The mission of the curriculum is to prepare students to optimize pharmaceutical care at the level of a pharmacotherapy generalist. The curriculum prepares pharmacists, as health care providers, to work collaboratively with others to achieve effective use of medicines and other interventions to mitigate disease and maximize health and well-being of patients and of society as a whole. The curriculum fosters professionalism and civic involvement while encouraging advancement of the profession and the individual through life-long learning.

**Professional Year:** P4, all terms

**Meeting times, location** Each rotation is 5 weeks in duration and at least 40 contact hours per week. The exact time and location is dependent on the preceptor’s schedule and clinic site.

**Prerequisites**
1. Students must successfully complete all required Doctor of Pharmacy course work in the first 3 professional program years.
2. Students must have a cumulative GPA ≥ 2.0
3. Students must hold a current certification in adult cardiopulmonary resuscitation.

**Participating Faculty** Varies with site

**Course Description**

During this rotation students will develop their pharmaceutical care skills for patients who are in an institution (e.g., hospital). Skills to be developed through direct patient care include:

- Proper use of patient-specific comprehensive data (patient/caregiver interviews, past medical records, medication history, physical exam findings, diagnostic and laboratory data) for making drug therapy decisions that reflect pharmaceutical care.
- Developing safe and cost-effective patient-specific pharmaceutical care plans with specific goals to resolve or prevent drug-related problems. These plans should be developed using previously gathered data and knowledge of pharmacokinetics, pharmacodynamics, social, cultural, ethical and humanistic factors.
- Proper implementation of patient-specific pharmaceutical care plans through written and oral communication. Plans should be communicated so that patients as well as other health care providers can understand their scope, nature and importance. Plans should inform all those involved of the risks and benefits of therapy, as well as clearly outline the proper use and desired outcome.
- Clearly document, using appropriate style and language, pharmaceutical care plans and patient care activities in the medical chart when appropriate.
- Monitoring of patient-specific pharmaceutical care plans through collection and interpretation of pertinent data. All care plans should be assessed to see if previously defined goals have been achieved. In assuming the responsibility for outcomes it may be necessary at times to reevaluate treatment plans or therapeutic goals.
Core Ability Outcomes

1. Patient Assessment
   • Review manual or electronic patient record/profile to accurately identify factors affecting therapy, health or disease management
   • Create and/or update patient record/profiles accurately and in a timely manner
   • Accurately create a drug-related problem list with prioritization of problems
   • Conduct accurate and complete patient interviews to obtain medication histories
   • Accurately perform necessary elements of physical assessment (e.g., blood pressure, foot exam)
   • Accurately assess patient health literacy and compliance
   • Accurately assess patient health status and care needs based on race, cultural, or socioeconomic criteria

   • Assess appropriateness of patient medication therapy (e.g., drug, dose, routes, etc.)
   • Make appropriate and complete recommendations for care: non-pharmacologic and pharmacologic therapies
   • Establish therapeutic outcomes/goals
     - Identifies and evaluates feasible therapeutic alternatives
     - Designs drug therapy regimen
   • Consult and collaborate with healthcare professionals, practicing as a member of an interprofessional team
   • Effectively manage treatments to enhance outcomes
   • Assess regimen for efficacy and toxicity
     - Selects parameters that are specific, measurable, achievable and associated with time frames
     - Redesigns regimen as necessary
   • Effectively document interventions in patient record/profile
   • Consult and intervene with patients and health care professionals regarding self-care and prescription medications
   • Recommend appropriate non-drug treatments (e.g., diet, smoking cessation, CAM)
   • Retrieve, evaluate and use scientific information to provide information and/or make therapeutic decisions
     - Use a systematic, efficient and thorough procedure for information retrieval and evaluation
     - Justify in writing or verbally in clear, concise and persuasive language
   • Demonstrate ability to appropriately triage patient for treatment or referral

6. Management
   • Detect and report medication errors and adverse reactions
   • Effectively collaborate with technical support staff to optimize care
   • Demonstrate appropriate human relations skills: displaying interest in others; sensitivity, empathy, acting in the best interest of others
   • Manage time wisely to maximize productivity and fulfill rotation obligations

General outcomes
   • Accurately identify, manage, and prevent drug-related problems and make appropriate decisions
   • Demonstrate needed scientific and practice knowledge to achieve rotation outcomes
     - Disease states including pathophysiology, anatomy/physiology
     - Drug therapy including pharmacology, kinetics, dosing
   • Able to effectively communicate
     - Use skills for effective verbal communication
     - Use skills for effective written communication
     - Use appropriate persuasion techniques to positively impact drug use
   • Demonstrate the characteristics of a pharmacy professional

Methods of Learning
Ability outcomes will be evaluated based on the student’s performance of various tasks throughout the rotation. The methods of learning will vary with the rotation site.

**Rotation Requirements**

**CORE REQUIREMENTS MUST BE COMPLETED. IF A CORE REQUIREMENT CANNOT BE COMPLETED DUE TO A SITE-SPECIFIC REASON, THE PRECEPTOR MUST PROVIDE AN EXPLANATION IN THE STUDENT’S EVALUATION. ASSIGNMENTS SPECIFIC TO THE SITE MAY SUPERCEDE OR SUPPLEMENT THE ADDITIONAL REQUIREMENTS AT THE DISCRETION OF THE PRECEPTOR.**

**Core Requirements**

- Maintain daily monitoring forms for at least 25 patient days during the rotation. Monitoring each day should include conditions being treated, pharmacotherapy plans, physical findings and laboratory test values to determine appropriateness and safety of therapy, and outcomes.
- Complete and present a minimum of 1 formal and 3 informal case presentations. Each presentation should involve a different disease state or focus of therapy. An analysis of disease state and treatments, including references to national and/or institutional treatment guidelines, should be included in the presentation.
- Identify and document a minimum of 25 drug related problems (for example 5/week) with patient-specific solutions.
- Provide drug information responses to the preceptor, pharmacy team, and/or health care medical team and submit written summaries, including references, to at least 3 drug information requests.
- Prepare written reports for 2 Adverse Drug Reactions.
- Prepare written reports for 2 Medication Errors or prevented Medication Errors.
- Attend at least one interdisciplinary meeting (ex. Pharmacy and Therapeutics Committee meeting, Patient Care Conference, etc.) and provide a written summary of what was discussed.

**Additional Requirements (if site offers opportunity for the experience)**

- Present/lead one journal club article discussion.
- Prepare 2 written discharge/transfer medication counseling plans for patients at an age-appropriate level (5th grade).
- Attend 2 conferences such as medical or pharmacy grand rounds, noon conference, resident seminar, or patient care conference and, for one conference, provide a written summary of the content. Include the name of the primary speaker or presenter.

Documentation of all written assignments must be provided on the Activity Log with examples of the student’s best work included in the student’s portfolio.

**Course Grading**

Students will be assessed using the P-4 Advanced Pharmacy Practice Rotation Student Evaluation Form utilizing the Stages of Professional Mastery to assess their ability to function as a pharmacist. Grading is on a satisfactory / unsatisfactory basis. Honors will be awarded to those students who exhibit exceptional skills, mastery of all ability outcomes and perform additional activities beyond those required. Grades will be based on student's pharmacy practice skills, knowledge and attitude. Skills will be assessed through direct observation of patient care activities at the practice site.

Students will be required to perform a self-evaluation and the preceptors will collaborate to perform a mid-point (week 2) and final evaluation. The preceptors will provide feedback on student performance on an ongoing basis throughout the rotation. Formal feedback will be documented on the Student Evaluation Form and submitted to the Office of Experiential Learning.

**Textbooks and Other Selected Learning Resources**
Learning resources will vary with the rotation site. The following is a list of suggested resources to assist the student in performing clinical activities:

4. Many resources are available via University of Pittsburgh Health Sciences Library, including a variety of databases and full-text online journals, at http://www.hsls.pitt.edu

**Student Disability Statement**

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 216 William Pitt Union, (412) 648-7890/(412) 383-7355 (TTY) as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

**Academic Integrity Statement**

Students enrolled in the pharmacy program are also considered to be members of the pharmacy profession and must adhere to the same professional, ethical, and legal standards. It is a violation of the School’s code of conduct policy for a student to engage in any act of academic misconduct, such as cheating, plagiarism, deceitful practice, unauthorized collaboration, harassment, or breach of confidentiality. It is also considered to be a violation of the code of conduct policy for a student to tolerate any of the aforementioned acts by other students. Unless authorized by the instructor, use of electronic devices of any kind during examinations is prohibited. Use of a personal digital assistant, palm top computer, cellular telephone or other electronic device during an examination is considered to be an act of academic misconduct.

**Absence Request Policy**

1. Any absences by students of one day or less per rotation should be handled by the student and the preceptor. In these instances it is the preceptor’s responsibility to specify and outline a plan for the make-up of the missed day.

2. Any absences in excess of one day per rotation will require completion of an “Absence Request” form (see CourseWeb site). If possible (advanced knowledge of an absence), this form should be submitted in duplicate to the preceptor and Ms. Anna Schmotzer in the Office of Professional Experience Programs at least one month prior to the scheduled absence. In the event the absence is not scheduled, the form should be submitted, in duplicate, to the preceptor and Ms. Anna Schmotzer in the Office of Professional Experience Programs within three days of the student’s return. It is the responsibility of the Director of Experiential Programs, working with the preceptor, to determine if the student can successfully make-up the rotation and outline a plan for the make-up of the missed days.

3. Days missed due to interviews and attending professional meetings (e.g., ASHP Midyear Meeting) are considered absences and the guidelines outlined previously should be followed. Students must discuss interview schedules and professional meetings one month before the meeting. The guidelines outlined in item # 1 and # 2 must be followed.
Ambulatory Care Rotation
Advanced Pharmacy Practice Experience
Pharm 5400 series
5 credit hours

The mission of the curriculum is to prepare students to optimize pharmaceutical care at the level of a pharmacotherapy generalist. The curriculum prepares pharmacists, as health care providers, to work collaboratively with others to achieve effective use of medicines and other interventions to mitigate disease and maximize health and well-being of patients and of society as a whole. The curriculum fosters professionalism and civic involvement while encouraging advancement of the profession and the individual through life-long learning.

Professional Year: P4, all terms

Meeting times, location Each rotation is 5 weeks in duration and at least 40 contact hours per week. The exact time and location is dependent on the preceptor’s schedule and clinic site.

Prerequisites
1. Students must successfully complete all required Doctor of Pharmacy course work in the first 3 professional program years.
2. Students must have a cumulative GPA $\geq 2.0$
3. Students must hold a current certification in adult cardiopulmonary resuscitation.

Participating Faculty Varies with site

Course Description

During this rotation students will develop their pharmaceutical care skills for patients who are ambulatory (e.g., in a clinic or a pharmacy care center). Skills to be developed through direct patient care and include:

- Proper use of patient-specific comprehensive data (patient/caregiver interviews, past medical records, medication history, physical exam findings, diagnostic and laboratory data) for making drug therapy decisions that reflect pharmaceutical care.
- Developing safe and cost-effective patient-specific pharmaceutical care plans with specific goals to resolve or prevent drug-related problems. These plans should be developed using previously gathered data and knowledge of pharmacokinetics, pharmacodynamics, social, cultural, ethical and humanistic factors.
- Proper implementation of patient-specific pharmaceutical care plans through written and oral communication. Plans should be communicated so that patients as well as other health care providers can understand their scope, nature and importance. Plans should inform all those involved of the risks and benefits of therapy, as well as clearly outline the proper use and desired outcome.
- Clearly document, using appropriate style and language, pharmaceutical care plans and patient care activities in the medical chart, when appropriate.
- Monitoring of patient-specific pharmaceutical care plans through collection and interpretation of pertinent data. All care plans should be assessed to see if previously defined goals have been achieved. In assuming the responsibility for outcomes it may be necessary at times to reevaluate treatment plans or therapeutic goals.
Core Ability Outcomes

1. **Patient Assessment**
   - Review patient record/profile to accurately identify factors affecting therapy, health or disease management
   - Create and/or update patient record/profiles accurately and in a timely manner
   - Accurately create a drug-related problem list with prioritization of problems
   - Conduct accurate and complete patient interviews to obtain medication histories
   - Accurately perform necessary elements of physical assessment (e.g., blood pressure, foot exam)
   - Accurately assess patient health literacy and compliance
   - Accurately assess patient health status and care needs based on race, cultural, or socioeconomic criteria

2 – 4. **Pharmaceutical Care Plan Development & Medication Therapy Management/Decision-Making**
   - Assess appropriateness of patient medication therapy (e.g., drug, dose, routes, etc.)
   - Make appropriate and complete recommendations for care: non-pharmacologic and pharmacologic therapies
   - Establish therapeutic outcomes/goals
     - Identifies and evaluates feasible therapeutic alternatives
     - Designs drug therapy regimen
   - Consult and collaborate with healthcare professionals, practicing as a member of an interprofessional team
   - Effectively manage treatments to enhance outcomes
   - Assess regimen for efficacy and toxicity
     - Selects parameters that are specific, measurable, achievable and associated with time frames
     - Redesigns regimen as necessary
   - Effectively document interventions in patient record/profile
   - Consult and intervene with patients and health care professionals regarding self-care and prescription medications
   - Recommend appropriate non-drug treatments (e.g., diet, smoking cessation, CAM)
   - Retrieve, evaluate and use scientific information to provide information and/or make therapeutic decisions
     - Use a systematic, efficient and thorough procedure for information retrieval and evaluation
     - Justify in writing or verbally in clear, concise and persuasive language
   - Demonstrate ability to appropriately triage patient for treatment or referral

6. **Management**
   - Detect and report medication errors and adverse reactions
   - Effectively collaborate with technical support staff to optimize care
   - Demonstrate appropriate human relations skills: displaying interest in others; sensitivity, empathy, acting in the best interest of others
   - Manage time wisely to maximize productivity and fulfill rotation obligations

7. **Public Health**
   - Educate/interact with patients and healthcare professionals regarding health promotion, disease prevention and wellness.
   - Participate in educational programs designed to benefit the health of the general public

**General outcomes**
- Accurately identify, manage, and prevent drug-related problems and make appropriate decisions
- Demonstrate needed scientific and practice knowledge to achieve rotation outcomes
  - Disease states including pathophysiology, anatomy/physiology
  - Drug therapy including pharmacology, kinetics, dosing
- Able to effectively communicate
  - Use skills for effective verbal communication
Use skills for effective written communication
Use appropriate persuasion techniques to positively impact drug use
• Demonstrate the characteristics of a pharmacy professional

Methods of Learning

Ability outcomes will be evaluated based on the student’s performance of various tasks throughout the rotation. The methods of learning will vary with the rotation site.

Rotation Requirements

CORE REQUIREMENTS MUST BE COMPLETED. IF A CORE REQUIREMENT CANNOT BE COMPLETED DUE TO A SITE-SPECIFIC REASON, THE PRECEPTOR MUST PROVIDE AN EXPLANATION IN THE STUDENT’S EVALUATION. ASSIGNMENTS SPECIFIC TO THE SITE MAY SUPERCEDE OR SUPPLEMENT THE ADDITIONAL REQUIREMENTS AT THE DISCRETION OF THE PRECEPTOR.

Core Requirements

• Complete a minimum of 4 patient care notes per week. Provide written detailed SOAP notes for 4 of the cases. Include patient information obtained through patient interview, physical examination, diagnostic/lab testing, etc. Define therapeutic goals and include pharmacy care plan for each patient.
• Identify and document a minimum of 20 drug related problems (for example, 4/week) with patient-specific solutions.
• Complete and present a minimum of 1 formal and 1 informal case presentation. Each case should involve a different disease state as the primary problem. An analysis of the disease state and therapy, including national and/or institutional treatment guidelines, should be included in the presentation.
• Provide drug information responses to the preceptor, pharmacy team, and/or health care medical team and submit written summaries, including references, to at least 3 drug information requests.
• Prepare 2 written Adverse Drug Reaction or Medication Error/prevented Medication Error reports. Discuss the site-specific process for reporting these events.
• Perform medication counseling for a minimum of 20 patients and provide written summaries for 4 of those patients, including discussion of prescription, OTC, herbal, and non-pharmacologic treatments as appropriate to the case.

Additional Requirements (if site offers opportunity for the experience)

• Discuss with the preceptor the practice management issues specific to the site such as formulary management, billing/reimbursements, regulatory compliance, patient safety and access to medications.

Documentation of all written assignments must be provided on the Activity Log with examples of the student’s best work included in the student’s portfolio.

Course Grading

Students will be assessed using the P-4 Advanced Pharmacy Practice Rotation Student Evaluation Form utilizing the Stages of Professional Mastery to assess their ability to function as a pharmacist. Grading is on a satisfactory / unsatisfactory basis. Honors will be awarded to those students who exhibit exceptional skills, mastery of all ability outcomes and perform additional activities beyond those required. Grades will be based on student's pharmacy practice skills, knowledge and attitude. Skills will be assessed through direct observation of patient care activities at the practice site.

Students will be required to perform a self-evaluation and the preceptors will collaborate to perform a midpoint (week 2) and final evaluation. The preceptors will provide feedback on student performance on an ongoing basis throughout the rotation. Formal feedback will be documented on the Student Evaluation Form and submitted to the Office of Experiential Learning.
Textbooks and Other Selected Learning Resources

Learning resources will vary with the rotation site. The following is a list of suggested resources to assist the student in performing clinical activities:

8. Many resources are available via University of Pittsburgh Health Sciences Library, including a variety of databases and full-text online journals, at http://www.hsls.pitt.edu

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Academic Integrity Statement

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Absence Request Policy

4. Any absences by students of one day or less per rotation should be handled by the student and the preceptor. In these instances it is the preceptor’s responsibility to specify and outline a plan for the make-up of the missed day.
5. Any absences in excess of one day per rotation will require completion of an “Absence Request” form (see CourseWeb site). If possible (advanced knowledge of an absence), this form should be submitted in duplicate to the preceptor and Ms. Anna Schmotzer in the Office of Professional Experience Programs at least one month prior to the scheduled absence. In the event the absence is not scheduled, the form should be submitted, in duplicate, to the preceptor and Ms. Anna Schmotzer in the Office of Professional Experience Programs within three days of the student’s return. It is the responsibility of the Director of Experiential Programs, working with the preceptor, to determine if the student can successfully make-up the rotation and outline a plan for the make-up of the missed days.
6. Days missed due to interviews and attending professional meetings (e.g., ASHP Midyear Meeting) are considered absences and the guidelines outlined previously should be followed. Students must discuss interview schedules and professional meetings one month before the meeting. The guidelines outlined in item # 1 and # 2 must be followed.
Community Pharmacy Practice Rotation  
Advanced Pharmacy Practice Experience  
Pharm 5400 series  
5 credit hours  

The mission of the curriculum is to prepare students to optimize pharmaceutical care at the level of a pharmacotherapy generalist. The curriculum prepares pharmacists, as health care providers, to work collaboratively with others to achieve effective use of medicines and other interventions to mitigate disease and maximize health and well-being of patients and of society as a whole. The curriculum fosters professionalism and civic involvement while encouraging advancement of the profession and the individual through life-long learning.

**Professional Year:** P4, all terms  

**Meeting times, location** Each rotation is 5 weeks in duration and at least 40 contact hours per week. The exact time and location is dependent on the preceptor’s schedule and clinic site.

**Prerequisites**  
1. Students must successfully complete all required Doctor of Pharmacy course work in the first 3 professional program years.  
2. Students must have a cumulative GPA $\geq 2.0$  
3. Students must hold a current certification in adult cardiopulmonary resuscitation.

**Participating Faculty** Varies with site

**Course Description**  
During this rotation students will develop competence in community pharmacy practice. Experiences may include but are not limited to:

- Establishing/enhancing patient-specific pharmacy databases through patient interviews  
- Evaluating and preparing prescriptions for dispensing to patients.  
- Providing medication and other health-related information and education to patients.  
- Counseling patients and caregivers.  
- Provide initial and ongoing evaluation of drug therapy.  
- Communicate with patients about non-prescription products, devices, and diagnostics.  
- Advanced drug compounding.  
- Maintaining and controlling medication inventory and purchasing.  
- Understanding distribution and documentation systems.  
- Developing competent pharmacy management skills.  
- Assuring medication safety in community pharmacy systems.  
- Manage and supervise pharmacy personnel.

**Core Ability Outcomes**  

1. **Patient Assessment**
   - Review patient record/profile to accurately identify factors affecting therapy, health or disease management  
   - Create and/or update patient record/profiles accurately and in a timely manner  
   - Conduct accurate and complete patient interviews to obtain medication histories  
   - Accurately assess patient health literacy and compliance  
   - Accurately assess patient health status and care needs based on race, cultural, or socioeconomic criteria

• Assess appropriateness of patient medication therapy (e.g., drug, dose, routes, etc.)
• Make appropriate and complete recommendations for care: non-pharmacologic and pharmacologic therapies
• Establish therapeutic outcomes/goals
  – Identifies and evaluates feasible therapeutic alternatives
  – Designs drug therapy regimen
• Effectively manage treatments to enhance outcomes
• Assess regimen for efficacy and toxicity
  – Selects parameters that are specific, measurable, achievable and associated with time frames
  – Redesigns regimen as necessary
• Consult and intervene with patients and health care professionals regarding self-care and prescription medications
• Recommend appropriate non-drug treatments (e.g., diet, smoking cessation, CAM)
• Demonstrate ability to appropriately triage patient for treatment or referral

5. Product Preparation, Dispensing and Administering
• Interpret, evaluate and clarify written prescriptions or drug orders to ensure appropriate effective, safe, and economical patient care
• Fill prescriptions or drug orders correctly (medication selection, quantity, labeling) according to State and Federal regulations
• Perform accurate calculations and documents all procedures
• Demonstrate proper techniques to accurately and safely compound (including parenteral admixtures)

6. Management
• Detect and report medication errors and adverse reactions
• Participate in discussions regarding compliance regulations (e.g., accreditation, legal, regulatory, safety)
• Participate in discussions concerning health care policy
• Manage the storage, preparation, dispensing and ordering of medications
• Effectively collaborate with technical support staff to optimize care
• Participate in the design, development, and marketing of patient services
• Participate in the pharmacy’s quality improvement program
• Manages/adjudicates insurance coverage issues
• Demonstrate appropriate human relations skills: displaying interest in others; sensitivity, empathy, acting in the best interest of others
• Manage time wisely to maximize productivity and fulfill rotation obligations

7. Public Health
• Educate/interact with patients and healthcare professionals regarding health promotion, disease prevention and wellness.
• Participate in educational programs designed to benefit the health of the general public

General outcomes
• Accurately identify, manage, and prevent drug-related problems and make appropriate decisions
• Demonstrate needed scientific and practice knowledge to achieve rotation outcomes
  – Disease states including pathophysiology, anatomy/physiology
  – Drug therapy including pharmacology, kinetics, dosing
• Able to effectively communicate
  – Use skills for effective verbal communication
  – Use skills for effective written communication
  – Use appropriate persuasion techniques to positively impact drug use
• Demonstrate the characteristics of a pharmacy professional

Methods of Learning
Ability outcomes will be evaluated based on the student’s performance of various tasks throughout the rotation. The methods of learning will vary with the rotation site.

**Rotation Requirements**

**CORE REQUIREMENTS MUST BE COMPLETED. IF A CORE REQUIREMENT CANNOT BE COMPLETED DUE TO A SITE-SPECIFIC REASON, THE PRECEPTOR MUST PROVIDE AN EXPLANATION IN THE STUDENT’S EVALUATION. ASSIGNMENTS SPECIFIC TO THE SITE MAY SUPERCEDE OR SUPPLEMENT THE ADDITIONAL REQUIREMENTS AT THE DISCRETION OF THE PRECEPTOR.**

**Core Requirements**
- Perform and document 20 prescription counseling experiences provided to patients, reflecting different medications and different patients.
- Perform and document via brief written SOAP notes 20 OTC counseling experiences provided to patients, reflecting different products or conditions.
- Discuss with the preceptor and diagram the drug distribution process, including physical handling and personnel involved in the order entry/verification process, pharmacist review, order filling, patient pick-up, and counseling process.
- Provide written documentation of 10 examples of insurance interventions performed by the student or preceptor.
- Discuss with the preceptor specific pharmacy procedures to assess prescriptions for appropriateness based on patient parameters (ages, sex, weight, allergies, disease state), drug interactions, refill status, and insurance issues.
- Discuss with the preceptor pharmacy procedures for inventory ordering, receiving, checking, and stocking.
- Discuss with the preceptor controlled substance security, record keeping, and CII inventory management.
- Discuss with the preceptor procedures to handle medication errors, expired medications, and disposal of hazardous substances.
- Fill a minimum of 250 prescriptions.

**Additional Requirements (if site offers opportunity for the experience)**
- Maintain a log of all compounded products, including calculations performed.
- Provide drug information responses to the preceptor, staff, or patients and submit written summaries, including references, to at least 3 drug information requests.
- Discuss with the preceptor pharmacist-delivered patient care services offered at the site (ex. MTM, blood pressure screening, blood glucose screening, immunizations, etc.), including student participation.
- Discuss with the preceptor pharmacy business procedures related to payment of bills, charging of customer accounts, product pricing, and assessment of financial performance.
- Discuss with the preceptor procedures for personnel scheduling, discipline, and performance evaluation.

**Documentation of all written assignments must be provided on the Activity Log with examples of the student’s best work included in the student’s portfolio.**

**Course Grading**

Students will be assessed using the P-4 Advanced Pharmacy Practice Rotation Student Evaluation Form utilizing the Stages of Professional Mastery to assess their ability to function as a pharmacist. Grading is on a satisfactory / unsatisfactory basis. Honors will be awarded to those students who exhibit exceptional skills, mastery of all ability outcomes and perform additional activities beyond those required. Grades will be based on student's pharmacy practice skills, knowledge and attitude. Skills will be assessed through direct observation of patient care activities at the practice site.

Students will be required to perform a self-evaluation and the preceptors will collaborate to perform a mid-point (week 2) and final evaluation. The preceptors will provide feedback on student performance on an
ongoing basis throughout the rotation. Formal feedback will be documented on the Student Evaluation Form and submitted to the Office of Experiential Learning.

**Textbooks and Other Selected Learning Resources**

Learning resources will vary with the rotation site. The following is a list of *suggested* resources to assist the student in performing clinical activities:


12. Many resources are available via University of Pittsburgh Health Sciences Library, including a variety of databases and full-text online journals, at [http://www.hsls.pitt.edu](http://www.hsls.pitt.edu)

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**Absence Request Policy**

7. Any absences by students of one day or less per rotation should be handled by the student and the preceptor. In these instances it is the preceptor’s responsibility to specify and outline a plan for the make-up of the missed day.

8. Any absences in excess of one day per rotation will require completion of an “Absence Request” form (see CourseWeb site). If possible (advanced knowledge of an absence), this form should be submitted in duplicate to the preceptor and Ms. Anna Schmotzer in the Office of Professional Experience Programs at least one month prior to the scheduled absence. In the event the absence is not scheduled, the form should be submitted, in duplicate, to the preceptor and Ms. Anna Schmotzer in the Office of Professional Experience Programs within three days of the student’s return. It is the responsibility of the Director of Experiential Programs, working with the preceptor, to determine if the student can successfully make-up the rotation and outline a plan for the make-up of the missed days.

9. Days missed due to interviews and attending professional meetings (e.g., ASHP Midyear Meeting) are considered absences and the guidelines outlined previously should be followed. Students must discuss interview schedules and professional meetings one month before the meeting. The guidelines outlined in item # 1 and # 2 must be followed.
Institutional Pharmacy Practice Rotation
Advanced Pharmacy Practice Experience
Pharm 5400 series
5 credit hours

The mission of the curriculum is to prepare students to optimize pharmaceutical care at the level of a pharmacotherapy generalist. The curriculum prepares pharmacists, as health care providers, to work collaboratively with others to achieve effective use of medicines and other interventions to mitigate disease and maximize health and well-being of patients and of society as a whole. The curriculum fosters professionalism and civic involvement while encouraging advancement of the profession and the individual through life-long learning.

Professional Year: P4, all terms

Meeting times, location
Each rotation is 5 weeks in duration and at least 40 contact hours per week. The exact time and location is dependent on the preceptor’s schedule and clinic site.

Prerequisites
1. Students must successfully complete all required Doctor of Pharmacy course work in the first 3 professional program years.
2. Students must have a cumulative GPA \( \geq 2.0 \)
3. Students must hold a current certification in adult cardiopulmonary resuscitation.

Participating Faculty
Varies with site

Course Description
During this rotation students will develop competence in hospital pharmacy operations. Experiences may include but are not limited to:

- Maintaining and controlling medication inventory
- Understanding distribution and documentation systems
- Preparation of intravenous medications including total parenteral nutrition and chemotherapy
- Pharmacy department management
- Quality assurance issues
- Medication formulary management

Core Ability Outcomes

5. Product Preparation, Dispensing and Administering
   - Interpret, evaluate and clarify written prescriptions or drug orders to ensure appropriate effective, safe, and economical patient care
   - Fill prescriptions or drug orders correctly (medication selection, quantity, labeling) according to State and Federal regulations
   - Perform accurate calculations and documents all procedures
   - Demonstrate proper techniques to accurately and safely compound (including parenteral admixtures)

6. Management
   - Detect and report medication errors and adverse reactions
   - Participate in discussions regarding compliance regulations (e.g., accreditation, legal, regulatory, safety)
   - Participate in drug approval/formulary process/therapeutic guideline development
   - Participate in discussions concerning health care policy
Manage the storage, preparation, dispensing and ordering of medications
Effectively collaborate with technical support staff to optimize care
Participate in the design, development, and marketing of patient services
Participate in the pharmacy’s quality improvement program
Demonstrate appropriate human relations skills: displaying interest in others; sensitivity, empathy, acting in the best interest of others
Manage time wisely to maximize productivity and fulfill rotation obligations

General outcomes
Accurately identify, manage, and prevent drug-related problems and make appropriate decisions
Demonstrate needed scientific and practice knowledge to achieve rotation outcomes
  Disease states including pathophysiology, anatomy/physiology
  Drug therapy including pharmacology, kinetics, dosing
Able to effectively communicate
  Use skills for effective verbal communication
  Use skills for effective written communication
  Use appropriate persuasion techniques to positively impact drug use
Demonstrate the characteristics of a pharmacy professional

Methods of Learning
Ability outcomes will be evaluated based on the student’s performance of various tasks throughout the rotation. The methods of learning will vary with the rotation site.

Rotation Requirements
CORE REQUIREMENTS MUST BE COMPLETED. IF A CORE REQUIREMENT CANNOT BE COMPLETED DUE TO A SITE-SPECIFIC REASON, THE PRECEPTOR MUST PROVIDE AN EXPLANATION IN THE STUDENT’S EVALUATION. ASSIGNMENTS SPECIFIC TO THE SITE MAY SUPERCEDE OR SUPPLEMENT THE ADDITIONAL REQUIREMENTS AT THE DISCRETION OF THE PRECEPTOR.

Core Requirements
  Complete and present a minimum of 1 formal and 1 informal case presentations. Each case should involve a different disease state as the primary problem. An analysis of the disease state and therapy, including national and/or institutional treatment guidelines, should be included in the presentation.
  Prepare written reports for 2 Adverse Drug Reactions.
  Prepare written reports for 2 Medication Errors or prevented Medication Errors.
  Review a minimum of 25 medication orders, determining appropriateness and seeking clarification when necessary. Provide a minimum of 5 written descriptions of interventions required for clarification or correction of medication orders.
  Maintain a log of 15 intravenous products prepared using sterile technique.
  Provide drug information response to the preceptor, pharmacy team, and/or health care medical team and provide written responses, including references, to at least 3 drug information requests.
  Attend at least one interdisciplinary meeting (ex. Pharmacy and Therapeutics Committee meeting, Patient Safety Committee, etc.) and provide a written summary of what was discussed.
  Discuss with your preceptor the drug distribution process including order entry and/or verification, pharmacist review, order filling, delivery, and administration.
  Discuss with your preceptor the role of the pharmacist in medication safety. Include the role of automation (robotics, automated dispensing cabinets, bar code scanning, etc) and electronic medical record, if applicable.

Additional Requirements (if site offers opportunity for the experience)
  Discuss with your preceptor clinical pharmacy services at the site. Include the responsibilities of each pharmacist involved in services other than dispensing.
• Discuss with your preceptor the different regulatory bodies with oversight of the institution and the responsibilities of the pharmacy in regard to institutional regulatory readiness.

Documentation of all written assignments must be provided on the Activity Log with examples of the student’s best work included in the student’s portfolio.

**Course Grading**

Students will be assessed using the P-4 Advanced Pharmacy Practice Rotation Student Evaluation Form utilizing the Stages of Professional Mastery to assess their ability to function as a pharmacist. Grading is on a satisfactory / unsatisfactory basis. Honors will be awarded to those students who exhibit exceptional skills, mastery of all ability outcomes and perform additional activities beyond those required. Grades will be based on student's pharmacy practice skills, knowledge and attitude. Skills will be assessed through direct observation of patient care activities at the practice site.

Students will be required to perform a self-evaluation and the preceptors will collaborate to perform a mid-point (week 2) and final evaluation. The preceptors will provide feedback on student performance on an ongoing basis throughout the rotation. Formal feedback will be documented on the Student Evaluation Form and submitted to the Office of Experiential Learning.

**Textbooks and Other Selected Learning Resources**

Learning resources will vary with the rotation site. The following is a list of suggested resources to assist the student in performing activities:

16. Many resources are available via University of Pittsburgh Health Sciences Library, including a variety of databases and full-text online journals, at [http://www.hsls.pitt.edu](http://www.hsls.pitt.edu)

**Student Disability Statement**

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 216 William Pitt Union, (412) 648-7890/(412) 383-7355 (TTY) as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

**Academic Integrity Statement**

Students enrolled in the pharmacy program are also considered to be members of the pharmacy profession and must adhere to the same professional, ethical, and legal standards. It is a violation of the School’s code of conduct policy for a student to engage in any act of academic misconduct, such as cheating, plagiarism, deceitful practice, unauthorized collaboration, harassment, or breach of confidentiality. It is also considered to be a violation of the code of conduct policy for a student to tolerate any of the aforementioned acts by other students. Unless authorized by the instructor, use of electronic devices of any kind during examinations is prohibited. Use of a personal digital assistant, palm top computer, cellular telephone or other electronic device during an examination is considered to be an act of academic misconduct.

**Absence Request Policy**
10. Any absences by students of one day or less per rotation should be handled by the student and the preceptor. In these instances it is the preceptor’s responsibility to specify and outline a plan for the make-up of the missed day.

11. Any absences in excess of one day per rotation will require completion of an “Absence Request” form (see CourseWeb site). If possible (advanced knowledge of an absence), this form should be submitted in duplicate to the preceptor and Ms. Anna Schmotzer in the Office of Professional Experience Programs at least one month prior to the scheduled absence. In the event the absence is not scheduled, the form should be submitted, in duplicate, to the preceptor and Ms. Anna Schmotzer in the Office of Professional Experience Programs within three days of the student’s return. It is the responsibility of the Director of Experiential Programs, working with the preceptor, to determine if the student can successfully make-up the rotation and outline a plan for the make-up of the missed days.

12. Days missed due to interviews and attending professional meetings (e.g., ASHP Midyear Meeting) are considered absences and the guidelines outlined previously should be followed. Students must discuss interview schedules and professional meetings one month before the meeting. The guidelines outlined in item # 1 and # 2 must be followed.