence in pharmacist-directed patient care.

Mission Statement of the Department of Pharmacy Practice
The Department of Pharmacy Practice is a leader in teaching, scholarship and public engagement. We serve the public, the profession, and improve the quality of healthcare by:
• Preparing future pharmacists to be compassionate and effective healthcare leaders
• Providing continuing professional development for current pharmacists
• Providing health maintenance and promoting disease prevention
• Providing care for the sick
• Educating patients, caregivers and healthcare colleagues on the optimal use of medications
• Engaging in collaborative and innovative scholarly activities
• Leading professional and advocacy organizations
• Promoting the development and integration of pharmacists in healthcare delivery models

Mission Statement of the Office of Experiential Education
The Office of Experiential Education coordinates the pharmacy practice experience components of the professional pharmacy curriculum. These experiences include introductory experiences in community, institutional and service learning known as Introductory Pharmacy Practice Experience (IPPE), as well as the Advanced Pharmacy Practice Experience (APPE). These experiential components are designed to provide students opportunities to apply information gained from didactic learning through hands-on experience in a variety of pharmacy practice settings beginning early in their professional training and continuing through their final year of the Doctor of Pharmacy program. The mission of the experiential program is to assist students in developing the knowledge, skills and attitudes required of a competent and caring pharmacy professional.
Advanced Pharmacy Practice Experiences (APPE) Syllabus Development

There are many benefits of having a syllabus posted for Advanced Pharmacy Practice Experiences (APPEs). Consider assisting your APPE preceptors in the process of updating or developing a syllabus for the APPEs available at your practice sites. This tool serves as a resource to help students navigate their learning experiences. Syllabi posted for each APPE also enhances the School of Pharmacy’s accreditation organization (ACPE) understand the great diversity of learning experiences UConn students have available to them.

Key benefits of having a syllabus:

- Students know what to expect from the experience both in terms of learning opportunities and methods as well as requirements and preparatory materials.
- Preceptors know that students arrive with an understanding of the key features and expectations of the learning experience.
- Students gain insight into the importance of the learning experience to the practice of pharmacy and the preceptor’s philosophy about learning.
- Preceptors have an archived document available to guide the orientation process and the assurance that the information has been communicated to students.
- Prospective students have the opportunity to review syllabi to appropriately select APPE opportunities most closely aligned with career aspirations.

A sample document is provided in Appendix C to facilitate the creation of your document. It may be used and edited as appropriate to reflect a specific rotation. This template is provided as a starting point to assist preceptors developing a syllabus for the first time. A final document can be uploaded to Rxpreceptor or forwarded to the Office of Experiential Education for uploading.
## Appendix A

### Self-Assessment of Institutional Experience

(To be completed by student and shared with preceptor)

<table>
<thead>
<tr>
<th>AREA 1: THE INSTITUTIONAL ENVIRONMENT</th>
<th>START</th>
<th>MID-TERM</th>
<th>FINAL</th>
<th>NOT COMPLETED (give reason)</th>
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<tbody>
<tr>
<td><strong>A. Pharmacy Orientation</strong></td>
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<tr>
<td>1. A brief orientation to the philosophy and goals of the pharmacy department</td>
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<td>2. Introduction to pharmacy personnel—a discussion of levels as well as responsibilities.</td>
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<tr>
<td>3. Overview of pharmacy services offered within the institution.</td>
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<tr>
<td>4. Involvement of pharmacy department in training programs, committees, etc. (within and outside the institution).</td>
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<tr>
<td>5. Tour of the pharmacy department including dispensing areas, clean rooms, storage, records, etc.</td>
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<tr>
<td>6. Introduction to the policy and procedure manual for pharmacy. (Should be reviewed by the student).</td>
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<tr>
<td><strong>B. Hospital Orientation</strong></td>
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<tr>
<td>1. A brief orientation to the philosophy of institutional services and patient needs. To include discharge planning and continuity of care.</td>
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<tr>
<td>2. Institutional ownership, management and corporate relationship.</td>
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<tr>
<td>3. Institution organization (organization chart) including the relationships of the various departments and levels of personnel; understanding of the duties, responsibilities and qualifications of the respective members; and a discussion of the function of the various institutional committees.</td>
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<tr>
<td>4. Licensure, certification, and accreditation process within the institution. This would include JCAHO, State of CT Dept of Health and Drug Control.</td>
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<tr>
<td>5. Knowledge of pharmacy related interactions with departments, e.g., billing, personnel, dietary, medical records and purchasing.</td>
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</tbody>
</table>

### AREA 2: PHARMACY PRACTICE/DRUG DISTRIBUTION

**A. Inpatient Dispensing**

1. Knowledge of distribution systems employed
2. Receiving and interpreting medication orders:
   - a. Written/order entry
   - b. Telephone, verbal, fax and computer orders.
### AREA 2: PHARMACY PRACTICE/DRUG DISTRIBUTION (Continued)

<table>
<thead>
<tr>
<th>3. Processing medication orders:</th>
<th>START</th>
<th>MID-TERM</th>
<th>FINAL</th>
<th>NOT COMPLETED (give reason)</th>
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</thead>
<tbody>
<tr>
<td>a. Regular and emergency order procedures.</td>
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<tr>
<td>b. Patient drug profile check.</td>
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<td>c. Proper selection of prescribed drug.</td>
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<tr>
<td>d. Locating drug.</td>
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<tr>
<td>e. Labeling (regular and auxiliary) and packaging.</td>
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<tr>
<td>f. Checking.</td>
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<tr>
<td>g. Charging-Crediting</td>
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<tr>
<td>h. Dispensing systems.</td>
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<tr>
<td>i. Record keeping and dispensing of prescriptions</td>
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<tr>
<td>j. Patient's personal medications</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Cancellation of Physicians orders</th>
<th>START</th>
<th>MID-TERM</th>
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<th>NOT COMPLETED (give reason)</th>
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</thead>
<tbody>
<tr>
<td>a. Automatic stop orders</td>
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<td>b. Orders changed through pharmacist intervention</td>
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<table>
<thead>
<tr>
<th>5. Acquiring information on drugs and drug dosage forms</th>
<th>START</th>
<th>MID-TERM</th>
<th>FINAL</th>
<th>NOT COMPLETED (give reason)</th>
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</thead>
<tbody>
<tr>
<td>a. For drugs unfamiliar to student.</td>
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<tr>
<td>b. Drug information request by other health professionals.</td>
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<tr>
<td>c. Special orders, e.g. non-formulary requests, restricted drugs, investigational drugs, etc.</td>
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<tr>
<th>6. Supervision of supportive personnel.</th>
<th>START</th>
<th>MID-TERM</th>
<th>FINAL</th>
<th>NOT COMPLETED (give reason)</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>7. Delivery of medications (schedules and methods)</th>
<th>START</th>
<th>MID-TERM</th>
<th>FINAL</th>
<th>NOT COMPLETED (give reason)</th>
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</thead>
<tbody>
<tr>
<td>a. Personnel and equipment</td>
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<tr>
<td>b. Security</td>
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<td>c. Storage on patient care areas, (e.g., labs, clinics, etc…).</td>
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<tr>
<td>d. Automated Dispensing Systems.</td>
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<table>
<thead>
<tr>
<th>8. Inspection of medication on nursing units</th>
<th>START</th>
<th>MID-TERM</th>
<th>FINAL</th>
<th>NOT COMPLETED (give reason)</th>
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<tbody>
<tr>
<td>a. Regular stock</td>
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<tr>
<td>b. Emergency stock and kits</td>
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<td>c. Controlled drugs</td>
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<tr>
<td>d. Methods of recording and reporting the inspection</td>
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<thead>
<tr>
<th>9. After hours drug acquisition</th>
<th>START</th>
<th>MID-TERM</th>
<th>FINAL</th>
<th>NOT COMPLETED (give reason)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. After hours pharmacy entry, emergency kits, night drug cabinet, automated dispensing system and on-call pharmacist.</td>
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<tr>
<th>10. Additional drug distribution services</th>
<th>START</th>
<th>MID-TERM</th>
<th>FINAL</th>
<th>NOT COMPLETED (give reason)</th>
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</thead>
<tbody>
<tr>
<td>a. Floor stock system</td>
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<tr>
<td>b. Stocking of clinics, emergency room, etc.</td>
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</table>

### B. Outpatient Dispensing

1. Availability of services, e.g., employees, discharge and pass medications, clinics, emergency room, etc.

2. Medication sampling policy
### AREA 3: RELATED PROFESSIONAL ACTIVITIES

#### A. Hospital Formulary Management
   1. Pharmacy and Therapeutics Committee (P&T) (attendance at one meeting is recommended.)
      a. Purpose, function and organization
      b. Responsibilities and duties of the member pharmacists.
      c. Generation and distribution of minutes.
      d. ADR's, DUE's, Medication error reporting.
   2. Hospital Formulary System
      a. Rationale and operation
      b. Selection and deletion procedure for drugs
      c. Procedures for non-formulary requests.
   3. Emergency/disaster planning and preparedness

#### B. Interdepartmental Relations
   1. Collaborative Practice, Quality Assurance, Infection Control, etc.
   2. Other liaison committees/teams e.g., nutrition, CPR, care plan, etc.

#### C. Professional Education and Activities
   1. Departmental continuing education
   2. Interprofessional educational activities, e.g., newsletters, bulletin board and in-service programs.
   3. Professional organizational activities.
   4. Staff development programs (intra/departmental), mandatory credentialing.

#### D. Communications
   1. Formal vs. informal
   2. Written
   3. Verbal
   4. Electronic

#### E. Pharmacists concerned for Pharmacists:

### AREA 4: LAWS, REGULATIONS AND PROCEDURES FOR CONTROLLED & INVESTIGATIONAL SUBSTANCES

#### A. Controlled Substances
   1. Processing of controlled substance orders (includes record keeping).
   2. Procurement, storage and return of controlled substances.
   3. Pharmacy and nursing control drug audit procedures
   4. Preparation and repackaging of controlled drugs
   5. Destruction of controlled drugs
   6. Guidelines for use of Methadone (maintenance, detoxification and analgesia)
   7. Transfer of controlled substances between hospitals and community pharmacies
### AREA 4: LAWS, REGULATIONS AND PROCEDURES FOR CONTROLLED & INVESTIGATIONAL SUBSTANCES (continued)

<table>
<thead>
<tr>
<th></th>
<th>START</th>
<th>MID-TERM</th>
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</table>

### B. Investigational Drugs

1. Control methods and records
2. Responsibility of pharmacy and investigator
3. Patient consent forms
4. Reordering

### AREA 5: STERILE PRODUCTS, SPECIAL FORMULATIONS & COMPOUNDING

#### A. Non-Sterile Products

1. Equipment and procedures
2. Quality control procedures

#### B. Parenterals/Sterile Products

1. IV Admixtures
   a. Aseptic technique
   b. Equipment and procedures
   c. Information sources on incompatibilities and stability
   d. Medication protocols
2. Total Parenteral Nutrition products
   a. Central
   b. Peripheral
3. Chemotherapy:
   a. Safety Issues
   b. Quality Assurance
   c. Protocols
4. Quality control procedures, including sterility testing

#### C. Packaging-Unit Dose and Conventional

1. Solids
2. Liquids
3. Sterile products

### AREA 6: PROCUREMENT AND INVENTORY CONTROL

#### A. Procedures on products specifications, Contracts, hospital and group bidding

#### B. Ordering Procedures

1. Direct, wholesaler and other institutions
2. Inventory level control

#### C. Receiving/Checking/Pricing
### AREA 6: PROCUREMENT AND INVENTORY CONTROL (continued)

<table>
<thead>
<tr>
<th>D. Arrangement of Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Routine stock</td>
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<tr>
<td>2. Special storage areas</td>
</tr>
<tr>
<td>E. Outdated Product Procedures</td>
</tr>
<tr>
<td>F. Product Return Policies and Procedures</td>
</tr>
<tr>
<td>G. Recall Procedures</td>
</tr>
</tbody>
</table>

### AREA 7: CLINICAL ACTIVITIES

| A. Visitation to Other Departments (Optional) |
| Student & Preceptor Discussion |
| B. Interaction With Health Care Professionals In Patient Care Area |
| C. Attendance at Medical Rounds And Conferences (Optional) |

### AREA 8: SPECIAL ASSIGNMENTS

| A. Project(s)/ staff seminar presentation |
| B. Parenteral Drug (See Appendix B)s |
Appendix B
Parenteral Medication Assignment

Guidelines for the Preceptor
The Preceptor should:

- Identify three (3) parenteral drugs for the student to research. These drugs should be related to current patient care.
- Review with the student the current Top Ten parenteral drugs utilized by the institution.
- Assist the student in getting started, e.g., sample write-ups, location of reference sources, personnel who may be able to assist, etc.
- Reinforce with the student the purpose of this assignment.
- Other recommendations:
  o Provide Mini case studies- i.e., follow a patient on a specific parenteral.
  o Expose student to patients actually receiving these meds. Observe compounding prior to dispensing and administration by nursing personnel.
  o Quiz students on administration rates, uses, etc.
  o Include a discussion of relevant therapeutic monitoring.
  o Possible oral presentation to staff.

Guidelines for the Student
The student should:

1. Understand purpose of write-ups, Top Ten List, terminology, sources of information, etc.
2. The work on write-ups and top 10 spread out over the duration of the rotation.
3. Prepare three (3) patient-focused write-ups. The student should understand the information researched and be prepared to discuss with their preceptor.

Required information:

- Generic Name
- Brand Name.
- Container(sizes/volumes)
- Color (of solution/powder)
- Type of Container (ampoule/vial/syringe/etc.)
- Indications for use (list major or significant uses, as well as off-label use of the drug)
- Clinical pharmacology
- Usual adult dosing
- Recommended diluents for reconstitution or dilution
- Recommended preparation and safe administration
- Approved parenteral routes of administration
- Serious and/or frequent side effects
- Notable physical, chemical, or therapeutic incompatibilities when used in combination with other drugs or solutions
- Significant warnings/precautions
- Relevant patient monitoring parameters
- Stability and storage (before and after)
- Overall student evaluation of the use of this drug in this case. Note whether drug is appropriate for indication(s), therapeutic goals were reached, appropriate dosing, administration, monitoring, etc. What was the patient outcome?
Appendix C

This Syllabus Blank is provided to help you design one for your site’s experiential learning opportunity.

Advanced Pharmacy Practice Experience Syllabus Format for: Rotation Name

Preceptor Name(s) & Contact information:
Information including address, phone number, email, pager etc. along with instructions on the preceptor’s preferred method of contact.

Goals of the Experience:
Include a short overview of what the experience entails and what the student should learn by participating. It would start out something like this:
The goal of this APPE is to expose the student to patient care in a [fill in blank] setting. Through their participation, students will gain the knowledge, skills, and attitudes necessary to... (fill in to capture the big picture of the experience).

Outcomes/Objectives:
List a number of outcomes for the experience. There are two samples listed below. An ability-based outcome (ABO) format, which is composed of knowledge, skills, and attitudes is preferred. Below, the ABO is in bold and individual objectives follow in a list. You probably need only three to five ABOs for most APPEs. If you struggle with the ABOs, try writing individual objectives first and then group them logically to identify common themes.

- **Students should be able to identify and utilize drug information services to facilitate their role as a drug information specialist for other health care professionals and patients to achieve positive therapeutic outcomes.**
  - Interact appropriately with other members of the health care team.
  - Know and use sources of drug information for any given patient care area.
  - Apply drug information to obtain positive outcomes for patients.
    - Serve as drug information specialists for patients and other health care professionals.

- **Students should be able to develop oral or written presentations on drug-related topics for other health care professionals and patients.**
  - Effectively communicate in verbal and/or written form, in concise and organized fashion, a pharmaceutical evaluation of the patient.
  - Serve as drug information specialists for patients and other health care professionals.
  - Develop presentation skills for various audiences for interdisciplinary education.
  - Develop communication skills for patient education.
Activities/Projects

List activities the student will perform. Although you can organize the list however you wish, sorting activities into daily, weekly, one-time, intermittent, and optional categories will make it easier for you to create your calendar later. This list can be quite long. Create something like the following list, but with specific details instead of generalities:

- Activity 1, Daily (maybe a patient care activity)
- Activity 2, Daily (maybe a quality assurance activity)
- Activity 3, Weekly (maybe a journal club)
- Activity 4, Twice Weekly (maybe a disease topic presentation)
- Activity 5, One Time (maybe a formal oral presentation to staff)

Evaluation Criteria:
Activities will be evaluated by direct observation from the preceptor as well as reports of performance from other health care team members collected periodically throughout the rotation. Please share any additional evaluation techniques that will be used

- A formal midpoint evaluation will be conducted with the student using the UConn format provided and documented in RxPreceptor.
- A formal end of APPE evaluation will be conducted with the student using the UConn format provided and documented in RxPreceptor.

Attendance:
Students are expected to observe the University of Connecticut School of Pharmacy policies with regards to attendance as noted in the latest version of the Professional Experience Program Manual posted in RxPreceptor. Please share any additional attendance policies specific to your practice that will be used.

Student Conduct Guidelines:
These could include many things. Here are some examples:

- The student must exhibit a professional appearance in manner and dress
- The student must adhere to the standards of dress and behavior specified by the instructor to whom he or she is assigned. These standards should be identical to those required of all pharmacists in the pharmacy.
- The student shall identify himself or herself as a student at all times.
- Academic honesty is expected. Any lapses in academic honesty will be subject to the processes and procedures established by the University of Connecticut School of Pharmacy.
- The student is obligated to respect any and all confidences revealed during the assignment in pharmacy records, medical records, fee systems, professional policies, etc.
- The student must keep in mind that the primary objective of APPEs is learning and that learning is not a passive process but requires a deep and active commitment on the student's part.
The student should recognize that the optimum learning experience requires mutual respect and courtesy between the instructor and himself or herself.

The student should encourage communication with all persons involved in the APPE including the instructor, physicians, other health professionals, and patients.

When making professional judgments the student should first discuss alternatives with the instructor.

The student is responsible for adhering to the work schedule established with the preceptor. For the student's own benefit, it may be necessary at times to devote more than the scheduled time or to deviate from the schedule.

The student should be punctual in meeting the schedule and is obligated to notify the instructor as soon as possible (please specify the preferred method of communication) if he or she will be absent or late.

**Student Evaluations of APPE and Preceptor:**
Students will comply with the University of Connecticut School of Pharmacy policies regarding the recording of evaluation for both Preceptors and their sites in the RxPreceptor system. Because evaluations are the cornerstone for improving the experience, the faculty for this APPE are very interested in hearing your opinion. Please feel free to provide feedback throughout the experience, as well. It may not be possible to make changes midstream, but we would still like your input.

**Background Material:**
List training materials, journal articles, guidelines, book chapters, etc. that you want students to read or complete prior to beginning your experience.
- Reading 1
- Reading 2

**Additional Requirements:**
List tools and equipment students need to be successful, such as laptop, handheld device, calculator, etc.
- Requirement 1
- Requirement 2

**Access to Site Benefits:**
List site-specific benefits that students have access to and procedures they need to follow, such as:

- While on this APPE, students have access to the following:
  - Parking instructions and procedures to obtain parking.
  - Any meal policies if applicable.
Accommodations:
Students who require an accommodation in the academic setting should contact the Center for Students with Disabilities (http://csd.uconn.edu/) Please feel free to contact a member of the Case Management Team at (860) 486-2943 or via e-mail at ODE@uconn.edu for further assistance.
When in doubt, please do not hesitate to contact the Office of Experiential Education for advice.

Frequently Asked Questions:
Refer to the Document Library located on-line in RxPreceptor.